“Can you see what I am saying?”

An action-research, mixed methods evaluation of telepsychology in rural Western Australia

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This thesis is presented in fulfilment of the requirements for the degree of Doctor of Philosophy, Murdoch University

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I declare that this thesis is my own account of my research and contains as its main content, work which has not previously been submitted for a degree at any tertiary education institution.

_________________________________________
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ABSTRACT

Rural communities have been recognised as uniquely challenging environments for mental health care delivery. Telepsychology, or clinical psychology services delivered via videoconferencing, may be one response to overcoming the obstacles of regional and remote health care delivery. However, despite telepsychology’s widespread appeal and existing infrastructure, few services appear to provide telepsychology as a routine service component for psychotherapeutic exchanges. The thesis’ primary research goal was to explore and explain the disconnect between research and practice in this field. Five major research questions were raised: 1) Is telepsychology effective?; 2) How do you effectively research a complex health interaction like telepsychology?; 3) How do you make telepsychology research clinically meaningful and user friendly for practitioners?; 4) If telepsychology is so good, why don’t clinicians use it more?; 5) When they do use telepsychology, how does it change the clinician's usual practice or the client's behaviour?

To answer these questions a non-traditional, mixed method approach was chosen in preference to a more traditional, experimental, or mono-method, quantitative one, because it includes a focus on micro-processes which may reveal the causes or maintaining factors in the disconnect between research and practice. This thesis also uniquely draws together data from multiple clinically relevant sources: the research and clinical literature; expert telepsychology clinicians; mental health clients in rural locations; and a practitioner-researcher who has expertise as a clinician in the field of rural mental health. Taken together, this rich
dataset illuminates the potential for psychotherapy by video in rural and remote Australia and provides a conceptual, clinical and practical framework for fulfilling this potential. It makes explicit the challenges and gaps in knowledge about telepsychology but also, unexpectedly, through micro-analysis of the telepsychology process, illuminates the fundamental active ingredients of the psychotherapeutic process more broadly.

The component studies of this thesis fill several research gaps by 1) comprehensively synthesising the available knowledge of tele-mental health via videoconferencing as a whole, clarifying what is known, and what remains unknown, about telepsychology; 2) providing a mixed methods approach to evaluating the human dimensions of implementation of a clinical telepsychology service (indeed any psychotherapeutic service) under naturalistic conditions; 3) identifying the unique conditions or phenomena in telepsychology interactions that influence both therapeutic process and outcome, at the largest (across-subjects data) and smallest (the communication dyad) units of analysis; 4) implementing and evaluating a trial of telepsychology in a depressed community sample; and 5) triangulating the findings into meaningful, clinical practice based recommendations and conclusions.

This thesis is the first research to apply a mixed-method, integrative, sequentially-triangulated research design to an investigation of telepsychology. Despite the implicit complexity of telepsychology as a healthcare system, the current research contributes in an original way by describing whole-field methodological trends, providing a comprehensive integrative review of findings, and evaluating an applied implementation of
the findings, from a unique researcher-participant perspective. This contribution is of pragmatic and intellectual value to the field, and offers a unique review of the practices and specific changes to therapeutic techniques and approaches from expert consumers of telepsychology.
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PREFACE

There is a tradition of narrative framing in hermeneutic qualitative research which is to "bracket", at the outset, the early or preliminary observations of the researcher, and make explicit their general expectations, perceptions, experience and background, for the express purpose of acknowledging the selective bias inherent in humanistic enquiry (Cresswell, 1998; Pontoretto, 2005;126). This particular section honours such a tradition.

The primary research question of this thesis developed from my observation about psychological practice. More specifically, I noted an absence of a particular psychological practice, namely telepsychology, when outwardly, the prevailing circumstances seemed particularly conducive to it.

In 2004, through frequent personal communications with mental health consumers and workers in the rural regions of the South West of Western Australia (WA), the provision of clinical psychology services was identified as a significant unmet need. In these particular areas at that time, services were limited in availability, had narrow avenues of access, or were financially prohibitive for most public health service consumers. In response to these not unreasonable requests for best practice mental health interventions, I began exploring possible solutions. A technological network of videoconferencing facilities was identified to be already linking rural mental health clinics with other rural clinics, their regional hubs and the state’s capital city, Perth. A preliminary literature review suggested that the international evidence base in support of the use of
videoconferencing technology in mental health (also known as “telepsychology” and “telepsychiatry”) had been steadily growing over the previous 45 years. At first glance, it appeared that Western Australia’s mental health system was following an international trend which recommended telepsychiatry/telepsychology as a cost effective treatment option for rural mental health clients.

However, further investigation revealed that while the videoconferencing equipment and transmission services were budgeted into the running costs of the many rural mental health clinics in the South West of WA, less than 40% of the hours already paid for were being used by the mental health staff, and none of the available hours were being used for direct client contact; i.e. psycho-therapy between clinician and consumer. Transmission hours that were being used included case conferencing, collegial supervision and administrative tasks between mental health workers and administrators. What was striking about this situation was that despite the obvious financial investment and the growing evidence base for the use of telepsychology, practitioners appeared ambivalent, and possibly even antagonistic, toward using telepsychology for direct client services. Unravelling why telepsychology appeared so strongly endorsed in the literature yet did not seem to be used “on the ground”, seemed to me to be a compelling research question to be answered.

When a proposal to trial a telepsychology service was made to the regional mental health clinic staff, they recognised the potential of this solution for their underserved mental health clients. However, they were
unsure about whether such a proposal would be successful, given it appeared untried in WA public mental health clinics, and were reluctant to participate in research. They were concerned that the research demands might compromise the service to their clients; i.e. prioritising methodology over real-world need. They also worried that the project might require an additional workload for them to implement the necessary assessment and evaluation during the trial. Finally, they indicated that they wanted the service to accommodate the complexity of their client group’s therapeutic needs, not a service that prioritised stringent diagnostic or other research criteria.

To further explicate the hermeneutic bracketing of this thesis, and my role as participant/researcher within it, I shall now describe my background. I am a Doctoral level, Clinical Psychologist with 13 years experience providing direct psychological intervention to children, adults and older adult clientele in Western Australia. Trained within a scientist-practitioner model, I have been employed in the public and private sector in clinical psychology, program evaluation and research positions. Given my extensive work experience with incarcerated populations, rural psychiatric triage, rural emergency management and clinical intervention with the elderly, my research interest in the area of telepsychology was spawned from a personal recognition that workforce and service alternatives were needed for those clients who did not have easy access to clinical psychology, and in particular, rural and remote clients. My personal agenda was to identify a low-cost strategy to reduce the shortfall
of Psychologists which appeared to be impacting upon the rural and
regional mental health clients I encountered every day at work.

Consequently, a research project that aimed to integrate and
honour both science and practice need was formulated. In order to
respond to a real-world problem with externally imposed real world
constraints, an exploratory, reflective stance to both research and practice
was indicated. In order to secure the support of mental health providers,
and also to meet the dual obligations of clinical accountability and high
quality research, a methodologically rigorous approach that
accommodated emergent research questions and ethically responsive,
timely, practice changes was developed. Finally, presented in this thesis,
a research investigation was completed where clients received a much
needed, quality psychological service, while meaningful research
outcomes of both a formative and summative nature contributed to the
unfolding continuum of research in telepsychology. Specifically, this
thesis has been designed to address the question “can telepsychology be
successfully implemented in the Australian rural and remote context?”

(i) **Summary outline of the chapters of the thesis.**

This preface at the beginning of the thesis provides the necessary
bracketing of the research studies to follow, by locating them in the realms
of real-world necessity. It introduces the primacy of methodological
decision making as a key component of the thesis due to the dual
ambitions of ethical and pragmatic service provision and methodologically
rigorous research.
Chapter 1 locates the primary research question, namely “can telepsychology be successfully implemented?” in the relevant contexts of Australian rural mental health and videoconferencing technology. Specifically, it describes the necessary technological and experiential issues surrounding the application of telepsychology to health in Western Australia. Chapter 2 considers and critiques the pre-existing telepsychology research and presents the findings in a literature review. This broad, integrative literature review includes a table of all experimental studies reported in the scientific literature to date. The accompanying text is an extensive, though not comprehensive, review of the entire field of telepsychology (i.e. child telepsychology and geropsychology are discussed only briefly), but it does emphasise those studies of particular relevance to this thesis as a whole.

Chapter 3 is a discussion of the methodological approach which developed iteratively to best respond to the identified gaps in the literature and the emergent research questions which were revealed with each study. This chapter describes the methods and approaches which informed the research design, and discusses why traditional approaches were less desirable.

Chapter 4 describes the development, implementation and evaluation of a survey of expert users of telepsychology, such that recommendations for practice and an exploration of pitfalls could be compared with the literature.

Chapter 5 describes a study of the recorded session transcripts from a subsample of participants in a large scale, randomised controlled
trial of telepsychology for depressed adults. By analysing the sessions from unknown therapists and clients, thematic analysis was perceived to provide a potentially objective opportunity for identifying pertinent practice and outcome issues, and corroborate the conclusions drawn in the telepsychology literature and from expert survey respondents.

Chapter 6 details the methodology for the telepsychology direct intervention study which emphasised the practitioner-researcher stance.

Chapters 7 and 8 present the detailed results from two examples of the multiple, time-series case studies (i.e. the intervention study). These case-studies describe the process and outcome of telepsychology for two of the seven depressed, community-based, adult research participants over the 12 month intervention period. Due to their level of detail, only two cases are included in the thesis proper. Two additional, fully detailed case-studies are included in Appendices H and I.

In addition to summative outcomes of quantitative measures of symptom change, therapeutic alliance and attendance, formative outcomes are also described in the case-studies as in-session issues and alliance changes, and are detailed in Chapter 7 and 8, as well as in the case-studies in the appendices. All of these outcomes are further analysed with particular attention directed to the impact of the telepsychology technology and encounter experience. This analysis maintains the research output focus on the specific practice gaps within the telepsychology literature.

Due to the significant depth and breadth of the separate case studies, Chapter 9 summarises the findings from all seven intervention
participants (case-studies). In this chapter, specific attention is given to
the process challenges and successes within the sessions, and the
impact of technology on the provision of a typical psychological
intervention for depression.

The final chapter, Chapter 10, details the discussion and
conclusions of the research overall, including future directions for the
telepsychology field and for practitioner driven research.
CHAPTER ONE

WHAT IS TELEPSYCHOLOGY AND WHY IS IT IMPORTANT?

1.1 Rural mental health and the need for innovation

Australia’s vast size can hinder effective and efficient delivery of mental health treatment (Chipp, Johnson, Brems, Warner & Roberts, 2008). In particular, rural communities have been recognised as uniquely challenging environments for mental health. Despite sometimes homogenizing media and cultural iconography, such communities are as heterogeneous in presentation and need as are metropolitan communities (Fraser, Judd, Jackson, Murray, Humphreys & Hodgins, 2002; Roufeil & Lipzker, 2007).

Although there are a number of definitions and methods of categorising rurality, the Australian Institute of Health and Welfare (AIHW, 2006) define rural and remote communities as communities whose residents are living outside cities with populations of greater than 250,000. Recent statistics have clearly demonstrated that residents of rural and remote Australia have poorer general health than do metropolitan residents (Australian Institute of Health and Welfare [AIHW], 2008), and a relationship between decreasing health and increasing remoteness has been identified (Phillips, 2002). As yet, there is no comprehensive epidemiological research which supports the contention that rural residents have higher rates of mental illness than do urban residents. However, some Australian rural and remote communities exhibit higher suicide mortality rates among some age groups, than do metropolitan communities (Hickie, 2004; Wilkinson & Gunnell, 2000). Although similar rates of mental
health disorder probably exist between metropolitan and rural areas, it has been hypothesised that the disease burden is far greater in rural areas due to limited access to services and lower rates of uptake when services do exist (Caldwell, Jorm & Dear, 2004; Rajkumar & Hoolahan, 2004).

Australian rural communities are typically separated by long distances, can be sparsely or minimally populated, and can experience extreme disparities in health infrastructure and human resources compared to their urban counterparts (Dixon & Welch, 2000; Rajkumar & Hoolahan, 2004). Global and local shortages of professional mental health workers, such as psychiatrists and clinical psychologists (Barton, Hawthorne, Singh & Little, 2003), have hampered remote communities’ efforts to recruit and attract staff when workplaces and positions are further disadvantaged by professional isolation, prohibitive travel costs, and relative lack of resources or social infrastructure associated with working in regional facilities (Buist, 2003; Francis, 2005; Humphreys, Wakeman, Wells et al., 2007; Judd & Humphreys, 2001; Rajkumar & Hoolahan, 2004). It has been reported (AIHW, 2006) that, in addition to having fewer GP’s, only about 4% of psychiatrists and 30% of mental health nurses in Australia are practising in rural and remote areas. A National Rural Health Alliance (NRHA) (2003) report also indicated that 20.5% of psychologists worked in rural and remote regions. This equates to between 0.83 psychologists per 10,000 head of population in very remote areas, to 3.44 in inner regional centres, compared to 5.92 psychologists per 10,000 head of population in major capital cities (Roufeil & Lipzker, 2007).

Typically, either mental health patients have travelled to main urban areas to access specialist treatment or local mental health staff have travelled
significant distances to provide specialist outreach services (New Freedom Commission on Mental Health-Subcommittee on Rural Issues [NFC-SRI], 2004; Roufeil & Lipzker, 2007; Simpson & Deans, 2000). The experience of care of the rural mental health patient often includes abbreviated or inadequate treatment, or no care at all (Mental Health Council of Australia (MHCA), 2005; Roufeil & Lipzker, 2007). The limited capacity for rural areas to maintain a sufficient mental health workforce in their own communities has meant that patients are forced to seek treatment away from their family and social networks, or tolerate professional outreach which may be able to provide a limited or inconsistent level of support (Judd & Humphreys, 2001; MHCA, 2005; Rajkumar & Hoolahan, 2004). The likely consequence of such realities is to hamper the rural client’s recovery or deter them from seeking treatment at all (Lavelle, 2005).

Medicare rebates for services by privately practising clinical psychologists were first granted in November 2006. Prior to this time, the majority of rural Australian residents with mental illness were managed by GPs or public mental health services which tended to offer outreach from larger regional hubs (Roufeil & Lipzker, 2007). Access to allied mental health professionals was limited for those without private health insurance or for those who did not present consistently with formal psychiatric diagnoses (and by implication, had moderately severe disabilities as a consequence of their mental health). In Australia, GPs have typically been the frontline managers of the majority of mental health problems, and they have faced numerous barriers to the delivery of quality care, such as limited referral pathways (Rajkumar & Hoolahan, 2004). Federal initiatives, such as the More Allied Health Services
Telepsychology in Rural WA

(MAHS) program and, more recently, Better Outcomes in Mental Health Care (BOiMHC), appear to have reduced referral, financial and geographical barriers for many consumers (see Fletcher, Bassilios, Pirkis, Kohn, Blashki & Burgess, 2008). However, even with increased financial access to psychology practitioners, recent psychology workforce data collected by the APS demonstrates a significant mismatch between the numbers of practicing psychologists providing Medicare funded services to non-metropolitan residents (26%) compared to metropolitan residents (73%) (Roufeil & Lipzker, 2007). Such statistics further reinforce the concerns that there is inequity of service access and use between rural and metropolitan mental health consumers. Because many barriers to help-seeking for rural clients remain, innovative solutions to the provision of specialist mental health care in remote and underserved communities are needed.

Telehealth, or health care that is mediated by distance technology, may be one response to overcoming the obstacles of regional and remote health care delivery. Telepsychiatry is one of the oldest applications of telehealth generally (Elford, White, St John, Maddigan, Ghandi & Bowering, 2001; Hilty, Luo, Morache, Marcelo, Nesbitt, 2002; Hilty, Marks, Urness, Yellowlees, Nesbitt, 2004; Tang, Chiu, Woo, Hjelm & Hui, 2001). First appearing in the peer-reviewed literature in 1973, the term telepsychiatry referred to “psychiatric consultation via interactive television” at the Massachusetts General Hospital in Boston (Dwyer, 1973). Telehealth applications have the potential to be innovative global tools that have the capability to cross existing geographical, temporal, political, social and cultural barriers within the health sector (Freir, Kirkwood, Peck, Robertson, Scott-Lodge & Zeffert, 1999; Jerome, DeLeon,
James, Folen, Earles & Gedney, 2000; Trott, 1996). Mental health activities are particularly well suited to videoconferencing because the majority of assessment and treatment information can be collected audio-visually (Hsuing, 2002; Jones, Leonard & Birmingham, 2006; Yellowlees, Miller, McLaren & Wootton, 2003). Other medical specialties have a greater dependence on physical examination or invasive diagnostic procedures (Baer, Cukor & Coyle, 1997; Maheu, Whitten & Allen, 2001).

Telepsychology is portable, currently relatively cheap, and can be conducted wherever suitable equipment and bandwidth are available. In 2005, the Department of Health in Western Australia managed a state-wide videoconference network of 104 sites (Dillon, Loermans, Davis & Xu, 2005). Currently, the Australian Federal Government is funding satellite installation to rural and remote homes to facilitate broadband speeds that are equivalent to metropolitan speeds, under an initiative known as the Australian Broadband Guarantee (see www.dbcde.gov.au/broadband/australian_broadband_guarantee). Complimenting the National Broadband Network (see www.dbcde.gov.au/broadband/national_broadband_network), this initiative opens up the possibility of in-home mental health servicing to regional clients, through the use of webcams and the internet, in the near future. This type of technological innovation facilitates access to telepsychology in extremely remote geographical areas and under-serviced environments (Bashur, 1997; Buist, 2003; Nickelson, 1998).

Despite this expanding infrastructure, therapeutic telepsychology remains an exception rather than a core practice, and funded services remain underutilised (Dillon et al., 2005). The remit of this thesis is to understand this
disparity and evaluate solutions to this problem. Given the burden of disease of rural and remote mental health, closing this gap and realising the potential of therapeutic telepsychology would seem to be an important priority.

1.2 Definitions

Telepsychiatry, e-mental health, behavioural telehealth, and less frequently, telepsychology are variously used terms to describe the delivery of mental health care services (including health assessment, diagnosis, intervention, consultation, supervision, education) and the exchange of health care information across distances (Baer, Elford & Cukor, 1997; Nickelson, 1998; Rees & Haythornthwaite, 2004; Stamm, 1998; Yellowlees, et al., 2003).

Despite telepsychology’s age, little consistency in the terminology or its exclusion criteria has been reached in the nearly 40 years since it first appeared. The broader research literature tends to interchangeably use the terms telepsychiatry, tele-mental health and others, when referring to the use of video-conferencing in mental health. The label that is chosen appears to depend on the setting in which the intervention occurs and the professionals who are involved. The relative infrequency of the term telepsychology in the literature appears to reflect the infrequency of routine psychotherapeutic use of this tool. Regardless of terminology, however, the technology, processes and effects appear to share common elements (Somers & Coyle, 2003).

In this thesis, the term “telepsychology” will not include the provision of services via the internet, email, telephony or “store and forward” approaches, even though these have been increasingly incorporated under the banner of e-mental health and telepsychiatry (Yellowlees et al., 2003). Videoconferencing
telepsychology was chosen as the experimental medium alone, as it was recognised to incorporate visual, auditory and interpersonal aspects analogous to the face-to-face encounter, whereas other technologies do not necessarily include all sensory modalities in as comparatively analogous degree as videoconferencing does. For the purposes of this thesis, real-time telepsychology will be defined as incorporating a two-way videoconferencing process to bring about an interaction between a therapist and a client by technologically facilitated means of information capture (i.e. camera), transport (i.e. computer bandwidth and audiovisual coder/decoders [CODECs]) and display (i.e. monitor) (Simpson & Deans, 2000; Yellowlees et al., 2003).

Telepsychology is the term that will be used in this thesis to describe the provision of direct psychological intervention and services. Moreover, these services will be provided by the author of this thesis. I am a Clinical Psychologist and researcher with 4 years experience in rural and remote mental health. As per the participant-researcher stance undertaken in this research, henceforth, this thesis will be reported in the first person to avoid any misattribution that the author is not also the sole clinician-researcher who implemented and evaluated the intervention.

1.3 The current study

The thesis has multiple ambitions. The research aims to provide an original contribution in terms of (i) illuminating the outcomes of an application of “bleeding edge” technology in psychology, specifically, this thesis examines the potential and the pitfalls of videoconference telepsychology by developing and carefully investigating a real-world application of telepsychology for a small
group of community mental health clients; (ii) understanding the research-practice gap in this field with a view to informing service development; (iii) an evolving and emergent aim became to produce a practitioner-accessible framework for how a real-world evidence-based approach to practice might be conceptualised and undertaken to contribute to a professional demand for a sustainable, evidence-informed practice system. This tripartite strategy represents a novel approach to practice-based research in an emerging field, and this novelty in strategy has, in turn, influenced the format by which results are reported. It provides a rationale and method with potentially greater contextual and face validity with practitioners for addressing the research-practice gap.

The thesis initially follows a traditional research pathway, and begins with a literature review. However, the investigative strategy deviated from a traditional approach when more commonly used research methods failed to answer important emerging research questions. My own bias and preferred approach was to use a practice-driven methodology which developed responsively and iteratively to resolve the changing research questions when formative issues emerged and informed the developing lines of inquiry. These iterative approaches will be elaborated further in Chapter 3.

Ultimately, the format of this thesis is in some sense non-traditional and more closely follows that of qualitative research, specifically, the developmental intervention research approach is influential in its concurrent integration of literature, data and methodological development (Fawcett, Suarez-Balcazar, Balcazar, White, Paine et al., 1994; Yoshioka, 1999). It describes the methodological processes and research approach that accommodates the
“untidy realities of research” (Mellor, 2001; 465) as key data in a scientist-practitioner framework. This approach incorporates a formative (process) orientation in addition to a summative (outcome) one. While explicating some of the micro-aspects of telepsychology that may contribute to its success or failure, careful consideration is also given to methodological issues of the research process itself which may have contributed to the limitations in practice application to date. The detailed idiographic, case-based approach adopted in this thesis contributes to the nomothetic findings of the research base regarding telepsychology as a whole. Because the methodology of this thesis is emergent, the formative outcomes are valued as highly as the summative outcomes. To that end, the methodology of the thesis narrative and the overarching framework around which it is structured remains prominent throughout. It is also described generally in Chapter 3, and provides a touchstone in each subsequent chapter.

In sum, this approach was chosen in preference to a more traditional, experimental, or mono-method, quantitative approach, because it includes a focus on micro-processes which may reveal the causes or maintaining factors to explain the disconnect between research and practice in this field. The mixed methodology and iterative approach more closely resemble the typical idiographic hypothesis testing practices of clinical psychotherapy, and hence, honour the scientist-practitioner tradition. It is also importantly, therefore, designed to be more accessible to the ordinary practitioner.
CHAPTER TWO

STUDY ONE: LITERATURE REVIEW
CAN TELEPSYCHOLOGY BE SUCCESSFULLY APPLIED IN THE RURAL AND REMOTE AUSTRALIAN CONTEXT? WHAT DO WE KNOW?

Despite generally positive accounts of the outcomes of telepsychology being published from all over the world, and a general sense of the value of therapeutic telepsychology to rural or remote communities, my primary observation was that the literature failed to be corroborated by the observed real world activities of rural and remote mental health services in Western Australia (WA). In WA, videoconferencing technology appeared to be used for a range of purposes in rural mental health, but very little of its use was dedicated to direct client psychotherapeutic intervention. International colleagues reported similar trends. Further, when the literature was reviewed in detail, what became clear was that there was no research directly addressing the question of whether routine or long-term telepsychology could be conducted with adult community mental health clients in Australia, as any comparable literature tended to illustrate short-term pilot trials, non-adult populations, or non-intervention based psychiatric practices. Indeed, the literature base in therapeutic telepsychology is an emergent one, still delineating the myriad topography of issues, and has yet to establish a definitive catalogue of efficacious or probably efficacious responses. Thus, a more preliminary approach to literature review was indicated in the absence of sufficient programmatic research for a traditional aggregative synthesis to be successful.
2.1 *The synthesis of research: Aggregative, integrative and interpretive reviews*

The terms aggregative, integrative and interpretive synthesis have been used to distinguish between types of literature review (Beaumeister & Leary, 1997; Dixon-Woods, Bonas et al., 2006; Mays, Pope & Popay, 2005). Aggregative synthesis is a summary of data organised around pre-existing commonalities (such as population type), either through meta-analysis or narrative accounts of primary studies. Aggregative reviews combine research but are not necessarily comprehensive. In fact, the majority of literature reviews are targeted to support a hypothesis and may be vulnerable to author bias because of this, as they may not always explicitly comment on literature selection decisions or rationales.

Alternatively, an interpretive synthesis aims to develop concepts and their relationship to the data as a whole, such that the synthesis produces concepts or theories which unify the data, but were not necessarily generated by the primary studies they synthesised (Dixon-Woods, Bonas et al., 2006; Dixon-Woods, Cavers, Argawal, Annandale, Arthur, Harvey et al., 2006). Integrative reviews aim to combine aggregative summary data with interpretive findings to refine the conclusions and add context to interpretive synthesis. Additionally, they also incorporate non-experimental data, grey literature or anecdotal reports into a richly detailed whole (Mays et al., 2005).

The integrative review method is a broad review approach that allows for the simultaneous inclusion of research using diverse methodologies (i.e. experimental and non-experimental research, qualitative and quantitative data), as opposed to meta-analyses which accommodate studies using only
quantitative methods. Integrative reviews combine theoretical literature with experiential/anecdotal and empirical literature bases for a range of purposes including i) to define concepts; ii) to compare, contrast and review theories; iii) to combine idiographic data to contribute to nomothetic knowledge; (iv) to explore and review evidence; and v) to examine the methodological issues of a particular topic (Broome, 1993; Cooper & Hedges, 1994; Whittemore & Knafl, 2005). The inclusion of research with various sampling frames, methodologies and data sources has the potential to offer the comprehensive portrayal of complex issues or ‘thick description’ (Geertz, 1973). The integrative review approach appreciates that it is the research question, and how well the data answers it, not a statistical evidentiary “gold standard”, that determines the ultimate value of the data that contributes to the data set as a whole.

Jenson and Allen (1996) argue that the synthesis of qualitative reports should be an interpretive, inductive, hermeneutic and eclectic process at every stage. Literature reviews, therefore, may include qualitative and quantitative research, may employ structured approaches to synthesising data or may employ less formal methods, depending on the research questions being asked (Barnett-Page & Thomas, 2009; Fyfe, Hampe, Hardy, Bentham, MacLeod & Mogus, 2007). In this tradition, this thesis’ review goes beyond a typical literature review. This thesis’ review combines narrative (aggregative) approaches with interpretive and integrative models of research synthesis, to identify that which is known and which remains unknown in the field of telepsychology as a whole. This “synthesis-as-research” approach (Jackson, 1980) has produced a lengthy product for the reader to digest, however, it is a warranted stage in the lifecycle of telepsychology as an emerging discipline,
particularly one that seems inexplicably “stuck” in its application to routine, long-term psychotherapeutic practice. Hence, the comprehensive review is presented as Study 1 in the thesis.

2.2 The application of synthesis methodology to a review of telepsychology literature

One criticism of the aggregative or narrative review has been that the inclusion/exclusion criteria for particular studies and the synthesis techniques that are used to create the review may not be explicit. Failing to address these aspects of the review explicitly may influence the ability of the reader to fully appreciate the effect of the reviewer’s theoretical position on the review’s findings (Suri, 1999). To avoid this pitfall, the approach in this telepsychology review began with a description of the search criteria, the location of data and the search-level exclusion criteria.

In order to complete a comprehensive integrative review, several search strategies were employed. Documents for the review were collected via online databases, ancestry searching, journal hand searching, networking, and searching research registries (Conn, Valentine, Cooper & Rantz, 2003; Whittemore & Knafle, 2005). I examined MEDLINE, PsycINFO, and Telemedicine Information Exchange (TIE) databases for literature on telepsychiatry. The search encompassed the period August 1973 to January 2011. In addition, a search of the World Wide Web using search engines “Google”, “Google Scholar”, “Yahoo”, and “ninemsn”, was conducted to also
access relevant grey literature. The following terms were used independently in this search: telepsychiatry, telepsychology, tele-mental health, behavioural telehealth, videoconferencing, and video conferencing. Articles resulting from the search of “video conferencing” and “videoconferencing” that were unrelated to mental health practice were not reviewed. Articles identified in these searches that focused on telemedicine which incorporated non-psychological or non-psychiatric disciplines (e.g., radiography, neurology, internet-based bibliotherapy or self-help) were not included in the review. The review data set also included positive and negative outcome reports, qualitative and quantitative reports, and pertinent grey literature, thereby limiting the likely influence of selection bias. The Journal of Telemedicine & Telecare and the journal Telemedicine and e-Health were hand searched for relevant articles pertaining to videoconferencing in mental health.

As previously described, integrative reviews approach the essential tasks of research synthesis as involving induction and interpretation, rather than a priori research questions. Thus, this type of review aims to interpret how things may be connected or interact with each other, and to integrate the process and outcome analysis from both experimental and non-experimental data (Dixon-Woods, Cavers et al., 2006; Noblitt & Hare, 1988). This thesis’ review, therefore, did not specify a precise review question other than to identify what is and is not known in telepsychology. The aim of this approach was to allow the data to reveal the most relevant categories under which findings would be summarised and interpreted, rather than to apply a priori definitions (Dixon-Woods, Cavers et al., 2006; Noblitt & Hare, 1988).

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1 Grey literature refers to non-peer reviewed, published and unpublished literature such as government reports, and internal organisation service descriptions and studies.
The second step of the review was to extrapolate information pertaining to outcome versus process findings from all relevant data. Several factors related to the literature database meant that the data available was not easily managed to permit the use of formal statistical techniques, such as global meta-analysis. Those factors include: 1) the heterogeneous nature of the telepsychology studies identified, 2) the dearth of randomised controlled trials, 3) the preponderance of demonstration and feasibility studies, and 4) the pre-existence of smaller meta-analyses of subcategories of telepsychiatry and telepsychology, such as cost, patient satisfaction and clinical outcomes (e.g. see Richardson, Frueh, Grubaugh, Egede & Elhai, 2009, in Appendix A, for further detail). Additionally, qualitative summaries of data, and their relationship to quantitative findings, were largely absent from the literature base, except as incidental observations. This absence suggested that an integrative approach to a literature review might offer a more satisfactory solution to making sense of the field as whole, particularly from the perspective of the clinician-researcher.

In response, a comprehensive review of the literature was conducted. At the time the research began (i.e. in 2005), the telepsychology literature base was relatively manageable in terms of being of a “synthesisable” size, but when the study commenced, a comprehensive synthesis had not been published. When the research commenced in 2005, the telepsychology (a.k.a. telepsychiatry) literature base consisted of less than 200 peer-reviewed published documents, and approximately 16 non peer-reviewed “grey” documents (including service and trial descriptions, unpublished dissertations,
web-pages and directories). The present review includes 345 documents directly related to telepsychiatry (including telepsychology); an estimated 95% of all peer-reviewed telepsychology intervention research to January 2011, and includes contributions from 24 significant and relevant grey literature documents (e.g. government and service reports), plus additional commentary, letters and scientific press articles.

The literature base was diverse, complex and included empirical work using both qualitative and quantitative methods, including editorial comment, case studies, evaluative and descriptive papers, trials, psychiatric and psychological methods, management and economics papers. Because of this diversity, and as per the assumptions of the integrative review, the ultimate value of the data document that was included in the review was not simply based on statistical rigour – although this was one criterion. This approach to conducting an integrative review is a developmental one, in that data is presented with different qualities of rigour, but studies are not ranked hierarchically according to those qualities. Moreover, data is not discarded automatically from the review on this basis alone, but combined with other sources of support to strengthen or weaken the conclusions being drawn.

Typically, a document was included if the conclusions described a plausible/reasonable explanation of phenomenon, filled a practice gap, or offered supplementary or circumstantial evidentiary support to previously documented observations or conclusions reported elsewhere. This integrative approach is multi-levelled and cyclical and to some extent, mimics the reflexive action research strategy (Whittemore & Knafle, 2005).
A final step in the integrative review involves the assembly of disparate data sources into a meaningful display. This display enhances the visibility of relationships and patterns, and permits interpretation and integration (Whittemore & Knafle, 2005). In this thesis, prominent or recurrent themes in the telepsychology literature were summarised under thematic headings, and the key findings represented as Table 2.1, an omnibus summary table (May, Gask, Atkinson, Ellis, Mair & Esmail, 2001). A visual summary of telepsychology research is presented in Section 2.4, Figure 2.1.

This review of telepsychology research represents an essential component of the thesis’ overall research design. The review, as an integrative study of all telepsychology research, represents a formative outcome of the larger thesis and enables the translation of research into practice.

2.3 An approach to the telepsychology literature

The first reports of telepsychiatry/telepsychology appeared in 1956 and described closed circuit television projects for medical education and group psychotherapy (Wittson & Dutton, 1956). Since that time, research on videoconferenced tele-mental health has grown to reflect the perceived potential attractiveness of this mode of service delivery and its increasingly common existence in clinical environments. From an initial review of 68 peer reviewed journal articles in the period 1970-2000 (Frueh, Deitsch, Santos, Gold, Johnson, Meisler et al., 2000), to 63 additional studies reviewed three years later (Monnier, Knapp & Frueh, 2003), a further 165 studies have appeared in peer-reviewed scientific literature from 2003 to the present day (Total n = 296 in 2011; figure does not include 49 non-peer-reviewed documents also included in
this review). Interestingly, although the literature suggests that large scale investment in videoconferencing based tele-mental health networks has positive benefits and is probably deserved (e.g. Krupisnki, Nypaver, Poroptovich, Ellis, Safwat & Sapci, 2002; Saleem, Taylor & Khalifa, 2008), significant gaps in the published research base still persist.

Thus far, the extant literature has had a technological focus, and has tended to emphasise quantitative over qualitative studies (Richardson et al., 2009). The quality of the quantitative studies, being small in sample size, generally uncontrolled and typically descriptive, reflects the reality of the developmental nature of research enquiry. While several reviews of telepsychology have been previously published in the scientific literature, the focus of these reviews has been to offer a descriptive account of studies, which in the majority have been quantitative in nature, and have tended only to be included if identified in peer-reviewed literature. In contrast, an integrative review, such as the one to follow, represents a broader and unique contribution to the telepsychology literature.

Rapidly changing technology has driven and altered the nature of telepsychiatry/telepsychology itself, and also the means by which information and research about telepsychology is disseminated. For example, in addition to peer reviewed publications, the clinician-researcher may also find useful practice material in the “grey literature” base, which includes evaluative reports of telepsychology services published “within house” for the purposes of funding accountability “within house” (i.e. they are organisation specific, and may have a specific agenda). Although not always their deliberate intention, these grey
materials may also describe the telepsychology implementation issues, barriers and solutions, faced and overcome by the organisation.

In both the peer-reviewed and grey literature, studies appear to be reported on the basis of either their study characteristics or their program novelty. Those reports based on study characteristics are often divided according to;

1) participant characteristics (e.g. older adults versus children; rural residents versus metropolitan residents, ethnic minorities and forensic populations);

2) methodological characteristics (e.g. controlled groups, naturalistic observations, randomised group assignment, quantitative versus qualitative measures); and

3) outcome measures (e.g. service profile characteristics, reliability, satisfaction and other process variables, clinical outcomes measured qualitatively and/or quantitatively, and cost). Those studies that represent descriptions of novel programs highlight the unique setting or service profile in which the study occurs (e.g. a well-known intervention approach applied to a site specific population, such as island residents, or indigenous children)

The literature review which follows will critically evaluate and describe the literature findings as they cluster around these commonalities. This literature review represents a necessary and unique contribution to the telepsychology field because of the growing gap between research (as summarised in the review), practice and need. This situation highlighted the need for the inclusive and comprehensive nature of this thesis’ literature review, given the absence of previous attempts at such an integration of knowledge, and the role of such a
review as a foundation stone for further intervention development and knowledge synthesis.

2.4 **What is known about tele-mental health, telepsychiatry and telepsychology.**

The research base for telepsychiatry, telepsychology and tele-mental health-related interventions is slightly more than 55 years old, and was first labelled as “telepsychiatry” by Dwyer (1973). A number of targeted literature reviews are available which aggregate and/or critically summarise the progress of the telepsychology research field over these 55 years (e.g., Ball & McLaren, 1997; Frueh et al., 2000; Frueh, Monnier, Elhai, Grubaugh & Knapp, 2004; Hilty, Liu, Marks & Callahan, 2003; Hilty, Marks et al., 2004; Hyler & Gangure, 2003; 2004; McLaren, 2003a; 2003b; Monnier et al., 2003; Norman, 2006; Pesamaa, Ebeling, Kuusimaki, Winblad, Isohanni & Moilanen, 2004; Richardson et al., 2009; Simpson, 2009). Wootton, Yellowlees and McLaren’s (2003) book *Telepsychiatry and E-mental Health* remains an essential first steps guide to the technological revolution occurring within mental healthcare.

As suggested by the many novel program demonstrations reported in the literature, it appears that the use of tele-mental health via videoconferencing has been widely embraced as a cost-efficient and effective service—particularly for those facing access-to-care barriers (Antonacci, Bloch, Saeed Yildirim & Talley, 2008; McGinty, Saeed, Simmons & Yildirim, 2006; Norman, 2006; Shore & Manson, 2005). Significant investment in tele-mental health infrastructure by large government agencies, such as the Veterans Affairs (VA) administration in
the US (Godleski, Nieves, Darkins & Lehmann, 2008), and Australian State Government Health Departments\(^2\) has also occurred. Services have taken a variety of forms, including short-term or pilot trials of direct patient intervention and psychotherapy, assessment and evaluation, medication management, case management, supportive counselling, psycho-education, and professional supervision and training, as well as administrative and managerial tasks (see Glueckauf & Ketterson, 2004; Godleski et al., 2008). Tele-mental health, telepsychiatry and telepsychology services have been described from all over the world for a range of mental health clientele, including children and adolescents, incarcerated populations, older adults, rural residents and racial minorities.

Figure 2.1 demonstrates how the telepsychology literature has been organised for the review which follows. Each shape represents a separate review section.

2.4.1 Novel applications & program descriptions

Since the first studies in the 1950's (e.g. Wittson & Dutton, 1956), the bulk of published reports of telepsychology have fallen into the category of novel clinical demonstrations and program descriptions (Frueh, Deitsch et al., 2000; Monnier et al., 2003; Richardson et al., 2009). Service reports and program descriptions have been published in the grey literature, peer-reviewed

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\(^2\) Between 1999-2004, $16 million was allocated by the WA government for a WA based pilot trial of telehealth and was detailed in the WA Hansard, 5\(^{th}\) December, 2002 found at http://www.parliament.wa.gov.au/hansard/hans35.nsf/(ATT)/5DB6D420FF9CC72748256C91002303ED/$file/A36+S2+20021205+p4175b-4176a.pdf.
journals and edited books from around the world, although reports from under-developed nations are rare.

The absence of third world applications of telepsychology suggests that telehealth is a tool for primary medical diagnosis and care, where health priorities remain focussed on survival, rather than a tool to enhance quality of life and personal development. Mental health is often not a priority in the health concerns of developing nations (Hyman, Chisholm, Kessler, Patel & Whiteford, 2006). For example, India has a population of over one billion citizens and has 4,000 psychiatrists, and one psychologist for every 20 psychiatrists (Patel & Saxhana, 2003). Even more concerning is that, for its 22 million citizens, Afghanistan has two local psychiatrists (Benderley, 2006). Despite the
developing world supporting 80% of the world’s total population, direct clinical experience with telemedicine, as a whole, is very limited (Vasallo, Hoque, Farquharson, Patterson, Swinfen & Swinfen, 2001). Thus far, only two studies relating to telepsychiatry clinical practice in developing countries (India; Majmumdar, 2007, cited in Melaka & Ediripullige, 2009) and education/training (Pakistan; Rahman, Nizami, Minhas, Niazi, Slatch & Minhas, 2006) have been identified. Wynchank and Fortuin (2010) report that the use of telepsychiatry in South Africa is increasing, but do not cite reports to justify this conclusion. Wootton, Ho, Patil, and Scott (2009) cite the expected arrival of two clinical services and one tele-educational service to South Africa, but these services had yet to commence in 2009.

Despite the lack of research evidence, the widespread trauma and psychological toll of living in unstable and conflicted countries suggests that telepsychology may eventually become an ethically necessary adjunct to primary care in under-developed nations. More recently, advanced digital communications have reduced the reliance on cable-based communication systems and the impact is likely to increase access for those countries with less developed communications infrastructure (McLaren, 2003a). Future reviews are likely to report an increase in telepsychology use in developing countries. For example, Murdoch University is currently trialling the use of telepsychology to enhance resilience in Rwandan genocide survivors (see http://rwanda.murdoch.edu.au).

Although it is undoubtedly widespread, the true number of telepsychiatry programs worldwide is unknown. Brief surveys of telepsychiatry programs and services have been published by Allen and Wheeler (1998) and Brown (1995,
which describe the type of consultation or service provision and frequency of use of many rural mental health services in the US. Further information regarding the use of technology mediated health interactions can be found in the Telemedicine Information Exchange (TIE), a website which purports to "provide an online, unbiased, all-inclusive platform for information on telemedicine and telehealth... aimed at health professionals..." and others. It is maintained by the Association of Telemedicine Service Providers (ATSP). The ATSP also released an online survey report in 1999 and reported that there were 43 documented telepsychiatry programs around the world, but few projects actually enjoyed significant patient volume (cited in Whitten, Zaylor & Kingsley, 2000). No subsequent research has reported the number of telepsychiatry programmes that now exist, nor the number of programmes which have survived since the survey in 1999.

In the broader telepsychiatry and telepsychology peer-reviewed literature, service and program descriptions, and novel clinical demonstrations include reports in the areas of:

- **child and adolescent mental health service delivery (CAMHS)**
  (Alessi, 2003; Blackmon, Kaak & Ranseen, 1997; Boydell, Volpe & Pignatiello, 2010; Broder, Manson, Boydell & Teshima 2004; Browne, Reilly & Bradley, 2006; Dongier, Tempier, Lalinec-Michaud & Meunier, 1986; Dossetor, Nunn, Fairley & Eggleton, 1999; Elford, White & Bowering, 2000; Elford et al., 2001; Ermer, 1999; Gelber & Alexander, 1999; Gibson, Pennington, Stenhoff & Hopper, 2010; Hufford, Glueckauf & Webb, 1999; Kopel, Nunn & Dossetor, 2001; Myers, Sulzbacher & Melzer, 2004; Nelson,
Barnard & Cain, 2003, 2006; Ryan, Stathis, Smith, Best & Wootton, 2005; Savin, Garry, Zuccaro & Novins, 2006; Staller, 2006; Sulzbacher, Vallin & Waetzig, 2006);

- **older adult services (OA’s)**
  (Grob, Weintraub, Sayles, Raskin & Ruskin, 2001; Johnston & Jones, 2001; Jones, Johnston, Rebouissin & McCall 2001; Jones & Ruskin, 2001; Lee, Kim, Jhoo, Lee, Kim, Lee et al., 2000; McEachern, Kirk, Morgan, Crossley & Henry, 2008; Montani, Billaud, Couturier, Fluchaire, Lemaire, Malterre et al.,1996; Montani, Billaud, Tyrell, Fluchaire, Malterre, Lauvernay et al., 1997; Savenstedt, Zingmark, Hyden & Brulin, 2005; Savolainen, hanson, Magnusson & Gustavsson, 2008; Schopp, Johnstone & Merrell, 2000; Sumner, 2001; Tang et al., 2001; Tyrell, Couturier, Montani & Franco, 2001)

- **family therapy**
  (Bischoff, Hollist, Smith & Flack, 2004; Dausch, Miklowitz, Nagamoto, Adler & Shore, 2009; Frier et al., 1999; Hill, Brown, Diebold, Borders, Standenmeier, Detweiler et al., 2004; Keilman, 2005; Kuulasmaa, Wahlberg & Kuusimäki, 2004);

- **mental health services for the deaf** (Austen & McGrath, 2006b; Lopez, Cruz, Lazarus, Webster, Jones & Weinstein, 2004);

- **the delivery of hypnosis**
  (Simpson, Morrow, Jones, Ferguson & Brebner, 2002);

- **treatment of substance use and gambling**
Telepsychology in Rural WA

(Frueh, Henderson & Myrick, 2005; King, Stoller, Kidorf, Kindbom, Hursh et al., 2009; Oakes, Battersby, Pols & Cromarty, 2008)

- **cognitive behavioural therapy (CBT) for eating disorders**
  (Bakke, Mitchell, Wonderlich & Erickson, 2001; Mitchell, Crosby, Wonderlich, Crow, Lancaster, Simonich et al., 2008; Mitchell, Myers, Swan-Kremeier & Wonderlich, 2003; Pelletier, 2003; Simpson, Bell, Britton, Mitchell, Morrow, Johnstone et al., 2006; Simpson, Knox, Mitchell, Fergusen, Brebner & Brebner, 2003)

- **cognitive-behavior therapy (CBT) for mood and anxiety disorders**
  (Bouchard, Payeur, Rivard, Allard, Paquin, Renaud et al., 2000; Bouchard, Paquin, Payeur, Allard, Rivard, Fournier et al., 2004; Cowain, 2001; Day & Schneider, 2002; Deitsch, Frueh & Santos, 2000; Frueh, Monnier, Grubaugh, Elhai, Yim et al, 2007; Germain, Marchand, Bouchard, Guay & Drouin, 2010; Griffiths, Blignault & Yellowlees, 2006; Himle, Fischer, Muroff, Van Etten, Lokers, Abelson et al., 2006; Manchanda & McLaren, 1998);

- **cancer patients and transplant recipients with adjustment disorder**
  (Cluver, Schuyler, Frueh, Brescia & Arana, 2005; Hilty, Nesbitt, Canning & Hales., 2000; Shepherd, Goldstein, Whitford, Thewes, Brummell & Hicks, 2006);

- **mental health practitioner training and supervision**
  (Ekblad, Manicavasagar, Silove, Baarnhielm, Reczycki, Mollica et al., 2004; Fahey, Day & Gelber, 2003; Heckner & Giard, 2005; Hilty, Alverson, Alpert, Tong, Sagduyu, Boland et al., 2006; Meyer,
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Hamel-Lambert, Tice, Safran, Bolon & Rose-Grippa, 2005; Rees & Gillam, 2001; Walter, Rosenquist & Bawtinhimer, 2004);

- **psychiatric consultation liaison services**
  (Hilty, Nesbitt, Hales, Anders & Callahan, 2000; Hilty, Yellowlees, Cobb, Bourgeois, Neufeld & Nesbitt, 2006; Hockey, Yellowlees & Murphy, 2004);

- **deployed military personnel**
  (Grady & Melcer, 2005; Hill et al., 2004; James & Folen, 1999; Neufeld, Yellowlees, Hilty, Cobb & Bourgeois, 2007) and **veterans**
  (Dunn, Choi, Almagro, Recla, Krupinski & Weinstein, 2000; Frueh, Monnier, Yim, Grubaugh, Hamner & Knapp, 2007; Shore, Savin, Orton, Beals & Manson, 2007)

- **forensic populations**

- **diagnosis/assessment**
  (Hildebrand, Chow, Williams, Nelson & Wass, 2004; Kobak, 2004; Shore, Hilty & Yellowlees, 2007; Shores, Ryan-Dykes, Williams, Mamerto, Sadak, Pascualy et al., 2004).

The outcomes typically reported include the following: 1) high consumer satisfaction with the service, particularly in the context of receiving service where none was provided before, or having to travel vast distances or incur
personal cost to receive service (Hyler & Gangure, 2003; Sorvaniemi, Ojanen & Santamaki, 2005; Thomas, Miller, Hartshorn, Speck & Walker, 2005; Urness, Wass, Gordon, Tian & Bulger, 2006); 2) clinicians express general satisfaction with telepsychiatry but technical problems remain a main concern (Gelber & Alexander 1999; McLaren, 2004; Monnier et al., 2003); 3) positive intervention outcomes, whether this is in regard to anecdotal evidence of symptom improvement or more objective measures (often in the absence of a control group) (Bischoff et al., 2004; Griffiths et al., 2006; Kuulasmaa et al., 2004).

A recent study in the USA (n= 200) also demonstrated that both rural and urban primary care patients were generally receptive to using medical and tele- mental health interventions via videoconferencing if offered; and they did not believe that videoconferencing technology would be overly sophisticated or complicated (Grubaugh, Cain, Elhai, Patrick & Frueh, 2008). This same study found that rural patients, in particular, expressed a willingness to use telepsychiatry, if it improved their access to services they would not otherwise receive.

Program descriptions including service types, frequency of use and features associated with success or failure have been published on services available around the world from;

- **Norway** (Gammon, Bergvik, Bergmo & Pederson, 1996; Gammon, Sørlie, Bergvik & Sørensen Høifødt, 1998; Hanssen, Wangberg & Gammon, 2007; Kuulasmaa et al., 2004),

- **Sweden** (Ekblad et al., 2004),

- **Denmark** (Mucic, 2008),
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**Finland** (Mielonen, Ohinmaa, Moring & Isohann, 1998; 2000; Sorvaniemi et al., 2005),

**New Zealand** (Al-Quirim, 2006; Kerr & Norris, 2003),

**Australia** (Buist, Coman, Silvas & Burrows, 2000; Fahey et al., 2003; Griffiths et al., 2006; Greenwood, Chamberlain & Parker, 2004; Hockey et al., 2004; Kavanagh & Hawker, 2001; Ryan et al., 2005; Starling & Foley, 2006),

**Spain/the Canary Islands** (De Las Cuevas, Artilos, De La Fuente & Serrano, 2003),

**Pakistan** (Rahman et al., 2006; Minhas & Nizami, 2005),

**Ireland** (Browne, Reilly & Bradley 2006),

**Canada** (Greenberg, Boydell & Volpe, 2006; Hampton, 2006; Urness, 2003b; Urness, Hailey, Delday, Callanan & Orlik, 2004),

**United States** (Bischoff et al., 2004; Brown, 1998; Hilty, Yellowlees, Cobb, Bourgeois, Neufeld & Nesbitt, 2006; McGinty, Saeed, Simmons & Yildirim, 2006; Savin et al., 2006; Whitten & Kuwahara, 2004),

**United Kingdom** (Haslam & McLaren, 2000; May, Gask, Ellis, Alkinson, Mair, Smith et al., 2000; McLaren, Ahlbom, Riley, Mohameddali & Denis, 2002)

In previous reviews, telepsychiatry services were often dominated by the use of the technology for liaison, education and training, case-conferencing and administrative purposes (e.g. Frueh et al., 2000; Monnier et al., 2003). It has been suggested that telepsychiatric consultation services may be insufficient for isolated and inexperienced providers in remote areas, who may lack the skills to implement the recommended treatments, and work in reduced multidisciplinary team environments (Starling & Foley, 2006). In contrast, increasing numbers of program descriptions suggest that the use of telepsychology for direct clinical
service provision to clients is increasing (Richardson et al., 2009; Simpson, 2009). However, these direct intervention activities are rarely for long-term or routine psychotherapeutic engagement, and may also include medication monitoring and consultation psychiatry to providers, in addition to psychotherapy (Folen, James, Earls & Andrasik, 2001; Richardson et al., 2009; Simpson, Deans & Brebner, 2001). It is noteworthy that while telepsychology is becoming more commonplace and new applications are frequently described, the ongoing patient, provider or service delivery issues related to the continued use of the technology, after the pilot or demonstration is completed, are often absent (Shore & Manson, 2004). This literature trend exposes a service gap and suggests that a more desirable service profile would include ongoing direct client clinical tele-consultations, in conjunction with shared use for support, liaison and education (Gelber, 2001; Grady & Melcer, 2005; Jerome et al., 2000).

Given that there are several tele-mental health services that have now been operating for close to 10 years or more, e.g., Appal-Link (Graham, 1996), South Australia’s Rural & Remote Mental Health Service (e.g. Clarke, 1997), University of Arizona (e.g. Cruz, Krupinski, Lopez & Weinstein, 2005), University of California-Davis (e.g. Hilty, Yellowlees & Nesbitt 2006) and the University of Michigan (e.g. Whitten & Rowe-Adjibogoun, 2002), more robust quantitative and qualitative indicators of the success or failure of longer-term and large scale programs, such as RCT’s and in depth case analyses, should be available, yet are relatively scarce in the literature.

Table 2.1. presents all telepsychology studies described in the preceding chapter, with an emphasis on intervention and outcome studies, rather than
reviews. The primary outcomes of the telepsychology and telepsychiatry studies include reliability, satisfaction, clinical outcome and cost. Studies are also summarised according to the location of the study, participant characteristics and sample size.
### Table 2.1 Omnibus table of intervention studies assessing reliability, satisfaction, clinical outcomes and cost of telepsychiatry/telepsychology

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Size</th>
<th>Participant characteristics</th>
<th>Location</th>
<th>Reliability</th>
<th>Satisfaction</th>
<th>Clinical outcomes</th>
<th>Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alessi, 2003</td>
<td>1</td>
<td>15y/o adolescent</td>
<td>US</td>
<td>√</td>
<td>√</td>
<td>O = Following v/c specialist consult, Dx changed, Tx changed, resulting in pt improvement, reduced severity of Sx</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baer, Cukor, Jenike, Leahy, O’Laughlen &amp; Coyle, 1995</td>
<td>10</td>
<td>Adult patients with OCD</td>
<td>US</td>
<td>√</td>
<td>√</td>
<td>R = Ratings of severity of OCD equal to F2F interview ratings on Y-BOCS S = Average to better than F2F care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baigent, Lloyd, Kavanagh, Ben-Tovim, Yellowlees, Kalucy et al., 1997</td>
<td>63</td>
<td>Adult state hospital inpatients</td>
<td>Australia</td>
<td>√</td>
<td>√</td>
<td>R = BPRS ratings similar, though difficulty with “overall concern” &amp; affect S = Many patients were satis &amp; preferred v/c instead of F2F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ball, McLaren, Summerfield, Lipsedge &amp; Watson, 1995</td>
<td>6</td>
<td>Adult inpatients</td>
<td>UK</td>
<td>√</td>
<td></td>
<td>S = with F2F, v/c &amp; hands-free telephone – higher for F2F &amp; videophone than for telephone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ball &amp; Puffett, 1998</td>
<td>8</td>
<td>Geriatric patients</td>
<td>US</td>
<td>√</td>
<td></td>
<td>R = Compared CAMCOG in F2F and v/c – (r) range from 0.1-0.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ball, Scott, McLaren &amp; Watson, 1993</td>
<td></td>
<td>Adult inpatients</td>
<td>Low cost</td>
<td></td>
<td></td>
<td>R = Compared MMSE between F2F &amp; v/c 48hrs apart. Correlation (r) between groups 0.89-0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bischoff et al., 2004</td>
<td>3</td>
<td>Adult community outpatients</td>
<td>High speed</td>
<td></td>
<td></td>
<td>S = pts &amp; therapists satis, good therapeutic alliance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bishop, O’Reilly, Maddox &amp; Hutchinson, 2002</td>
<td>24</td>
<td>Randomly assigned Adult outpatients</td>
<td>Canada</td>
<td></td>
<td></td>
<td>S = 17 completers. No sig diff between F2F and v/c in S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackmon et al., 1997</td>
<td>43</td>
<td>Child outpatients</td>
<td>ND</td>
<td></td>
<td></td>
<td>S = Children’s S = “high”; parent &amp; provider S = “very good”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bose, McLaren, Riley &amp; Mohammedali, 2001</td>
<td>13</td>
<td>Brief counselling adult outpatients</td>
<td>ND</td>
<td></td>
<td></td>
<td>S = Overall happy, would use again</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>n</td>
<td>Participant characteristics</td>
<td>KBPS (FPS)</td>
<td>Location</td>
<td>Reliability</td>
<td>Satisfaction</td>
<td>Cost</td>
<td>Comments</td>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bouchard et al., 2004</td>
<td>21</td>
<td>Adult Panic Disorder pts</td>
<td>384</td>
<td>Canada</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>S = early &amp; strong relationship formed in telepsych</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>O = CBT F2F as effective as telepsych</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bouchard et al., 2000</td>
<td>8</td>
<td>Adult outpatients</td>
<td>384</td>
<td>Canada</td>
<td>✓</td>
<td></td>
<td></td>
<td>O= 12 sessions telepsych CBT. Improvements in target Sx's and GAF. Early &amp; strong therapeutic alliance developed.</td>
</tr>
<tr>
<td>Bratton &amp; Cody, 2000</td>
<td>20</td>
<td>Geriatric patients in a retirement community</td>
<td>128</td>
<td>US</td>
<td>✓</td>
<td></td>
<td></td>
<td>S = good despite hearing &amp; poor image problems</td>
</tr>
<tr>
<td>Brodey et al., 2000</td>
<td>43</td>
<td>Forensic psychiatric inmates in a large urban jail</td>
<td>384</td>
<td>US</td>
<td>✓</td>
<td></td>
<td></td>
<td>S = Patient S with evaluations was moderately high for patients in both groups; no sig diffs between them. Psychiatrist happy with Dx capability</td>
</tr>
<tr>
<td>Callahan, Hilty &amp; Nesbitt., 1998</td>
<td>93</td>
<td>Adult primary care outpatients</td>
<td>128 (15)</td>
<td>US</td>
<td>✓</td>
<td></td>
<td></td>
<td>S = equal to a nonpsychiatric population</td>
</tr>
<tr>
<td>Chae, Park, Cho, Hong &amp; Cheong, 2000</td>
<td>30</td>
<td>Adult outpatients</td>
<td>33</td>
<td>Korea</td>
<td>✓</td>
<td></td>
<td></td>
<td>S = Equal to usual, F2F care</td>
</tr>
<tr>
<td>Clarke, 1997</td>
<td>32</td>
<td>Adult Psychiatry</td>
<td>128</td>
<td>Australia</td>
<td>✓</td>
<td></td>
<td></td>
<td>S = nurses more S than GP’s; pts rated with BPRS=high rates of PD and affective Dx</td>
</tr>
<tr>
<td>Cluver et al., 2005</td>
<td>10</td>
<td>Terminally ill cancer pts</td>
<td>384</td>
<td>US</td>
<td>✓</td>
<td></td>
<td></td>
<td>S= 6 sessions CBT alternating between telepsych and F2F. Positive S equivalent regardless of administration approach</td>
</tr>
<tr>
<td>Cullum, Weiner, Gehrmann &amp; Hynan, 2006</td>
<td>33</td>
<td>Older adult (mild cog impairment and AD)</td>
<td>Closed circuit</td>
<td>US</td>
<td>✓</td>
<td></td>
<td></td>
<td>R = neuropsych test battery equally reliable between F2F and telepsych; however telepsych group had a partner during testing to assist with anxiety and equipment</td>
</tr>
<tr>
<td>Day &amp; Schneider, 2002</td>
<td>80</td>
<td>Adult outpatients</td>
<td>ND</td>
<td>US</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>O = 5 sessions CBT. 2-way audio or video is comparable to F2F Tx as per BSI, GAF. Process scores on Vanderbilt Scales indicated greater participation in telepsych conditions than F2F S= equiv b/w conditions.</td>
</tr>
<tr>
<td>de Las Cuevas, Arredondo, Cabrera, Sulzenbacher &amp; Meisse, 2006</td>
<td>140</td>
<td>Adult outpatients</td>
<td>384-768 (30)</td>
<td>Spain</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>O = No diffs between F2F and telepsych (8 weeks x 30 mins) CBT + medication consultations (RCT) as measured by CGI and SCL-90R</td>
</tr>
<tr>
<td>Study</td>
<td>n</td>
<td>Patients</td>
<td>KBPS (FPS)</td>
<td>Location</td>
<td>Reliability</td>
<td>Clinical outcome</td>
<td>Satisfaction</td>
<td>Cost</td>
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</tr>
<tr>
<td>Dongier et al., 1986</td>
<td>50</td>
<td>Adult, child outpatients</td>
<td>Closed circuit TV</td>
<td>Canada</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doze, Simpson, Hailey &amp; Jacobs, 1999</td>
<td>90</td>
<td>Adult outpatients</td>
<td>128 to 384</td>
<td>Canada</td>
<td>√</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elford et al., 2000</td>
<td>23</td>
<td>Child patients</td>
<td>336</td>
<td>US</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elford et al., 2001</td>
<td>23</td>
<td>Children</td>
<td>336</td>
<td>US</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fortney, Pyne, Edlund, Williams, Robinson, Mittal et al., 2007</td>
<td>395</td>
<td>VA Adult primary care patients</td>
<td>ND</td>
<td>US</td>
<td>√</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freir et al., 1999</td>
<td>34</td>
<td>Adult outpatients (child/parents)</td>
<td>128</td>
<td>UK</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frueh et al., 2005</td>
<td>18</td>
<td>Adult group therapy for alcohol disorders</td>
<td>384</td>
<td>US</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glueckauf, Fritz, Ecklund-Johnson, Lisaa, Dages &amp; Carnes, 2002</td>
<td>22</td>
<td>Teenagers with epilepsy &amp; parents</td>
<td>768</td>
<td>US</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graham, 1996</td>
<td>39</td>
<td>Adult outpatients</td>
<td>768</td>
<td>US</td>
<td>√</td>
<td>√</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>n</td>
<td>Patients</td>
<td>KBPS (FPS)</td>
<td>Location</td>
<td>Reliability</td>
<td>Satisfaction</td>
<td>Clinical Outcome</td>
<td>Cost</td>
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<tr>
<td>Grealish, Hunter, Glazer &amp; Potter, 2005</td>
<td>5</td>
<td>Adolescent inpatients</td>
<td>3 x ISDN</td>
<td>UK</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greenwood, Chamberlain &amp; Parker, 2004</td>
<td>31</td>
<td>Adults referred to mood clinic</td>
<td>384</td>
<td>Australia</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Griffiths et al., 2006</td>
<td>15 + 5</td>
<td>Adult community outpatients and case managers</td>
<td>128</td>
<td>Australia</td>
<td>√</td>
<td>√</td>
<td>O = CBT for anxiety Dx and MDD delivered to pts &amp; Case mngs. Sig improvements as measured on MHI and HoNOS. S = telepsych consults acceptable to pts and Case mngs.</td>
<td></td>
</tr>
<tr>
<td>Grob et al., 2001</td>
<td>27</td>
<td>Nursing home residents</td>
<td>384</td>
<td>US</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harley, 2006</td>
<td>11</td>
<td>5 patient consultations + 6 specialist presentation</td>
<td>ND</td>
<td>UK</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haslem &amp; McLaren 2000</td>
<td>69</td>
<td>Adult &amp; geriatric outpatients</td>
<td>128</td>
<td>US</td>
<td>√</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hildebrand et al., 2004</td>
<td>29</td>
<td>Neuropsych Ax of geriatric volunteers</td>
<td>336 or 384</td>
<td>Canada</td>
<td>√</td>
<td>√</td>
<td>R = Scores for expressive word knowledge similar in both test conditions; larger diffs in the visual–spatial processing scores. Group who were initially Ax’d via F2F had narrower limits of agreement on most measures than the group who were initially Ax’d via v/c</td>
<td></td>
</tr>
<tr>
<td>Hill, Allman &amp; Ditzler, 2001</td>
<td>2</td>
<td>Military Personal and family therapy</td>
<td>ND</td>
<td>US</td>
<td>√</td>
<td>√</td>
<td>Case study of 2 military personnel including family members in ongoing therapeutic process</td>
<td></td>
</tr>
<tr>
<td>Hilty, Nesbitt, Hales et al., 2000</td>
<td>40</td>
<td>Adult primary care outpatients</td>
<td>384 (15)</td>
<td>US</td>
<td>√</td>
<td></td>
<td>S = S equal for F2F &amp; telepsych, if patient given the choice</td>
<td></td>
</tr>
<tr>
<td>Himle et al., 2006</td>
<td>3</td>
<td>OCD outpatients</td>
<td>384</td>
<td>US</td>
<td>√</td>
<td>√</td>
<td>O = Improvement for 3 cases over 12 weeks manualised ERP as measured by YBOCS, CGI, Ham D, WAI, and telepresence and V/C scale S = all satisfied</td>
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<tr>
<td>Study</td>
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<td>Patients</td>
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<td>Satisfaction</td>
<td>Clinical outcome</td>
<td>Cost</td>
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<td>Hunkeler, Meresman, Hargreaves, Fireman, Berman, Kirsch, 2000</td>
<td>302</td>
<td>Adult outpatients in primary care</td>
<td>ND</td>
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<td>Jerome, 1986</td>
<td>ND</td>
<td>Children and families</td>
<td>ND</td>
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<td>Johnston &amp; Jones, 2001</td>
<td>40</td>
<td>Nursing facility residents</td>
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<td>✓</td>
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<td>Jones, Johnston, Reboussin &amp; McCall, 2001</td>
<td>30</td>
<td>Geriatric nursing home patients</td>
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<td>Kennedy &amp; Yellowlees, 2000</td>
<td>124</td>
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<td>Kennedy and Yellowlees, 2003</td>
<td>124</td>
<td>Adult outpatients</td>
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<td>Kirkwood, Peck &amp; Bennie, 2000</td>
<td>27</td>
<td>Adult patients in residential rehabilitation centres</td>
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<td>Kobak, 2004</td>
<td>42</td>
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<td>384</td>
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<td>Leonard, 2004a</td>
<td>80</td>
<td>Forensic adults</td>
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<td>Lexcen, Hawk, Herrick &amp; Blank, 2006</td>
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<td>Forensic adults</td>
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<td>Clinical outcome</td>
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<td>Lyketsos, Roques, Hovane &amp; Jones, 2001</td>
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<td>Older adult dementia patients</td>
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<td>✓</td>
<td>O = Reduced psychiatric hospitalization by 50%</td>
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<td>Malagodi &amp; Smith, 1999</td>
<td>4</td>
<td>Occupational evaluation of adult patients</td>
<td>128 video &amp; 16.8 phone</td>
<td>US</td>
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<td>R = v/c/ worked, but took more time &amp; had motion problems</td>
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<td>Manguno-Mire, Thompson, Shore, Croy, Artecona &amp; Pickering, 2007</td>
<td>21</td>
<td>Adult Forensic – competency to stand trial Ax</td>
<td>768</td>
<td>US</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>S = Pt &amp; provider S measured; pts no preference for F2F or telepsych, Providers had greater satisfaction with F2F.</td>
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<tr>
<td>Mannion, Fahy, Duffy, Broderick &amp; Gethins, 1998</td>
<td>9</td>
<td>Psych Ax Adults from Aran Islands</td>
<td>384</td>
<td>UK</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>S = telepsych acceptable to pts &amp; clinicians – obviating need for travel.</td>
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<tr>
<td>Marcin, Nesbitt, Cole, Knuttel, Hilty, Prescott et al., 2005</td>
<td>223 (n=65 Psych)</td>
<td>Retrospective chart review of adults at GP following specialist consult via v/c</td>
<td>384</td>
<td>US</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Review of multiple disciplines administered via v/c O = Dx changed in 37%; Tx changed in 94% &amp; clin improvement in 72% after video psychiatric consultation</td>
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<tr>
<td>Matsuura, Hosaka, Yukiyama, Ogushi, Okado, Haruki, et al., 2000</td>
<td>17</td>
<td>Adult volunteers and outpatients</td>
<td>384</td>
<td>Japan</td>
<td>✓</td>
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<td>R = BPRS – perfect agreement b/w F2F &amp; telepsych</td>
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<td>McCloskey, 1997</td>
<td>236</td>
<td>Adult outpatients</td>
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<td>S = Rural Montana; would have had to travel significantly</td>
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<td>McEachern et al., 2008</td>
<td>71</td>
<td>Rural, older adult community outpatients</td>
<td>ND</td>
<td>Canada</td>
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<td>✓</td>
<td>✓</td>
<td>R = Comparison of MMSE delivered via telepsych and F2F found equivalent</td>
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<td>McLaren, Ball, Summerfield, Watson &amp; Lipsedge, 1995</td>
<td>3</td>
<td>Adult schizophrenia patients</td>
<td>ND</td>
<td>UK</td>
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<td>✓</td>
<td>✓</td>
<td>S = Pts felt comfortable &amp; some preferred it to F2F</td>
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<td>McLaren, Laws, Ferriera, OFlynn, Lipsedge &amp; Watson, 1996a</td>
<td>7</td>
<td>Community mental health centre</td>
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<td>US</td>
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<td>✓</td>
<td>✓</td>
<td>S = Comparison of telepsych &amp; F2F; pt S higher with telepsych &amp; also higher than psychiatrist S</td>
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<td>Mielenen et al.,1998</td>
<td>14</td>
<td>Adult inpatients</td>
<td>ND</td>
<td>Finland</td>
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<td>✓</td>
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<td>S = High pt S (80% considered it to have been useful)</td>
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<td>Study</td>
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<td>Patients</td>
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<td>Reliability</td>
<td>Cost</td>
<td>Comments</td>
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<td>Mitchell et al., 2008</td>
<td>128</td>
<td>Randomised controlled study of Adults with eating Dx</td>
<td>1.544megabits/sec</td>
<td>US</td>
<td>√</td>
<td>√</td>
<td>O = pts randomised to either F2F or telepsych to receive 20 sessions manualised CBT for Bulimia Nervosa. Over 16 weeks, roughly equivalent in outcome (binge eating &amp; depression) to F2F S = acceptable to pts</td>
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<tr>
<td>Modai, Jabarin, Kurs, Barak, Hanan &amp; Kitain, 2006</td>
<td>81</td>
<td>Adult inpatients</td>
<td>ISDN</td>
<td>Israel</td>
<td>√</td>
<td>√</td>
<td>C = telepsych more expensive S = pts and physicians satisfied R = Tx perceived to be safe</td>
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<tr>
<td>Montani et al., 1997</td>
<td>15</td>
<td>Elderly inpatients</td>
<td>ND</td>
<td>France</td>
<td>√</td>
<td></td>
<td>S = 11/15 pts preferred F2F to telepsych, but telepsych overall judged acceptable by pts and psychologist</td>
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<tr>
<td>Morgan, Patrick &amp; Magaletta, 2008</td>
<td>186</td>
<td>Male prison inmates</td>
<td>satellite</td>
<td>US</td>
<td>√</td>
<td>√</td>
<td>S = No sig diffs between F2F and V/C in inmates’ perceptions of alliance with mental health professional, or overall S O = no sig diff in self report post-session mood.</td>
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<tr>
<td>Morland, Pierce &amp; Wong, 2004</td>
<td>20</td>
<td>Older adult outpatients</td>
<td>512</td>
<td>US</td>
<td>√</td>
<td>√</td>
<td>S = equal between F2F and V/C. 3 withdrew O = coping skills &amp; info retention equivalent between groups</td>
<td></td>
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<tr>
<td>Myers et al., 2004</td>
<td>369</td>
<td>CAMHS outpt clinics</td>
<td>384</td>
<td>US</td>
<td>√</td>
<td></td>
<td>R = Telepsych pts representative of usual care outpatients. Similar Dx’s represented. Adequate technical resolution &amp; capacity for rapport building for accurate Ax</td>
<td></td>
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<tr>
<td>Myers, Valentine &amp; Melzer, 2007</td>
<td>172</td>
<td>CAMHS outpts</td>
<td>384</td>
<td>US</td>
<td>√</td>
<td></td>
<td>S = Referring providers = high S with telepsych, pediatricians consistently more satisfied than GP’s. Sustainability of telepsych challenged by public reimbursement &amp; infrastructure costs</td>
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<tr>
<td>Nelson et al., 2003</td>
<td>28</td>
<td>Child patients with depression</td>
<td>128</td>
<td>US</td>
<td></td>
<td></td>
<td>O = 8wks CBT = Substantial clinical change, equivalent to F2F care</td>
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<tr>
<td>Nelson, Zaylor &amp; Cook, 2004</td>
<td>62</td>
<td>Male prison inmates</td>
<td>128</td>
<td>US</td>
<td>√</td>
<td></td>
<td>R = high correlation (r) b/w psychiatrist &amp; inmate self rating of illness severity on SCL-R-90</td>
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<tr>
<td>Nesbitt, Marcin, Alexander, Hilty &amp; Prescott, 2002</td>
<td>164</td>
<td>Adult outpatients with specialty consultations including psychiatry</td>
<td>128 to 384</td>
<td>US</td>
<td>√</td>
<td></td>
<td>O = Change in Dx in 91% of cases and clinical improvement in 56% of cases</td>
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</table>
### Telepsychology in Rural WA

<table>
<thead>
<tr>
<th>Study</th>
<th>n</th>
<th>Patients</th>
<th>KBPS (FPS)</th>
<th>Location</th>
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<th>Satisfaction</th>
<th>Clinical outcome</th>
<th>Cost</th>
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<tr>
<td>Neufeld et al., 2007</td>
<td>33</td>
<td>Convenience sample CAMHS and Adult patients</td>
<td>384</td>
<td>US</td>
<td></td>
<td>√</td>
<td></td>
<td></td>
<td>O = Sig improvement at 3 &amp; 6 months follow-up on SF-12 following delivery of rural outpatient primary mental health care delivered via telepsych (289 consults in first yr)</td>
</tr>
</tbody>
</table>
| O’Reilly, Bishop, Maddox, Hutchinson, Fisman & Takhar, 2007 | 495  | Randomly assigned adult outpatients                | 384        | Canada   | √            | √             | √                |      | O = psychiatic consultation & short term f-up equivalent between F2F and v/c groups  
S = levels similar between groups  
C = telepsych at least 10% cheaper per pt than F2F                                                                                   |
| Poon, Hui, Dai, Kwok & Woo, 2005    | 22   | Older adults with mild cognitive impairment        | 1.5        | Hong Kong| √            | √             |                  |      | O= 12 sessions compared F2F and telepsych sig improvement in attention, memory & language post-cog intervention with no diff between F2F Vs telepsych  
S = telepsych S positive between pts and staff                                                                                      |
| Preston, 1995                      |      | Teleconsultations in Texas                         | 384        | US       |             |               |                  |      | C = compared the cost of rural telepsych with on-site visits & concluded that the former was more expensive initially but the reverse was true after 2.7 years.                                              |
| Ruskin, Reed, Kumar, Kling, Seigel, Rosen et al., 1998 | 30   | Geriatric outpts                                  | 384        | US       | √            | √             |                  |      | R = SCID-IIIR – F2F equivalent to telepsych  
S = Geriatric satisfaction similar to adult satisfaction                                                                                       |
| Ruskin, Silver-Aylaian, Kling, Reed, Bradham & Hebel, 2004 | 119  | Randomly assigned adult veterans with depression to telepsych or f2f | 384        | US       |             | √             | √                |      | O = HAM-D, STAI, GAF & CGI scores improved over Tx – equiv between groups, equiv pt adherence, S & C over 8x (20 min) sessions/6 months  
S = no b/w group diffs in S or dropout rates  
C = telepsych more expensive until costs of psychiatrist travel factored in. No increase in health care resource consumption in telepsych                                          |
| Savin et al., 2006                 | 21   | Evaluations of CAMHS service+ Case studies of 2 new child evaluations | 384        | US       |             |               |                  |      | S= good pt & provider satisfaction but psychiatrists felt therapeutic alliance took longer than F2F. Progress likely facilitated by on-site worker also  
C = telepsych $200p/m cheaper than regular F2F  
R = adequate reliability with practitioners available on site                                                                                     |
### Telepsychology in Rural WA

<table>
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<tr>
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<th>n</th>
<th>Patients</th>
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<th>Reliability</th>
<th>Clinical outcome</th>
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<tr>
<td>Schneider, 1999</td>
<td>80</td>
<td>Randomly assigned adult</td>
<td>Closed circ TV</td>
<td>US</td>
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<td>√</td>
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<td>O = Telepsych&gt;control &amp; equiv to audio &amp;F2F therapy over 5 sessions of CBT</td>
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<td>Schopp et al., 2000</td>
<td>98</td>
<td>Randomly assigned adult</td>
<td>768</td>
<td>US</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>R = Neuropsych Ax no group differences between F2F &amp; v/c in client ratings of interpersonal factors. S = Telepsych clients were more likely to want to repeat their experience, but psychologist Swas lower for telepsych C = Telepsych costs sig lower than F2F costs.</td>
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<tr>
<td>Shepherd et al., 2006</td>
<td>25</td>
<td>Rural adult cancer patients</td>
<td>ND</td>
<td>Australia</td>
<td>√</td>
<td>√</td>
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<td>O = anxiety decreased &amp; QOL increased following average of 3 sessions of CBT as measured by HADS, Functional Ax of cancer Therapy – General. S = service acceptable and practical</td>
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<tr>
<td>Shore, Brooks, Savin, Manson &amp; Libby, 2007</td>
<td>53</td>
<td>American Indian veterans</td>
<td>384</td>
<td>US</td>
<td>√</td>
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<td>C = On the basis of current transmission costs, telepsych health proved less expensive than F2F interviews.</td>
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<tr>
<td>Shore, Brooks, Savin, Orton, Grigsby &amp; Manson, 2008</td>
<td>53</td>
<td>American Indian veterans</td>
<td>384</td>
<td>US</td>
<td>√</td>
<td></td>
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<td>R = equivalent reliability of SCID administered F2F and v/c/ S = equiv patient S, comfort &amp;cultural acceptability to F2F.</td>
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<td>Shore &amp; Manson, 2004</td>
<td>50</td>
<td>American Indian veterans</td>
<td>384</td>
<td>US</td>
<td>√</td>
<td></td>
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<td>S = 50 clinic interactions in 7 months including individual &amp; groups. Pt S&amp; comfort rated highly</td>
</tr>
<tr>
<td>Shore, Savin et al., 2007</td>
<td>53</td>
<td>Randomly assigned</td>
<td>384</td>
<td>US</td>
<td>√</td>
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<td>R = Overall R of SCID statistically equivalent between F2F &amp; telepsych administration, though higher agreement for externalizing rather than internalizing disorders.</td>
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<td>Shores et al., 2004</td>
<td>18</td>
<td>Older adult veterans</td>
<td>384</td>
<td>US</td>
<td>√</td>
<td></td>
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<td>R= Telepsych Dx were in 100% agreement with F2F clinical examinations. Early session technical difficulties resolved as familiarity with equipment increased &amp; had no adverse impact on Dx accuracy S = high degree of satisfaction with the telemedicine experience, willing to use again.</td>
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<tr>
<td>Simpson, Doze, Unness, Hailey &amp; Jacobs., 2001</td>
<td>230</td>
<td>Adult outpatients</td>
<td>384</td>
<td>Canada</td>
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<td>S = High level of satisfaction with the service&amp; equipment</td>
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<td>Location</td>
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<td>Satisfaction</td>
<td>Clinical outcome</td>
<td>Cost</td>
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<td>Simpson, (S), et al., 2001</td>
<td>10</td>
<td>Adult outpatients – depression, anxiety, eating Dx</td>
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<td>UK</td>
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<td>Simpson et al., 2002</td>
<td>11</td>
<td>Adults single session hypnosis</td>
<td>384</td>
<td>UK</td>
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<td>Simpson, Bell, Knox &amp; Mitchell, 2005</td>
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<td>Adults with bulimic disorder</td>
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<td>Simpson et al., 2006</td>
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<td>Adults with bulimic disorder</td>
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<td>Singh, Arya &amp; Peters, 2007</td>
<td>37</td>
<td>Consecutive Psychiatric adult outpatient referrals</td>
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<td>NZ</td>
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<td>Sorvaniemi et al., 2005</td>
<td>60</td>
<td>Consecutive adult acute inpatients</td>
<td>384</td>
<td>Finland</td>
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<td>Starling, Rosina, Nunn &amp; Rossiter, 2003</td>
<td>136+</td>
<td>Service evaluation of CAMHS (families, clinicians &amp; psychiatrists)</td>
<td>ND</td>
<td>Australia</td>
<td>√</td>
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<td>Stevens, Doidge, Goldbloom, Voore &amp; Farewell, 1999</td>
<td>40</td>
<td>Adult outpts</td>
<td>384</td>
<td>Canada</td>
<td>√</td>
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<tr>
<td>Thomas et al., 2005</td>
<td>38</td>
<td>Rural DV women’s crisis centre referral service</td>
<td>1.54mbps</td>
<td>US</td>
<td>√</td>
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<td>Trott &amp; Blignault, 1998</td>
<td>50</td>
<td>Adult and child outpatients</td>
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<td>Australia</td>
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<td>Urness et al., 2006</td>
<td>62</td>
<td>Adult outpatients single consultation</td>
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### Telepsychology in Rural WA

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<th>KBPS (FPS)</th>
<th>Location</th>
<th>Reliability</th>
<th>Satisfaction</th>
<th>Clinical outcome</th>
<th>Cost</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wagnild, Leenknecht &amp; Zauher, 2006</td>
<td>11</td>
<td>Psychiatrist treating rural/frontier patients</td>
<td>384-768</td>
<td>US</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td>S = most psychiatrists agreed re: benefits for patients in terms of reduced cost &amp; travel time, but identified sig. technical &amp; interpersonal barriers that discouraged their use of telepsych.</td>
</tr>
<tr>
<td>Werner &amp; Anderson, 1998</td>
<td>260</td>
<td>University based cost estimates</td>
<td>ISDN</td>
<td>US</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>C = rural telepsychiatry 3-4x's more expensive than F2F service and telepsych was 'economically unsupportable'.</td>
</tr>
<tr>
<td>Yoshino, Shigemura, Kobayashi, Nomura, Shishikura, Den et al., 2001</td>
<td>42</td>
<td>Adult inpatients with Schizophrenia</td>
<td>128kbps &amp; 2mgbps</td>
<td>Japan</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>R = Inter class coefficient of BPRS ratings sig lower at 128kbps than 2mgbps</td>
</tr>
<tr>
<td>Zaylor, 1999</td>
<td>49</td>
<td>Adult outpatients with depression or schizoaffective disorder</td>
<td>128</td>
<td>US</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>O = No difference in GAF scores at 6-month follow-up Vs F2F</td>
</tr>
<tr>
<td>Zaylor et al., 2001</td>
<td>45</td>
<td>Forensic adult pts</td>
<td>128</td>
<td>US</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>S = telepsych effective means to deliver mental health services as indicated by improvement on SCL-R -90</td>
</tr>
<tr>
<td>Zarate, Weinstock, Cukor &amp; Morabito, 1997</td>
<td>45</td>
<td>Adult schizophrenia patients</td>
<td>128 and 384</td>
<td>US</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>R = Global severity and positive Sx per BPRS and other scales were reliably rated; negative Sx less so</td>
</tr>
</tbody>
</table>
Table Key

S = satisfaction; O = outcome; R = reliability; C = cost;

F2F = face to face; telepsych = telepsychology/telepsychiatry; v/c = videoconference(d); pts = patient(s); KbpS = kilobits per second; FPS = frames per second; ND = not described

Ax = Assessment; Dx = Diagnosis; Rx = medication; Mx = management; Tx = treatment; Sx = symptom; b/w = between;
CBT= Cognitive Behavioural Therapy; ERP = Exposure & response prevention therapy;

BDI = Beck Depression Inventory (BDI-II);
BNT-15 = Boston Naming Test- 15 item version;
BPRS = Brief Psychiatric Rating Scale;
CGI= Clinical Global Impression Scale
CDT = Clock Drawing Test
CORE-OM = Clinical outcomes in routine service - Outcome measure
COWAT = Category Fluency & letter fluency
Digit Span = from WAIS-R
GAF = Global Assessment of Functioning;
GDS= Geriatric Depression Scale
GHQ = General health Questionnaire
HADS = Hospital Anxiety & Depression Score
HDRS = Hamilton Depression Rating Scale
Honos = Health of the Nation Outcome Scales,
HVLT-R = Hopkins Verbal Learning Test–Revised
MHI = Mental Health Inventory
NART = National Adult Reading Test
MMSE = Mini-Mental State Examination
SCID=Structured Clinical Interview for DSM-III Axis I Disorders
SCL-R-90 = Symptom Checklist-90-R,
SF-12 = Short Form-12
STAI = Spielberger State Trait Inventory
WAI = Working Alliance Inventory
Y-BOCS = Yale-Brown Obsessive Compulsive Inventory

BN = Bulimia Nervosa; OCD = Obsessive-compulsive disorder; QOL = Quality of Life

Table does not include review studies, summaries, service description studies, or studies where no intervention outcome was measured and reported.
2.4.2 Studies investigating the reliability of psychological assessments conducted via telepsychology

Reliability studies have compared initial assessments, diagnoses, and psychometric evaluations between face-to-face and telepsychology conditions. These studies have typically assumed that video-conferenced assessments are accurate if the telepsychology outcomes closely resemble the outcomes of face-to-face administration (Singh et al., 2007). Thus far, nearly all comparisons between face-to-face same room assessments and telepsychology assessments have good inter-rater reliability, with coefficients ranging between 0.69-0.93. In addition, good diagnostic discrimination, with false positives less than 0.5%, has been consistently reported at transmission speeds of 128-384 kilobytes per second (KBPS) (Hyler, Gangure & Batchelder, 2005; Lexcen et al., 2006).

In studies that assess the reliability of the initial interview process, Brennan, Kealy, Gerardi, Shihi, Allegra, Sannipoli, et al. (1998) and Baigent et al. (1997) describe high inter-rater reliability (between 0.8-0.95) of initial interviews conducted by a psychiatrist, when comparing adult patients randomly assigned to either video-conferencing or face-to-face conditions. Baer et al. (1995) compared face-to-face and video-conferencing initial assessments by psychiatrists, using the Yale-Brown Obsessive Compulsive Disorder scale (YB-OCD), Hamilton Depression Scale (Ham-D) and Hamilton Anxiety Scale (HAM-A), and obtained correlations of between 0.97-0.99 between the two interview modes. Comparing the inter-rater reliability of 30 inpatients repeatedly assessed in same-room or same-room plus telepsychology Structured Clinical Interview
for DSM-III-R (SCID-III-R) interviews, Ruskin et al. (1998) reported similar inter-rater reliability coefficients for all conditions.

Ball et al. (1993) compared scores on the Mini-Mental State Examination (MMSE) administered to the same adult inpatients (n=11) on two separate occasions. Despite slight modifications to the administration instructions to accommodate camera and visibility issues in the videoconferencing conditions, the inter-rater correlation was 0.89. In a similar study, Montani et al. (1996) and Montani et al. (1997) compared scores on Mini-Mental State Exam (MMSE) and clock drawing test administered to the same elderly patients (n=25) on two separate occasions. Scores on both tests were lower in the telepsychiatry condition, a finding that challenges the appropriateness of telepsychiatry for test administration to the elderly. The differences were perceived to be the result of differences in maintaining attention and sensory accommodations to elderly patients. However, picture framing, sound quality and difficulties maintaining eye contact were specifically cited as detractors from this approach.

In order to evaluate capacity for independent living, Hildebrand et al. (2004) examined the reliability of neuropsychological assessment of 26 elderly residents and found that videoconference administration at 334 or 386kbps was equivalent to face-to-face administration. Shores et al. (2004) also confirmed equivalent diagnostic accuracy for dementia for telepsychology and in-person assessments, as did Cullum et al. (2006). With geriatric populations in particular, problems with the comparative ease of assessment using scales which employ behavioural observational ratings, like the Brief Psychiatric Rating Scale (BPRS), have also been reported at lower bandwidths (Baigent et al., 1997; Grob et al., 2001). Researchers have urged caution when interpreting
results with older adults but, in general, have been supportive of continued use of telepsychology as a means for reliable psychometric assessment for this particular special population (Ball & McLaren, 1997; McLaren, Laws et al., 1996; Montani et al., 1997).

In another special population, Elford et al. (2000) reported a 96% agreement in diagnosis and treatment regimen between telepsychology and same room interviews conducted with children. Further research has been recommended in order to confirm the reliability of telepsychology assessments of special populations (Monnier et al., 2003).

Hawker and Kavanagh (1998) summarized that assessments and treatment recommendations were as equally reliable in videoconferencing assessments as they were in face-to-face environments. They also recommended that conclusions made on the basis of video-conferenced assessments be corroborated by the collection of collaborative background information and observations from other workers who may be present during the interviews.

In a meta-analysis of 14 (n=380) adult diagnostic/assessment reliability studies from 1956-2002, Hyler et al. (2005) concluded that few studies attempted to compare telepsychology with face-to-face evaluations using standardized assessments. Many researchers appear to develop their own assessments in response to a perceived uniqueness of need for which telepsychology may be a novel response. In developing their own assessments for their own perceived unique settings, researchers have criticised that they have potentially undermined the reliability of measurement in telepsychology (Stamm & Perednia, 2000). However, this occurrence reflects a genuine
absence of valid and reliable measures in this unique setting, and reflects a necessary and pragmatic research decision. In Hyler et al’s (2005) meta-analysis, the reported effect sizes were small overall, suggesting little or no difference between telepsychology and face-to-face administrations. In these studies higher bandwidth was reported as slightly more effective for assessments requiring detailed observations. Rather glowingly, however, the authors concluded that in some research and clinical areas, they predicted that telepsychology assessments would replace in-person assessments (Hyler et al., 2005).

There are numerous studies concerning the reliability of telepsychiatry assessments for children, adults and geriatric patients. The fundamental assumption of the research corpus as a whole has been that the standard method of face-to-face assessment is always accurate, and as such represents the gold standard (e.g. Antonacci et al., 2008; Hyler et al., 2005). Given that psychotherapy and clinical interventions typically occur in a face-to-face office environment, the implied assumption of much research is that face-to-face intervention also represents the “gold-standard”, and alternatives to this are somehow deficient or missing key therapeutic elements. This assumption has been challenged by those researchers who have identified advantages to using telepsychology with particular client groups (Mitchell, J.E. et al., 2003; Simpson et al., 2005).

In addition to the assumption that the gold standard for comparison is face-to-face sessions, telepsychology reliability studies are also weakened by patient selection factors, small study size, variable assessment instruments, and the variety of patient problems (Antonacci et al., 2008; Mair & Whitten,
Overall, the bulk of the extant literature investigating the reliability of assessments conducted by videoconferencing supports their equity and validity with face-to-face assessments and outcome measures. What is infrequently described in studies that do not have reliability as a primary outcome focus is whether, in the course of standard clinical evaluations, the outcome measures are administered in the same way for the duration of the evaluation, or consistently when both face-to-face and telepsychology conditions are included in the study. For example, few studies describe whether the assessments are first administered face-to-face (e.g. as part of a screening process) before the individual receives telepsychology intervention and if ongoing evaluations are administered the same way or “at a distance” (i.e. mailed out). This issue of administration may have a subsequent impact on either the progress of the intervention (i.e. by modifying the working relationship) or on the instrument reliability over multiple measurement occasions.

Additionally, the mere physical presence of the therapist when clients complete self-report assessments may be influential in altering the outcome, compared to self-directed completion of assessments when posted to clients prior to telepsychology interventions. Thus far, studies have yet to explicitly examine these factors or speculate on the impact of variable combinations of assessment and intervention.

2.4.3 Clinical trials

The clinical outcome literature for telepsychiatry is very small, but growing. In general, outcomes across clinical trials have been positive. However, this literature lacks sufficient detail regarding the use of
telepsychology with specific diagnostic groups and therapy types, or over long-term (or routine) engagements.

Only a handful of randomized, controlled studies of tele-mental health clinical outcomes has been published (Day & Schneider, 2002; de Las Cuevas et al., 2006; Fortney et al., 2007; Frueh, et al., 2007; O’Reilly et al., 2007; Poon et al., 2005; Ruskin et al., 2004). These studies have all randomized participants to receive either tele-mental health or face-to-face services, but differ significantly in terms of sample size, intervention approach, and outcome measures.

Some of the clinical studies described above have randomly assigned participants to receive “treatment as usual” (TAU) via videoconferencing or face-to-face. These TAU packages have included components of supportive counselling, psychoeducation, and medication delivered to depressed veterans \((n = 119;\) Ruskin et al., 2004) or a combination of CBT with medication delivered to adult psychiatric outpatients \((n = 140;\) de Las Cuevas et al., 2006). For example, Ruskin et al. (2004) conducted a study to compare outcomes of depressed adults treated through telepsychology and in person. All patients improved significantly on the Hamilton Depression Scale (HAM-D), but these groups did not differ significantly from each other. Both groups also improved significantly from baseline in scores on the Beck Depression Inventory (BDI), Global Assessment of Functioning (GAF), State-Trait Anxiety Inventory (STAI), the Clinical Global Impression (CGI) and the Medical Outcomes Study 12-Item Short-Form Health Survey (SF-12) (Ruskin et al., 2004).

In each of these studies (de las Cuervas et al., 2006; Ruskin et al., 2004), both intervention conditions yielded comparable outcomes, with few
between-groups differences in symptom severity, treatment adherence, retention, or satisfaction. Participants in the videoconferencing conditions also reported high satisfaction with the medium and a rapid and strong development of therapeutic alliance (Ruskin et al., 2004). Although these larger tele-mental health efficacy studies controlled for provider and evaluator effects and used standardized assessments, the interventions delivered were generally brief in duration (20-30 minutes), non-manualised, and difficult to replicate, given their focus on site-specific patients and their needs.

The largest (n = 495) randomized controlled study, thus far, compared telepsychiatry to face-to-face TAU clinical psychiatric services, delivered to distant communities in Canada (O'Reilly et al., 2007). TAU consisted of a clinical assessment by a psychiatrist and up to four monthly follow-up sessions, including some combination of medication management, psycho-education, supportive counselling, and/or triage services. The two forms of service delivery were compared on self-report clinical outcomes, satisfaction, and post-intake psychiatric admissions over 12-months. On all measures of clinical outcome, telepsychiatry was comparable to face-to-face service delivery, with both groups reporting clinically and socially relevant levels of reduced symptomatic distress and improved mental health (i.e. a reduction from diagnostic caseness and reduced number of psychiatric hospitalizations). Participants also reported moderate levels of satisfaction with the medium. In the cost analysis, the average cost of tele-mental health was 10% less per patient, and 16% less per visit, than the cost of face-to-face treatment, when travel and reimbursement expenses for psychiatrists were taken into account. Overall, this study concluded that a brief tele-mental health intervention
provided a more cost-effective clinical service with no loss of efficacy, compared to traditional face-to-face care. However, the authors noted that while the brief telepsychiatry intervention was as successful as TAU, they would not draw similar conclusions about equivalency with regard to more complex psychotherapy in general, as they viewed these as “more dependent on the therapist-patient relationship” (p. 842).

Crow, Mitchell, Crosby, Swanson, Wonderlich and Lancaster (2009) conducted a randomized controlled trial of face-to-face versus CBT telepsychology for bulimia nervosa. One hundred and twenty-eight women with DSM-IV diagnosed bulimia nervosa (BN) or eating disorder, not otherwise specified (EDNOS), were randomized to 20 sessions of CBT over 16 weeks. Findings indicated equivalent outcomes for face-to-face and telepsychology conditions, with considerable cost savings (due to recovered therapist travel costs) for the telepsychology condition.

Results so far demonstrate that treatment delivered by videoconferencing results in no worse clinical outcomes than the same treatment delivered face-to-face. However, because of the small number of randomized clinical trials (especially for specific treatments and for specific patient populations), even when combined with in-depth case analyses (e.g. Alessi, 2003; Bischoff et al., 2004; Cowain, 2001; Hilty, Nesbitt, Canning et al., 2000), the evidence base to support the clinical efficacy of tele-mental health interventions remains promising but under-developed.

In the context of the RCT philosophy, the methodological shortcomings of the studies conducted so far include: inadequate power due to small sample size (e.g. Frueh, et al., 2007; Poon et al., 2005), mixed diagnostic participant
pools (e.g. de Las Cuevas et al., 2006; Fortney et al., 2007; O’Reilly et al., 2007), mixed or non-standardized interventions that are difficult to replicate (O’Reilly et al., 2007; Ruskin et al., 2004), and relatively small clinical within-group change between delivery conditions (Antonacci et al., 2008; Greene, Morland, Durkalski & Frueh, 2008; O’Reilly et al., 2007). Nelson and Palsbo (2006) concluded that telepsychology delivery research does not neatly fit into the empirical model and a “one-size fits all” approach may not translate to multiple communities and special populations.

Unlike randomised controlled studies in other fields, telepsychology participants are unable to be blinded to conditions (i.e. telepsychology versus face-to-face) and it may be unethical to withhold treatment or assign clients to waitlists when participants are drawn from the community. Multisite trials, repeated measures and aggregated results may be a research design package to respond to such shortcomings. Stamm (1998) and others describe several large scale multisite users who are continuing to progress this line of research (see also Krupinski et al., 2002 for extended discussion). Improvements in the outcome research base might be made if studies included multiple measurement strategies, such as the addition of both qualitative and quantitative approaches (Gaston & Marmar, 1989), and if they provided triangulated and multi-layered explanations from small group studies. At a clinical level, richly descriptive, smaller case studies would also be illuminating.

Thus far, case studies have contributed significant findings and recommendations for practice in the areas of child and adolescent psychiatry (Alessi 2000, 2003; Goldfield & Boachie, 2003; Hilty, Sison, Nesbitt, Hales, 2000; Miller Kraus, Kaak, Sprang, Burton, 2002; Paul, 1997; Rendon, 1998),
adult outpatient psychiatry (Bischoff et al., 2004; Bouchard et al., 2000, Ghosh, McLaren & Watson, 1997; Himle et al., 2006; McLaren et al., 1995; Simpson, Bell, Britton et al., 2006; Simpson, Bell, Knox et al., 2005); group therapy (Deitsch et al., 2000); and assessment (Malagodi & Smith, 1999). Although illuminating for the clinician-researcher, the variability in cases and interventions mean that conclusions remain mixed.

These telepsychology studies have demonstrated 1) adequate development of therapeutic alliance as measured by standardised instruments, such as the Working Alliance Inventory (Horvath & Greenberg, 1989) and the Agnew Relationship Measure (Agnew-Davies, Stiles, Hardy, Barkham & Shapiro, 1998); and 2) adequate satisfaction ratings by clients and practitioners. Adequate practitioner ratings are in contrast to negative attitudes toward telepsychology that are reported elsewhere (e.g. Mannion et al., 1998; Schopp et al., 2000).

Some of the case studies have reported that accommodations to the technological constraints of videoconferencing, such as lighting, room layout and camera positioning, are easily implemented (e.g. Jones et al., 2006). Moreover, studies also report that clients and practitioners tolerate trial and error with regard to practice adjustments to sound and picture quality, and these adjustments appear to have minimal impact on either the development of alliance or clinical outcomes (Mitchell, Simpson, Fergusen & Smith, 2003; Nagel & Yellowlees, 1995). Other case studies, however, have indicated that practitioners are concerned that telepsychology may be 1) inadequate regarding the development of rapport; 2) limiting in terms of use of intervention technique and capacity to communicate; 3) testing of the limits of confidentiality, and 4)
generally preferable only in the absence of face-to-face service (e.g. Alaska Science & Technology Foundation (ASTF) 2003; Al-Quirim, 2006; Austen & McGrath, 2006a; Cowain, 2001; Hu & Chau, 1999; Jones et al., 2001; May et al., 2001; Schopp, et al., 2000). The evidence is mixed with regard to the extent to which these concerns are borne out.

2.4.4 Psychotherapy, CBT and telepsychology

Clinical outcome studies are increasing in number, although the bulk of research remains as small demonstration studies, pilot trials or case studies (e.g. Bakke et al., 2001; Cowain, 2001; Deitsch et al., 2000; Freir et al., 1999; Harvey-Berino, 1998; Himle et al., 2006; Kaplan, 1997; Manchanda & McLaren, 1998; Simpson, (S). et al., 2001; Simpson et al., 2006). The impact of videoconferencing on the capacity to conduct effective psychotherapy remains an issue for exploration. Few studies investigating how the dynamics of relationship and counselling processes are influenced by the technology currently exist (Holtom, 2005, cited in Simpson, 2009). Therapists’ pre-existing negative expectations about the impact of technology on therapeutic alliance and the capacity to transmit and recognise empathy have also been reported (Rees & Stone, 2005). Of the few studies which specifically investigate the use of empirically validated psychosocial treatments for specific mental disorders, CBT tends to be the therapeutic approach of choice, as it is in the broader therapeutic community generally (Simpson, 2009). Often studies describe symptom change, satisfaction, and even alliance. However, studies rarely describe the specifics of the intervention approach or how it may have been modified, if at all, for telepsychology intervention.
CBT may be particularly well suited to tele-mental health, in that it is focused on learning principles, is often time limited, and may not be as dependent on the therapeutic relationship as other insight oriented or experiential therapies, thereby reducing the potential impact of technological interference with therapeutic alliance (Bouchard et al., 2004). Results suggest that CBT delivered via videoconferencing is at least as effective as CBT delivered face-to-face, although most of the studies describing CBT use have had small sample sizes (e.g., \( n = < 40 \)) and, therefore, may have been unable to detect statistically significant differences between groups. Furthermore, as argued elsewhere (e.g. Greene et al., 2008; O'Reilly et al., 2007), failure to detect a statistically significant difference in outcome does not necessarily indicate equivalence of outcome.

Smaller controlled trials of tele-mental health have used CBT to treat a variety of conditions, including adults with panic disorder and agoraphobia (Bouchard et al., 2004), social phobia (Pelletier, 2003); combat veterans with posttraumatic stress disorder (Deitsch et al., 2000; Frueh et al., 2007), children with depression (Nelson et al., 2003; Nelson et al., 2006) and eating disorders (Mitchell, (J). et al., 2003; Mitchell et al., 2008; Simpson et al., 2006).

For example, Cowain (2001) described a single case of a woman with panic attacks who experienced a significant decrease in anxiety and depressive symptoms following 12 sessions of CBT intervention delivered via telepsychology. Early sessions of high expressed emotion suggested a restricted empathic presence of the therapist. Additional verbal encouragers were required, but ultimately the client was satisfied with the level of support.
she received. The author noted that physical interruptions at the far site were an ongoing problem.

Bouchard et al. (2004) had similar success with CBT treatment for eight clients with panic disorder and agoraphobia, who appeared to develop rapport with the therapist from the first session. The researchers hypothesised that positive expectations, combined with a strong sense of presence, facilitated strong bonds between the participants and the therapists and good outcomes.

The treatment of eating disorders has also had generally positive results when using a CBT protocol with telepsychology. Simpson et al. (2006) described positive clinical outcomes for six participants with BN with CBT via telepsychology, compared to an equivalent group treated face-to-face. They noted that this particular client population obtained particular benefits from telepsychology, especially among those who were self-conscious.

In a larger study, Mitchell et al. (2008) described a randomised controlled trial \( (n=128) \) of 20 sessions of manualised CBT for Bulimia Nervosa (BN) over 16 weeks, delivered either by telepsychology or face-to-face. Outcome measures at treatment end and follow-up at 3 and 12 months included frequency or abstinence from binge eating and purging, plus mood changes. They reported that their study demonstrated that manualised therapy was deliverable via telepsychology. However, they also highlighted substantial organisational and preparation differences between telepsychology and face-to-face delivery of treatment.

In an attempt to replicate the typical makeup of a mildly symptomatic community sample, Day and Schneider (2002) evaluated multi-issue participants \( (n=80) \), randomly assigned to receive five sessions of CBT
delivered via face-to-face, two-way audio, two-way video or a waiting list control group. Although both the audio and video groups had higher drop-out rates than the face-to-face group, no significant differences were found between treatment groups across outcome measures of problem inventories and satisfaction measures. All three intervention groups were significantly superior to the no-treatment group. Limitations of this study however included a failure to follow-up drop-outs, a failure to include rural rather than local urban participants, and the relatively short treatment length. Although the authors intended to replicate a community sample, the wide variety of presenting problems, combined with significant variability in symptom severity, and the failure to explore the relationship between specific presenting problems and problem severity with treatment modality, is considered a further vulnerability of this study (Simpson, 2009).

In all published studies of CBT applied in a telepsychology environment, the results thus far suggest that CBT is an effective therapeutic approach for telepsychology, even when technology-based limitations are identified. Thus, the use of CBT as a primary treatment modality in future research is consistent with current research findings which endorse CBT as a suitable intervention approach for telepsychology.

2.4.5 Satisfaction studies

In broader psychotherapy research, the measurement of satisfaction captures different participants, samples various component elements of satisfaction, and is linked as an index to other encounter outcomes (Lebow, 1983). In telepsychology research, satisfaction has also been measured from
the client and/or the provider’s perspective as they simultaneously participate in a telepsychology encounter, while other telepsychology studies have compared satisfaction ratings between the same types of participants, as they receive intervention in a face-to-face or telepsychology environment.

Several researchers have challenged the perception that satisfaction is a comparatively simple variable to measure (Hall & Dornan, 1988; Rees & Haythornthwaite, 2004; Williams et al., 2001). Concerns regarding the assessment of satisfaction and its use as an indicator of telepsychology’s effectiveness that have been raised have included (i) an unclear operationalisation or definition of satisfaction itself, (ii) lack of standardization in satisfaction measures, and thus, lack of comparability across studies (Hall & Dornan, 1988; Wensing, Grol & Smits, 1994), and (iii) the influence of methodological confounds, including self-selection bias, social desirability bias and acquiescent response (Pascoe, 1983). These concerns are echoed in the broader psychotherapy satisfaction literature (Lebow, 1983).

Table 2.1 includes findings in relation to client and practitioner satisfaction with teleconferencing to provide mental health services or interventions. Satisfaction has been the most consistently reported outcome for telepsychiatry research in various settings and participant samples (Brodey, et al., 2000; Browne et al., 2006; Ekblad et al., 2004; Elford et al., 2001; Freir et al, 1999; Greenberg et al., 2006; Hilty, Sison et al., 2000; Kopel et al., 2001; Krupinski, Barker, Lopez & Weinstein, 2004; McLaren, Laws et al., 1996; Meyer et al., 2005; Modai et al., 2006; Morland, Frueh, Pierce & Miyahara, 2003; Myers, Valentine & Melzer, 2008; Myers, Valentine, Morgenthaler & Melzer, 2006; Simpson, (J). et al., 2001; Simpson, (S). et al., 2001; Urness et al., 2006).
In general, client satisfaction with telepsychology as a means to deliver therapy or conduct assessments is consistently high (e.g. Williams et al., 2001). This finding, however, is tempered by research elsewhere that suggests that regardless of the kind of care received, patients of every health specialty express high levels (80% or higher) of satisfaction (Carr-Hill, 1992; Hall & Dornan, 1988). For example, Kennedy and Yellowlees (2000) reported in their study that despite a lack of clinical improvement, patients reported very high levels of satisfaction with rural telepsychology psychiatric services. Other researchers have also observed that clients’ satisfaction with services are consistently high, and, at times, these ratings have had little to do with clinical outcomes (e.g. see Bishop et al., 2002; Hall & Dornan, 1988).

Clients participating in telepsychiatry have cited the benefits of reduced travel time (Baer, Cukor et al., 1997; Baer, Elford et al., 1997; Jones & Ruskin, 2001), reduction in dangerous or difficult travel due to climatic conditions or personal incapacity (i.e. Gammon, et al., 1998; Sumner, 2001); less lost work time (Bose et al., 2001; Brodey et al., 2000), and shorter waiting times for service (Bischoff et al., 2004; Simpson, (J). et al., 2001). Others have described feeling in greater control and under less scrutiny when participating in telepsychology (e.g. Allen, Roman, Cox & Cardwell, 1996; Bakke et al., 2001; Simson, (J). et al., 2001).

When clinicians report high levels of satisfaction from telepsychology, they typically do so less consistently, but for the same reasons as clients, such as less travel time, less exposure to negative environments and lower personal cost (Bose et al., 2001; Hilty et al., 2004; Hilty, Bourgeois, Nesbitt & Hales, 2004; Jones et al., 2001; Monnier et al., 2003). Practitioners have been
reported as finding the use of the technology as a positive experience, and videoconferencing “... a medium which can transmit warmth or empathy, and which allows discussion of sensitive issues, particularly with practice” (Nagel & Yellowlees, 1995). Most practitioners cite the benefits of telepsychology as offering a means to maintain consistent therapeutic input, and therefore a strong therapeutic relationship, on a regular basis, to geographically distant clients who might otherwise be seen less frequently or easily (May et al., 2001; Sleek, 1997).

One of the typically linked indices of outcome, satisfaction has been argued by some authors to be a necessary prerequisite to the development of good therapist-client relationships in telepsychology (Rees & Haythornthwaite, 2004; Simpson, 2009). Even in the face of consistent positive satisfaction and therapeutic alliance ratings by clients, Rees and Stone (2005) report that, when randomly assigned to evaluate face-to-face or videoconference therapy sessions, clinical psychologists rate telepsychology as lower in therapeutic alliance, suggesting that this may be one cause for the reduced uptake of this technology. A similar negative finding has been observed for psychiatrists’ ratings of alliance. In one study, psychiatrists identified significant technical and interpersonal barriers to telepsychology which discouraged them from ongoing use (Wagnild et al., 2006). Similar attitudes about the inappropriateness of teleconferencing for specialist mental health work were reported by others (Austen & McGrath, 2006a; Hilty, Nesbitt, Marks, Callahan, 2002; Hu & Chau, 1999; Jones et al., 2006). Whitten and Mackert (2005) confirm that providers often act as the most significant “gate-keepers” to the uptake and continued use
of telepsychiatry and telepsychology (see also Jones et al., 2006; Rees & Haythornthwaite, 2004).

Several methodological issues are significant in research into telepsychology satisfaction surveys. Firstly, the quality of satisfaction surveys, and how these measures are constructed or administered, is often unclear, but perceived to be critical (Williams, May & Esmail, 2001). When studies report equivalent or non-equivalent satisfaction between face-to-face and telepsychology interactions, or between user groups, i.e. children and parents versus providers, they rarely explore or elaborate on the reasons for this discrepancy (e.g. Bishop et al., 2002; Elford et al., 2004). Instruments may use general satisfaction statements (i.e. “In an overall, general sense, how satisfied are you with the service you have received?”), and fail to determine if satisfaction is partially a function of the novelty of using new technology to participate in services, or due to a treatment-based reason.

For example, when satisfaction ratings are compared between those who receive telepsychology or face-to-face service, even if they receive “treatment as usual”, it is possible that telepsychology participants, or providers, are satisfied for different reasons than their face-to-face counterparts. Mair and Whitten (2000) caution against interpreting high ratings of satisfaction across studies as being representative of equivalent levels of satisfaction. They, and others (Simpson, 2009; Williams et al., 2001), argue that study specific moderators, such as study setting or participant characteristics, influence satisfaction ratings. Mair and Whitten (2000) cite the example of forensic populations, as having different reasons for their satisfaction with telepsychology than community-based adults, and thus question the
generalisability of findings across satisfaction studies with different participant populations. General telepsychiatry patients benefit from being able to be seen by experts, in their own community, in a timely fashion. They also benefit from having reduced costs associated with reduced travel and work down time, and shorter waiting periods for an appointment (Hilty, Nesbitt, Kuenneth, Cruz & Hales, 2007). Face-to-face clients may be satisfied because they too had the advantage of participating in research and, therefore, had reduced waiting times, or they were satisfied with the treatment offered or the approach of the therapist.

Crucially, high levels of satisfaction may not accurately reflect what is best for the client (Simpson, 2009). One such example may be the socially anxious client who avoids social contact and engages in avoidant safety behaviours when engaging in telepsychology; avoidant behaviours that would not be possible in a face-to-face environment. Additionally, providers may be satisfied with telepsychiatry simply because it did not meet their worst expectations of technical breakdowns and poor quality interactions. For some regions, telepsychiatry may be the only option for access to mental health care and so users are satisfied in the face of no service at all (Harley, McLaren, Blackwood, Tierney & Everett, 2002; Simpson, 2009), or may even be concerned that their negative evaluation of telepsychology might impact on their future access to similar services (Williams et al., 2001). As Mair and Whitten (2000) state in their review of 32 telemedicine satisfaction studies,

“…we are unable to discern whether the participants said they were satisfied because telemedicine didn’t kill them, or that it was “OK,” or that it was a wonderful experience. The available evidence does not help us to understand the reasons underlying satisfaction or dissatisfaction”
For many rural and underserved participants, at whom telepsychology research is often targeted, another issue of particular relevance when assessing satisfaction has been that when the controlled condition is face-to-face service, participation in telepsychology research is often the only alternative to no service at all. Singly focussed satisfaction studies, or clinical intervention studies which include the assessment of satisfaction, may simply be reporting on the satisfaction inherent in a “something is better than nothing” response set. The current study benefits from including items in the satisfaction surveys and contemporaneous interviews data collection to contribute to untangling this ambiguity.

Furthermore, studies do not report on whether participant or provider ratings of satisfaction change over time (Mair & Whitten, 2000). Most evaluations of satisfaction have been conducted retrospectively with post-encounter surveys (e.g. Frier et al., 1999; McLaren, Laws et al., 1996; Norman, 2006, Simpson, (J). et al., 2001, Urness et al., 2006), a methodology criticised by reviewers Mair and Whitten (2000). Other research has indicated that different types of consumers may report different levels of satisfaction because of their specific client characteristics. For example, research has suggested that females may prefer videoconferencing over males (Manning, Goertz & Street, 2000) and younger people may be more receptive to “[giving] it a go” (Rohland, Saleh, Rohrer & Romitti, 2000). In contrast, clients with more complex problems may express lower ratings of satisfaction than those with less complex or shorter term difficulties (Ghosh, McLaren & Watson, 1997; Simpson, (S)., 2001; 2009).
Future evaluations of satisfaction with telepsychology would need to take account of the complex process issues in the therapeutic encounter in addition to the changes in the relationship and satisfaction that occur over time. Multilayered methodologies, with repeated measure sampling frames offer an opportunity to explore this dynamic relationship, and the methodology undertaken in the case-studies to follow represents one attempt to accommodate this observation. All of these findings support the value of case study investigation that illuminates these potentially significant differences, and triangulating these findings with broader nomothetic research. The case studies presented in Chapter 5 of this thesis will illuminate if and why clients in this sample prefer telepsychology to face-to-face interventions, and will monitor whether and how their ratings of satisfaction change over time.

2.4.6 Process studies - Studies of communication and relational process.

Related to the evaluation of satisfaction, numerous telepsychology effectiveness studies have attempted to evaluate factors that are specific to the process of conducting transmitted communications (Cukor, Baer, Willis, Leahy, O’Laughlin, Murphy et al., 1998; Greenwood et al., 2004; Hilty, Nesbitt et al., 2002; Kaplan, 1997; Kim & Biocca, 1997; Manchanda & McLaren, 1998; Manning et al., 2000; McLaren, Laws et al., 1996; Miller, 2001, 2003a, 2003b; O’Malley, Langston, Anderson, Doherty-Sneddon & Bruce, 1996; Shore et al., 2008; Stevens et al., 1999; Turner, 2001; Urness, 2003a, 2003b). In these studies, face-to-face delivery of psychological intervention is implied, for the
most part, to be the gold standard. The assumption underpinning the high status of face-to-face intervention is that the relationship between practitioner and client is best developed when each participant is within direct physical proximity in the same physical space (May et al., 2001). Face-to-face contact is also recognised as having none of the problematic technology-human interface issues that can occur in videoconferencing (such as transmission delay, reduced field of view, artificiality of visual experience, and auditory acuity) (Hilty, Marks et al., 2004; May et al., 2001).

Given that the therapeutic alliance has also been identified as one of the most significant variables associated with positive clinical outcomes in psychotherapy generally (Asay & Lambert, 1999; Horvath & Symonds, 1991; Lambert, 1992; Lambert & Barley, 2001), the quality of the therapeutic alliance is considered a central requirement for telepsychology interventions to be effective and assessments to be accurate (Bee, Bower, Lovell, Gilbody, Richards et al., 2008; May et al., 2001; Singh et al., 2007).

Broadly, the therapeutic alliance is described as the collaborative and affective bond between a therapist and his/her patient (Horvath, 1995; Krupnick, Sotsky, Simmons, Moyer, Elkin, Watkins et al., 1996; Martin, Garske & Davis, 2000). For example, Lambert (1992) argued that up to 30% of the differences in improvement resulting from psychotherapy are due to nonspecific interaction factors or factors common to all interventions. These “common factors” are also known as therapeutic alliance or relationship-mediated factors, and include empathy, warmth, acceptance, affirmation and recognition. They are deemed to be present in all psychotherapy interactions, regardless of the therapist’s theoretical orientation (ibid.). The interference of technological conditions which
may alter or rupture the expression of these factors has been speculated to affect the process of therapy and, subsequently, to affect the successful outcome of telepsychology interventions (Ghosh et al., 1997; Manning et al., 2000; Miller 2003a; Turner 2001). To that end, the quality of the videoconferencing technology affects the experience and may dovetail directly into the clinical outcomes and consumer satisfaction in subsequent telepsychology interventions. These issues will be further explored in the chapters to follow.

Pragmatically, mental health assessment and intervention depends primarily on verbal information and visual cues (Singh et al., 2007). Visual information includes eye contact, physical expression, gesture and posture, while auditory/verbal information includes volume, tone of voice, cadence and the literal speech content (Miller, 2003a, 2003b). However, if both verbal and visual information is also transmitted in videoconferencing, why should researchers be interested in exploring the process of telepsychology any further?

Telepsychology appears to have both positive and negative effects on communication and the development of relationships (Hilty, Nesbitt et al., 2002). Non-verbal communication, which includes eye-contact, gestures, posture, proximity, fidgeting, nodding, facial expressions and lip reading (Fussell & Benimoff, 1995; Miller et al., 2003b), combines with verbal communication to enhance mutual understanding and achieve intervention goals (Hilty, Nesbitt et al., 2002). Studies have indicated that the mode of communication also alters the nature of what is communicated. Telephone conversations have been observed to take longer than in-person conversations and videoconferencing
requires greater time than the telephone (Ochsman & Chapanis, 1974, cited in Hilty, Nesbitt, Marks & Callahan, 2002). Other researchers have argued that telepsychology communications lack richness due to the limitations imposed on posture, body positioning and other non-verbal communication tools (Cukor et al., 1998; Manchanda & McLaren, 1998; Turner, 2001; see also Miller, 2003a, 2003b).

A particularly salient issue in videoconferencing is related to physical proximity and the concept of “social presence” or “tele-presence” (Cukor et al., 1998; Lombard & Ditton, 2006; Turner, 2001). Tele-presence refers to the compelling sense of being present in a mediated virtual environment (Kim & Biocca, 1997) and social presence to the capacity for clients and providers to share a social space, develop familiarity and discuss complex issues (Hilty, Nesbitt et al., 2002). Simpson (2003) also describes it as “the level at which it is possible for the presence of individual participants to be conveyed within any interactive setting” (p.171). Being present in a virtual place is not the same as not being there in a physical place, so, tele-presence describes a person's perception of being, as opposed to actually being, at a specified or understood place (Kim & Biocca, 1997; Lombard & Ditton, 2006). Tele-presence operates during good telepsychology, and a sense of “social presence” appears to be a typical outcome for telepsychology interactions3.

Researchers of therapeutic processes (e.g. see Horvath & Bedi, 2002; Horvath & Symonds, 1991; Lambert & Barley, 2001) argue that good therapy is not simply about what is said or how it is said. They propose that it also includes other non-specific factors, such as empathy, rapport, acceptance,
warmth, client and provider expectations and beliefs, and clinical skills (Horvath & Luborsky, 1993). Horvath and Greenberg’s (1994) theories of therapeutic alliance development suggest that compromises to key communication would impair the development of working alliance, and potentially break down treatment, resulting in poor outcomes. With these theories in mind, Ghosh et al. (1997) suggested that videoconferencing might compromise communication because it limits the information or cues available to the other participant (e.g. body language) and impairs the development of empathy due to its creation of a voyeuristic sense from feelings of detachment or dissociation from the other participant (i.e. a failure to generate tele-presence). These factors, however, are often challenging to quantify. The supposition that the primary information of a video encounter, in addition to the non-specific factors of the therapeutic experience, can be as effective, or better than, a face-to-face encounter, requires testing and quantification (Singh et al., 2007). One of the purposes of telepsychology process studies, therefore, is to determine if the absence of interpersonal contact and physical presence precludes or impedes the development of tele-presence and an effective therapeutic alliance. Process studies of telepsychology tend to emphasise either 1) the technical/operational aspects of the transmission (such as transmission speed, frame tension, physical environment), or 2) the interpersonal/relational characteristics (such as communication, practice accommodations, technique, clinical skills and social presence), in an effort to answer such questions. Both of these types of process studies (i.e. technical versus relational) will be explored in further detail below. Research into clinical processes has expanded to include investigations into therapeutic alliance, the therapeutic environment and the encounter
context, as well as the clinician’s skills, and their impact on the effectiveness of
telepsychiatry (Bischoff, 2004; Bischoff et al., 2004; Foster & Whitworth, 2005;
Miller, 2003a, 2003b; Morgan et al., 2008; Rees & Stone, 2005; Simpson &
alliance is particularly salient, given the demonstration that elements of the
therapeutic relationship positively correlate with both treatment gains (see
Horvath & Bedi, 2002; Martin et al., 2000) and treatment satisfaction (Magaletta,
Fagan & Peyrot, 2000; Morgan et al., 2008).

Investigation of the impact of technology on the therapeutic experience is
further necessitated by the findings of several telehealth studies. These studies
suggest that therapeutic alliance is rated by clients as equally high as face-to-
face interventions, regardless of therapy orientation (Ghosh et al., 1997;
Simpson, Bell, Britton et al., 2005; Simpson, Knox et al., 2003; Urness, et al.,
2006). However, further telepsychology service uptake is not universally
accepted, and some participants are particularly reticent to use it (Mair &
Whitten, 2000; Whitten & Mackert, 2005). How can this phenomenon occur
where the recipients of a telepsychology service rate alliance as highly as it is
rated in face-to-face therapy, yet still appear to be reluctant to use it when given
the choice? (e.g. Freir et al., 1999). Such inconsistencies are worthy of further
exploration.

Prior to using telepsychiatry, clinicians have often reported lower
expectations about the use and value of telepsychiatry compared to their
patients who receive this service. Clinicians tend to argue that the technology
ddictates changes to their usual interaction styles and, therefore, requires a
different skill base which they are reluctant to develop (Austen & McGrath,
Hill (1997) and others (Bischoff et al., 2004; Mannion et al., 1998; Omodei & McLennon, 2000), have reported that clinicians complain that telepsychology results in having a reduced ability to observe body language, a tendency to miss the subtleties of non-verbal communication, client concerns regarding privacy and confidentiality, the potential for reduced rapport, a lack of sense of presence during therapy, and reduced spontaneity during communication. Jerome (1993) reported that both clinicians and clients in his study preferred face-to-face interviews to video-conferenced psychiatrist’s interviews. Clinicians also suggest that because of the artificiality of the transmission image and environment, engaging participants is harder, and the potential for therapeutic alliance to be ruptured or underdeveloped is greater (Rees & Haythornthwaite, 2004; Rees & Stone, 2005; Starling & Foley, 2006).

Summaries of doctor-patient interactions report that researchers have expressed concern that the technological necessity of discrete turn-taking during the telepsychiatry exchange may force the clinical interaction to become more task-oriented, less spontaneous and more mechanised (e.g. Mair & Whitten, 2000; May et al., 2001; McLaren 2003b; Miller, 2003, 2003b; Wootton & Darkins, 1997). However, others suggest that such a constraint may make interactions more efficient and focussed, and outcomes obtained faster (e.g. Gammon et al., 1998; Miller, 2003a, 2003b; Urness, 2003a).

In a review of 61 studies of doctor-patient communication in telepsychiatry, Miller (2003a) demonstrated that therapists’ assumption of
impeded communication appears unsupported by the literature. In this study, communication features were extracted from multi-item questionnaires, non-participant observations, interviews and case reports. Features were given a positive rating if ≥50% of the reported sample scored the feature favourably. Features were listed into 23 categories which included general communication efficacy, patient and provider understanding, patient and provider expression and comfort, and non-verbal behaviour. Other categories included video and audio quality, privacy, multiple provider involvement, satisfaction overall, and assessment/diagnostic accuracy. Of all 23 categories, only the non-verbal communication category scored greater negative than positive findings.

In general, it appears that the sense of inadequacy and commonly perceived limitations of videoconferencing are less strongly held by clients than by therapists (e.g. Hu & Chau, 1999; May et al., 2001; McLaren et al., 1995; Omodei & McLennan, 1998 in Capner, 2000; Whitten & Mackert, 2005). Clients seem to adapt more rapidly to challenges associated with turn-taking, reduced visual cues and task focused therapy than do clinicians (Omodei & McLennon, 1998 in Capner, 2000; see also Section 2.5 – Process Studies for further discussion). In their examination of a single case study, Manchanda and McLaren (1998) concluded that telepsychology “did not appear to impair the application of CBT within a sound collaborative therapeutic relationship” (p. 55). This was measured by positive changes in thought, emotion and behaviour and based on client and therapist reports before, during and after intervention. They reported that exaggerated movements, speech and tone could compensate for the loss of non-verbal information resulting from telepsychology’s barriers or technical problems. These findings suggest that it
is experience with technology and individual differences, rather than the quality of the medium, which alters satisfaction ratings or affects a clinician’s sense of a developing therapeutic alliance (Schneider, 1999; Simpson, 2003).

Studies investigating the optimal technical and environmental conditions in which to conduct telepsychology consultations have increased. These studies have consistently demonstrated that the “artificiality” of transmissions, as a consequence of bandwidth, camera resolution, colour/picture or sound distortion, appears to not impede the client’s satisfaction with the service, the accuracy of assessments, the reliability of evaluations or the clinical outcomes for clients in emergency or research consultations (Cruz, Cruz, Krupinski, Lopez, McNeely, Weinstein, 2004; Hyler et al., 2005; Jones et al., 2006; Kennedy & Yellowlees, 2003; McLaren, 2003a; Sorvaniemi et al., 2005).

Consistently, authors recommend that successful telepsychiatry services usually depend on how practitioners and patients adapt to the technology, and incorporate it into routine service provision, more than on technical or reimbursement issues, although these are also important considerations (Ruskin et al., 1998; Simpson, 2003a; Sulzbacher et al., 2006). Provider-related barriers to service implementation are associated with the acceptance of any new technology and practice in health care, and include cost and reimbursement issues, resistance to change by individuals or organizations, and technological illiteracy.

Whitten and Mackert (2005) describe two studies which highlight the provider as “gate-keeper” to access and continued uptake of telehealth services, and that ease of use of the technology, and incentives to continue to use it despite lack of experience, will influence how successfully a
telepsychiatry service will be established. Other researchers have linked previous hands-on experience with the technology to increased satisfaction with consultations (Mitchell et al., 2003, cited in Simpson, 2009).

In a case-study based investigation of the impact of videoconferencing on development of working alliance, Ghosh et al., (1997) conducted 10 sessions of eclectic therapy with a young female-male transsexual who was seeking gender reassignment surgery. Using the Working Alliance Inventory (WAI), the researchers separately measured client and therapist participative ratings of the bond, goal and task components which contributed to a global WA measurement. Sessions were conducted over 128kbps ISDN, resulting in properly synchronised audio and video, but with a slight delay\(^4\). The authors described the relatively quickly implemented adaptations made by the therapist and client to the transmission delay. These accommodations included a tendency to shorter sentences (allowing more entry points for the other to speak, thereby reducing interruption of each other caused by both talking at the same time), and/or waiting until the other had clearly finished before replying.

Although they did not report frames per second (FPS) transmission speed, the authors made comment that the picture resolution and colour quality were not sufficiently detailed to permit observation of subtle changes, such as blushing or tearing up, and therefore some potentially useful clinical information was largely absent. The picture quality was adequate enough to see major body language and emotional facial expressions, and in general this was considered by both client and therapist as sufficient. However, the client’s lower rating of bond might have been indirectly influenced by a sense that the

\(^4\) Factors which affect the rate of data transfer include distance from the exchange, quality of the lines and number of users sharing the network (Jones et al., 2006).
therapist was not as aware of her emotional state as she might have been in a face-to-face encounter. The therapist in this study reported feeling somewhat detached from the client because he was unable to offer tissues when she became distressed, or make supportive gestures; however, this was not perceived to be a major problem. Again, it is perhaps these small behaviours perceived by the client that unconsciously contribute to feelings of bond with their therapist, and are ultimately instrumental in creating rapport. This particular study’s results were not discrete enough to tease this possibility out.

Nevertheless, Simpson, Bell, Britton et al. (2005) and Simpson, Bell, Knox et al. (2005) suggest video therapy may be particularly well suited to patients who require high levels of within-session control, or who present with high levels of shame and body related self-consciousness, such as those with eating disorders (see also Mitchell, (J). et al., 2003). Others have noted that videoconferencing can help to limit distracting behaviours such as tremors and fidgeting (McLaren et al., 1995)

Several researchers have speculated that the distancing effect of telepsychology may also be a positive attribute, as it allows for greater honesty and openness to disclosure, and promotes a sense of security for clients (Day & Schneider, 2002; Kavanagh & Yellowlees, 1995; McLaren et al., 1995; Miller, 2003a, 2003b; Onor & Misan, 2005; Simpson, 2003). This phenomena is understood to occur because the consultation tends to take place in a neutral territory (i.e. the telepsychology facility or, at least, outside the clinician’s office). This perceived neutrality may enhance the client’s comfort and reduce feelings of being scrutinised (Norman, 2006; Omodei & McLennon, 2000).
In summary, the research into the interpersonal aspects of telepsychology suggests practitioners are satisfied with telepsychology’s capacity to:

1) allow for the expression of empathy,
2) permit the genuine development of therapeutic alliance,
3) enhance a client’s sense of control in therapy,
4) facilitate the sense of presence during therapy,
5) permit practical issues, such as the tendency for fewer interruptions, and,
6) potentially enhance clinical outcomes, due to the necessity for increased therapist preparation for sessions.

Barriers to telepsychiatry use by patients include technological illiteracy (lack of knowledge, limited exposure to technology or education about the equipment) and lack of confidence to manage problems surrounding the technology (Alverson, Shannon, Sullivan, Prill, Effertz, Helitzer et al., 2004; Shore, Savin, Novins & Manson, 2006; Starling & Foley, 2006). In the main, it has been argued that these barriers can be overcome by adequate education and client preparation prior to the commencement of sessions, or shared/co-facilitated sessions which incorporate ground staff in early sessions to facilitate comfort with the technology (Bischoff et al., 2004; Greenwood et al., 2004; Shore et al., 2006; Shore et al., 2007).

Recommendations for enhancing therapeutic alliance and overall satisfaction with telepsychology are littered throughout the research literature, with some studies placing greater emphasis than others on the practical aspects of “doing telepsychology”. For example, several researchers provide
advice with regard to technical setup and recommendations regarding greater preparation time, with particular attention to the consideration of ways to introduce and conclude the session, how the interviews will proceed, how to share information and the use of tip sheets or diagrams during sessions, and how to make people feel comfortable with the technology (e.g. Capner, 2000; Jones et al., 2006; Simpson, Bell, Knox et al., 2005). Others have suggested that a prior face-to-face relationship is an essential component (Cukor & Baer, 1994; Gammon et al., 1998; Hilty, Nesbitt et al., 2002). Cukor and Baer (1994) outlined a number of recommendations for telepsychology consultations, including instructions on when to commence talking, maintaining eye contact, avoiding rapid movement, eliminating distractions including appropriate attire and lighting, good audio quality and being well organised and prepared. They also emphasised acting naturally and avoiding long pauses, in addition to teaching participants what to expect from the telepsychology session and how to use the equipment. These recommendations have been supported in other studies where clients have also reported that they do not like amplified head nods and head leans, and are more satisfied when clinicians use their normal counselling skills (Omedei & McLennan, 2000).

Thus far, the research suggests that telepsychology creates challenges for the practitioner and the client; however, these challenges appear to be overcome with preparation, flexibility and time. Moreover, one need not assume that all clients prefer, or benefit from, a face-to-face intervention every time. Telepsychology research indicates that there are numerous advantages to telepsychology that are both pragmatic (i.e. it’s cheaper and more convenient), but may also be facilitative of better clinical and process outcomes
for particular client groups (Day & Schneider, 2002; Kavanagh & Yellowlees, 1995; McLaren et al., 1995; Miller, 2003a, 2003b; Mitchell et al., 2003; Onor & Misan, 2005; Simpson, 2003; Simpson, Bell, Knox & Mitchell, 2005).

2.4.7 Technical studies: Transmission speed, equipment & room design.

The technical studies of telepsychology investigate the factors which directly impact on how interventions are delivered, and how they interface with the technological features of digital transmission. Research in this area is divided into transmission speed and equipment, technology and communication interference and room design and layout.

Telepsychology employs telecommunications networks, computer networking, digital signal processing and audio/visual production. The video systems that are used all over the world vary significantly according to the cost of the system, the cost of transmission, and the degree of resolution in the video image (Simmons, West & Chimiak, 2003). A key consideration of videoconferencing in telepsychology is the quality of the audio-visual experience, which is directly related to the speed of picture and sound transmission in kilobytes per second (kbps) (Jones et al., 2006; Simmons et al., 2003). The transmission method (optic fibre or phone line ISDN) and the speed of the transmission directly impact on audio quality and picture quality in frames per second (FPS) and have a significant impact on both the initial cost of the system and the cost of using the system. FPS refers to the speed at which the pixels of a televised image are refreshed following on screen movement, and at low bandwidths may result in pixilation, distortion and freezing. While some studies report having smooth movement at 30 FPS (television quality), most
studies report only bandwidth (i.e. kbps), and not FPS (see Hilty, Nesbitt et al., 2002 for further discussion).

2.4.7.1 Transmission speed and equipment

Videoconferencing occurs when a video image captured by a camera is digitized, compressed via the codec (compression-decompression unit) present on both ends of the connection, and transmitted through cable. The wider the cable bandwidth, the more expensive it is to install and use. However, wider bandwidth allows for a greater amount of information to be transmitted, and thus, greater resolution of the video image. More expensive systems use personal computers, video cameras at both ends of the connection, computer based video monitors and ISDN cable wiring between sites. ISDN transmission varies between 128 and 512 kbps, with the highest bandwidth providing excellent video representation. Roughly, 128kbps provides the equivalent of a 0.3 second audio and picture delay, and the experience is not unlike that seen during satellite picture links on broadcast television. Transmission speed of 384-512kbps is virtually live. At lower bandwidths, images may appear a little distorted by poorer resolution and jerky on-screen movement.

Therefore, the design of the technical environment and the transmission parameters play an important role in facilitating the quality of the communication between a practitioner and a client (Major, 2005; Mitchell et al., 2003 Miller, 2003a). Delays in transmission or asynchrony may have direct impact on both the speed and rhythm (cadence) of the telepsychology participants’ speech, and, as a result, critical therapeutic information may be lost. Communication difficulties, challenges to comprehension, and excessive auditory processing
effort may not impair the accuracy of global judgments; however, such clumsy communication may impair the development and maintenance of the therapeutic alliance in therapy. The virtual environment, created by the video based connection between two physical locations, offers a limited window of visual cues that would otherwise be available in a face-to-face, physical environment. The field of view is limited to the size of the video monitor and, indeed, can be moved to completely screen out those visual cues that are deemed uninteresting, inessential or undesirable. The result is that the virtual environment is socially constructed, limited by design, and is different from the physical, real, environment (Turner, 2001).

Several studies have concluded that quality of equipment has the potential to impact on reliability. Tone of voice, inflection, cadence and speed of speech, facial expression and gestures are all involved in diagnostic confirmation, and researchers have consistently agreed that good quality audio and video transmission is necessary for effective telepsychology communications (Chae et al., 2000; Montani et al., 1997; Yoshino et al., 2001; Zarate et al., 1997). Zarate et al. (1997) has also investigated the impact of transmission speed on recognition of schizophrenia symptoms, by examining the reliability of the SAPS (Scale for Assessment of Positive Symptoms) and the SANS (Scale for the Assessment of Negative Symptoms) and the Brief Psychiatric Rating Scale (BPRS). Comparing face-to-face ratings with 128kbps transmission and 384kbps transmission speeds, all three modes were equally reliable for the BPRS and SAPS. However, because of the difficulty associated with observing more subtle, non-verbal cues of negative symptoms, the SANS ratings were less reliable in the 128kbps transmissions. In particular,
researchers found that low bandwidth systems (33-128kbps) produced “motion echoes” and sound asynchrony that was not present at higher bandwidth.

Positive results using the same assessment tools (i.e. BPRS) were also reported by Chae et al. (2000) who compared face to face assessments of schizophrenia to assessments conducted using a lower bandwidth (33kbps) videophone.

In a similar investigation, Yoshino et al's. (2001) results of BPRS assessments of 42 schizophrenic inpatients concur with these findings. However, these researchers tested 128kbps and 2 mbps (i.e. 2 megabits/sec = 2000kbps) telepsychology with face-to-face assessments. They concluded that 2mbps speed produced the same quality interaction as a live interview. They reported that during the lower bandwidth transmission condition...

“… audio occasionally paused, participants’ speech clarity worsened, the video image was highly distorted, and observation of facial expression was nearly impossible” (p. 226).

Yoshino et al. (2001) speculate that the meaning and intent of the assessment questions may have been impaired for this particular client group because of the distorted image which resulted from lower bandwidth transmission.

Research, and often serendipitous discovery, has highlighted the importance of room design features, transmission speed, and technical considerations as important moderating variables in the success of clinical interactions (Mitchell et al., 2003). These issues will be explored further in the sections which follow.

2.4.7.2 Technology and communication interference
Studies of psychotherapy processes have described the conversational dyad to be the simplest unit of communication in the counselling relationship (Grahe & Bernieri, 1999; Miller, 2001; Miller, 2003b). Good communication in the form of “asynchronized exchange of linguistic expressions” (Manning et al., 2000:120) allows for a natural and predictable flow of conversational events (or dyads) between participants. Interference or delay in the anticipated flow between dyads creates poor communication. In a counselling relationship, delay may subsequently impair the development of good rapport, because it impedes or retards the natural flow of the conversational dyads (ibid.).

Unlike face-to-face communication, the transmission of verbal and visual cues over videoconferencing has the potential to be delayed at the point of signal digitisation and transmission speed, and compromised by poor quality cameras, poor focussing of images, and incorrect camera placement.

As previously described, a speed of 128kbps typically results in a 0.3 second audio and visual delay, where transmission at 384 kbps to 512 kbps is virtually live. Although satellite transmission transcends geographic limitations, it is extremely expensive and almost always involves a 0.5- to 1.0-second delay (Hilty, Marks et al., 2004; Simmons et al., 2003). If delays are too great, and participants speak simultaneously, the effect is to cancel out the words of the other party, and potentially give the impression of constantly interrupting (Hilty, Marks, et al., 2004; Kim & Biocca, 1997). The consequence of such delays may be loss of meaning or rapport, due to lack of co-ordinated turn-taking or asynchrony of the cooperative, interpersonal, utterances, postures and expressions that combine with verbal content in communication (Manning et al., 2000).
Recognising the impact of transmission speed and signal delay on communication, Manning et al. (2000) evaluated the effect of three different signal delays (zero delay, 300 ms delay [e.g. equivalent to 128kbps], and 1,000 ms delay [equivalent to satellite delay]) on client-perceived rapport in stress evaluation sessions, conducted via telepsychology or face-to-face. Ratings of rapport were deemed to be equivalent for groups in all delay conditions. However, when gender was investigated separately, women gave lower ratings of rapport in face-to-face conditions than in the delayed conditions, compared to men. The researchers speculated that telepsychology might offer increased security and comfort for therapy participants who are self-conscious or anxious with unfamiliar therapists or therapists of the opposite gender to themselves. For anxious participants, face-to-face therapy may feel more confronting and intense when it is contrasted to a less “in your face” or “artificial” environment, as might be found in telepsychology. However, one patient with anxiety and paranoid personality traits described the experience of videoconferencing as “dehumanising” and “unsettling” (Simpson, Doze et al., 2001).

Some researchers have speculated that telepsychology (via videoconferencing) exists somewhere in the middle of a continuum of service between face-to-face encounters and telephone consultations (Hilty, Nesbitt et al., 2002; Hilty, Luo et al., 2002). Ball et al. (1995) directly compared all three modes of communication (i.e. low cost videophone, face-to-face and telephone) to identify differences in non-verbal communication and satisfaction. Differences in the rates of mutual gaze were noted in both visual modes, with higher rates than during typical interpersonal interactions. Moreover, higher rates of non-verbal behaviours, such as reclining, were observed more
frequently during visual modes. Each of these non-verbal behaviours are argued to infer meaning, such as differential status, anxiety and relaxation (Mehrabian, 1969 cited in Hilty, Luo et al., 2002). Satisfaction ratings were highest for the face-to-face interaction condition and lowest for regular telephone condition, for both clients and physicians. Physicians also reported a sense of better understanding of their patients in visual modes, but experienced greater levels of anxiety during the videophone (telepsychiatry) condition.

2.4.7.3 Room design and layout

Other aspects deemed to be important to enhance the effectiveness of telepsychology experience involve room design features (Jones et al., 2006). These features include lighting, audio quality and echo, image background, size of room, layout of equipment and furniture and access to fax and telephone lines to support videoconference sessions (Jones et al., 2006; Major, 2005). Although many considerations appear to reflect personal preferences and the availability of resources (see Jones et al., 2006), and recommendations are based on anecdotal experiential evidence more frequently than empirical investigation, these recommendations remain intrinsically sensible, and are supported by observations and secondary feedback described in research with an alternative focus. For example, the issue of camera placement and monitor size is described both in terms of personal preference and practical need. The placement of the camera above the monitor at an angle of 3-5 degrees allows for the impression of eye contact, even when participants are watching the monitor and not the camera (ibid.). Similarly, a moveable lens camera allows the view to be remotely zoomed or panned across the room and may facilitate
close-up observations of client’s behaviour (Capner, 2000). As described above, when psychiatric diagnosis or treatment recommendations require fine grained assessments, this may be a useful, though clearly not essential, tool.

One of the unique qualities of telepsychology over face-to-face sessions is the presence of the camera and distance of the client from the practitioner. This particular facet of the telepsychology experience has been cited as a contributor to client’s positive ratings of satisfaction with the medium, as it provides a greater sense of control over the intervention sessions (i.e. Manning et al., 2000; Simpson, Bell, Britton et al., 2005; Simpson, Bell, Knox et al., 2005). Omodei and McLennan (1998) have also described satisfaction as being a function of the degree to which the client has control over the technology (i.e. the camera movement and off button), compared to face-to-face interventions, despite the discomfort expressed by clinicians (in Capner, 2000). Allen et al. (1996) and Kavanagh and Yellowlees (1995) have reported that clients felt a greater sense of control in video sessions than in face-to-face sessions because they could move out of the view of the camera, out of the room or even turn off the equipment if they wished. Furthermore, the neutral territory of the videoconferencing room (Omodei & McLennan, 2000), combined with the perceived distance between clinician and patient, may assist clients to feel less inhibited and more comfortable with disclosure, compared with face-to-face consultations (McLaren et al., 1995; McLaren & Ball, 1997; Onor & Misan, 2005).

Recommendations regarding room and equipment setup are available from a variety of sources, regarding advice to participants and videoconferencing etiquette (Jones et al., 2006; Maheu et al., 2001), such as
the avoidance of rapid movements to minimise pixilation and picture distortion, to the wearing of appropriate colours to reduce image bleeding and visual distractions (Maheu et al., 2001; Stamm, 1998; Tyrell et al., 2001), and lighting and audio requirements (Hsiung, 2002). In the main, it is human factors, not technological ones which determine the success or failure of telepsychology (Cukor & Baer, 1994; McLaren & Ball, 1997; McLaren, Laws et al., 1996).

The features outlined above will be further detailed in the case studies in Chapters 7, 8 and 9, and the Appendices H and I. The case studies will illuminate how factors such as technical issues, like camera and audio placement, room layout and technical problems, impacted on the therapist-researcher’s experience of conducting therapy and the subsequent impact on the therapeutic relationship.

### 2.4.8 Ethical, regulatory & legal issues

Research into the ethical, legal and regulatory issues around the use of telepsychiatry is fairly limited, as it is with almost all telehealth consultations, but this research typically describes recommendations to address the impediments to service implementation. These factors can include:

- integrating technology and evidence into practice,
- collaborations with law enforcement,
- cross-state licensure (resolving whether the site of delivery is at the provider’s or client’s end),
- collaborations across services/ intervention responsibilities with certified personnel (who is the primary carer?),
• standard of care issues (including emergency protocols, determination of roles and responsibilities of involved staff, liability for risks of abandonment or negligence in the face of equipment failure, liability of services to fail to provide telepsychology as a standard support option),
• reimbursement,
• practice behaviour (such as post-session consequences for ground staff),
• treatment approaches (which may differ between settings, e.g. forensic versus outpatient clinic), and,

privacy, security and infrastructure managementAntonnacci et al., 2008; Capner, 2000; Hsiung, 2002; Koocher & Moray, 2000; McCarty & Clancy, 2002; McGinty et al., 2006; Miller Burton, Hill, Luftman, Veltkamp & Swope, 2005; Shore, Brooks et al., 2007; Shore, Hilty et al., 2007).

In Australia, Medicare reimbursement is now available for telepsychiatry consultations, although only psychiatrists are able to access these item numbers. In Australia, treatment interventions in the form of counselling, psychological assessment and clinical interventions are typically handled by allied health providers, such as clinical psychologists, and not psychiatrists. Thus, any mental health service provided in a non-face-to-face manner, such as telephone consultations, videoconferences, or internet therapy, is unable to be claimed under Australia’s Medicare system. This is the case even when clients are otherwise eligible for allied health services under the MBS (Medical Benefits Scheme) Items 2710 or 2712.
In general, Australia’s telepsychology medico-legal issues remain unresolved. Policies are also excessively cumbersome and deter clinicians from offering telepsychology (Hawker & Kavanaugh, 1998). In both the private and public sector, remuneration policies are unsatisfactory and seemingly random. In the main, the clinical responsibilities for the treatment of mental disorders remain with the local, face-to-face, Community Mental Health Team. This policy, when applied to the real world of rural and remote mental health, inaccurately assumes that a sufficiently experienced and resourced team exists in the same place as the need does. This is not borne out by the literature (Cooper & Davies, 2000, cited in Buist, 2003). Evidence to date would suggest that significant work at the policy and regulatory levels needs to be completed before telepsychology may fulfil its promise to rural and regional Australia as a strategy to reduce the disparity in mental health service delivery.

2.4.9 Cost analysis

The future of telepsychology depends in equal measure on its clinical effectiveness and its cost-effectiveness. Studies investigating the cost of providing various telepsychology and telepsychiatry services consistently demonstrate adequate effectiveness. Telepsychology is less expensive for patients, because it reduces travel time, travel costs and time off from work (Bose et al., 2001; Jones & Ruskin, 2001). Although some cautions have been put forward regarding the capacity for low-patient demand areas, such as rural or remote locations, to adequately meet the “breakeven point” (e.g. Simpson, (J). et al., 2001; Mielonen et al., 2000; Werner, 2001), cost-effectiveness is maintained when assessment of success is extended to include administrative,

Shore, Brooks et al. (2007) have contributed compelling evidence to confirm telepsychiatry’s promise as an efficient and cost effective tool to serve and research clinically underserved, rural and remote mental health populations. Reporting on the significantly decreasing costs associated with performing telepsychiatric consultations on 384kbps integrated services digital network (ISDN) from 2003 to 2005, the authors described the expense of new clinic telehealth consultations over an 11 month period as costing $6,000 more per person than in-person interviews in 2003. Direct costs were calculated from transmission, personnel, travel and equipment costs. In 2005, the same research-based telehealth interviews cost $8,000 less than in-person interviews over the same duration. In established clinics, the cost for telehealth in 2003 was $1,700 more than in-person interviews, but $12,000 less in 2005. While costs associated with personnel, travel and equipment remained relatively stable over the period, a nearly 2 ½ times reduction in transmission costs, and nearly 3 times greater tele-consultation hours were responsible for the significant improvement in economic efficiency for this study group.

In a study of Canadian telemental health, individual patient costs were higher in face-to-face consultations, however higher “societal” costs suggested that cost-effectiveness in telehealth is contingent on an adequate patient workload (Persaud, Jreige, Skedgel, Finley, Sargeant & Hanlon, 2005). The cost of sending a patient from a remote community for suicide risk assessment to Labrador, Newfoundland was also compared with the cost of
videoconferencing, and found to have saved the Newfoundland Government nearly $141,000 for 71 patients over the year 2003, while being satisfactory to clinicians and patients alike (Jong, 2004).

Similarly, Krupinski et al. (2004) reported that the cost of lost, real-time teleconsultations is US$228 per hour, of which $126 per hour constituted the reimbursement costs for the clinicians at the local site. As she did not report on the comparative frequency of, reasons for, or costs associated with, unsuccessful (i.e. client failed to attend as scheduled) face-to-face cases, it is difficult to know whether this figure represents significant expense, compared to the provision of a standard consultation service. She and her colleagues identified factors associated with unsuccessful consultations related to changing telehealth sub-specialties, personnel turnover at tele-sites, and missed or cancelled appointments by patients. Smith, Scuffham, and Wooton (2007) reported that telepaediatrics was cheaper than diverting rural and remote referrals to in-person consultations in Brisbane, Queensland, and the most important factors associated with cost-effective thresholds were travel costs, coordinator salaries and videoconference equipment costs.

In a recent randomized controlled trial of face-to-face versus telepsychology (see also Mitchell et al., 2008), Crow et al. (2009) investigated costs associated with the delivery of cognitive behavioural therapy (CBT) for women with bulimia nervosa (BN). Over a 16-week period, 128 women with BN received 20 sessions of CBT. Results indicated significant clinical improvement, in addition to telepsychology being a cheaper option (see Mitchell et al. (2008) for further detail). Costs were predominantly associated with therapist travel and gasoline charges for attending face-to-face appointments.
Results demonstrated that, at the conclusion of treatment, the total cost per participant was $9324.68 for those who received face-to-face CBT and $7300.40 for those who received telepsychology; just over $2000 saving from using telepsychology.

Harley (2006) described the cost effectiveness of supplying psychiatric consultations and presentations to clients on the Island of Jersey where traditional models of psychiatrists travelling to the site cost four times more than the cost of telepsychiatry consultations, and the breakeven point for number of consultations was four times lower than the actual number of teleconsultations per year.

It would be reasonable to conclude from the literature that, as the cost of technology decreases, the availability of services will increase. In metropolitan regions, with the infrastructure to support demand for services, this suggests that telepsychology would be cost effective. The capacity for rural and remote regions to build and sustain telecommunication infrastructure is less secure. Smaller populations cannot afford to continuously upgrade rapidly changing technologies, and pre-existing technology networks may not be easily “retro-fitted” to accommodate new technological advances. However, wireless technologies and the increasingly ubiquitous nature of the internet may further enhance the cost effectiveness and pure pragmatics of telepsychology in the future (Monnier et al., 2003; Simmons et al., 2003). One such attempt to equalise the technology gap between rural and metropolitan Australia is the increased access and government subsidy available for rural Australians to access satellite broadband (see www.broadband-hub.com.au/rural-broadband-options), and increased investment in terrestrial broadband infrastructure via the

These innovations are new and have undergone multiple revisions in planning, resulting in significant access delays. In addition, although a 2008 Australian Communications and Media Authority ‘Telecommunications Today’ report claimed that the rural sector is “reasonably connected” online, other surveys have reported that rural broadband users still see themselves as receiving an inferior service to their metropolitan counterparts ([http://cherrypip.com.au/piet/media/commDay.pdf](http://cherrypip.com.au/piet/media/commDay.pdf)). The current Gillard Government appears committed to rolling out the National Broadband Network to rural and remote areas, and particularly for its use in health (Karvelas, 2010). The development of a local evidence-base for the effectiveness of telepsychology is particularly timely in this context.

### 2.4.10 Special populations

It has long been recognised that no single approach to treatment or service provision meets the needs of all consumers. A failure to recognise the consumer’s special needs will ultimately result in negative clinical and social outcomes. Special populations may be identified according to age, gender, ethnicity or cultural factors, location or mental health problem. They are typically underserved, disenfranchised and facing additional barriers to service access (Alverson, Holtz, D'Iorio, DeVany, Simmons et al., 2008). For the purposes of summarising the telepsychology literature, I have grouped the research into special population sub-categories of 1) racial/ethnic groups; 2) rural groups; and 3) incarcerated patients.
2.4.10.1 Racial/ethnic Groups

The literature on telepsychiatry with diverse populations and minority groups remains limited to four largely descriptive studies and case reports, with occasional remarks in other studies on the racial or ethnic demographic profiles of their samples. Overall, authors identify that the unique elements of cross-cultural psychiatry layer onto the challenges associated with telepsychiatry consultations, and the relationship between distance providers and local staff is a critical element in their success (Boydell, Greenburg & Volpe, 2004; Shore & Manson, 2005). Shore et al. (2006) aimed to address the absence of telepsychology research with minority groups, by suggesting a systematic framework, based on the DSM-IV outline for understanding cultural issues in psychiatric treatment, and to address cultural aspects of telepsychiatry care. Using examples from their work with predominantly North American Indian, Hispanic and Alaskan native veterans, they describe the importance of features of the patient-doctor interaction; these include issues such as eye contact and image framing, establishing trust and rapport through involving ground based tribal/telehealth outreach workers to act as the bridge between the psychiatrist and client at their first meeting, developing positive “system transference” through developing partnership and collaborative links in organizational culture, clarifying confidentiality boundaries, and understanding location-based cultural expectations and experience.

The value of a site-specific, participatory approach to developing frameworks for evaluating telepsychiatry services is reported by Boydell et al. (2004). They present their own “social ecology” sensitive evaluation of a
paediatric telepsychiatry program in Toronto, Canada. A similar developmental approach is recommended by Shore and Manson (2005), following experiences in establishing a service to rural American Indians emphasising needs identification and the organisation of partnerships for success. These authors suggest that technology-based services may appear unappealing to local residents due to a number of reasons, including; 1) the American Indians’ general mistrust of government initiatives, based on significant marginalisation and institutional traumatisation; 2) the fact that, typically, Indian Health Services are staffed by non-Indian providers, who 3) do not stay long term in posts and, 4) they have been enrolled into numerous research interventions for which the clients perceive little long term benefit, because the services cease when the research ends. Despite these significant detractors, reasonable success has still been reported with interventions designed specifically to accommodate the special needs of ethnic and racial minority groups.

One such positive outcome has been the good preliminary support for the diagnostic reliability of psychometric assessment tools administered via telepsychology, compared with face-to-face administration. For example, Shore, Savin et al. (2007) found equal reliability between telepsychology and face-to-face administrations of the Structured Clinical Interview for DSM Disorders (SCID) to American Indian Veterans. Furthermore, despite clients having historically negative cultural expectations regarding government provided services, Savin et al. (2006) also report equivalent reliability between face-to-face and telepsychology administrations of clinical interviews for American Indian residents. The authors suggest that because telepsychiatry permits access to clinicians with expertise in areas such as cross-cultural
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psychology and telepsychiatry, which would typically be unavailable in rural areas, this facilitates success. Even with this expertise, however, the psychiatrists in Savin et al.'s. (2006) study perceived that it took longer to establish rapport in the telepsychiatry sessions, compared to their experience in face-to-face interviews, and they were concerned that therapeutic rapport would be impaired. However, the decreased rapport perceived by the telepsychiatrists did not reduce the capacity to provide accurate diagnosis or consultation when ground-staff clinicians were present in all interviews, especially when interacting with child patients.

Several Australian services have also focused on the provision of mental health support to minority populations. For example, the Queensland Transcultural Mental Health Secondary Support Service is a telepsychiatry-specific service which directly targets clients, and employs staff, from culturally and linguistically diverse backgrounds (Lessing & Blignault, 2001). It provides a consultancy and referral service, but as of 2011, not direct clinical contact (see http://www.health.qld.gov.au/pahospital/qtmhc/tccs.asp).

Little work investigating the application of telepsychiatry/telepsychology to Australian indigenous communities has been completed thus far. For example, 7 of the 54 cases (who presented with a predominant diagnosis of disruptive behaviours, ADHD and depression) described in a pilot trial of a child and adolescent service (run from Sydney to the rural communities of Dubbo (415kms away) and Bourke (775kms away), were Aboriginal children. Positive clinical changes were reported for all clients, however no distinctions between outcomes were reported between indigenous versus non-indigenous children and families; nor were there any descriptions of modifications or culturally
specific changes that may have been made to intervention approaches (Dosseter et al., 1999).

Other researchers have described programmes where Australian Aboriginal and indigenous clients have probably been included in the participant samples over the normal provision of service (e.g. Gelber & Alexander, 1999; Starling & Foley, 2006). However, this is largely inferred from the description of catchment area demographics and the presence of Aboriginal-specific workers (e.g. Aboriginal liaison mental health workers, Aboriginal health trainees). Clearly, further work with this often remotely located, special population is required, for example, research which investigates how to enhance Aboriginal people’s engagement with services and technology (e.g. such as attending non-traditional office locations and the use of liaison staff), and running sessions appropriate to Aboriginal-specific family dynamics (Sheahan, 2002).

2.4.10.2 Rural groups

Significant differences in socioeconomic status, lifestyle behaviours and access to care have resulted in health disparities between most rural and urban communities (Alverson et al., 2004; Bischoff et al., 2004; Ermer, 1999; New Freedom Commission on Mental Health, 2004). Regional, rural and remote Australians experience greater community under-servicing of critical services than do metropolitan Australians (Alverson et al., 2008; Fraser et al., 2002). The difficulties of living with a mental health problem are compounded by limited access to specialist services, which is evidenced by the lesser numbers of psychiatrists and psychologists practicing in rural areas, and by over half as much paid to rural residents than metropolitan residents in Medicare benefits.
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(Fraser et al., 2002; Greenwood et al., 2004; Harris, 2008). In addition, support services are scarce and families find it difficult to access education or financial assistance. Communities may struggle with the overt signs of mental illness, such as inappropriate or acting out behaviours that may stigmatise the patient and their family. When professionals do exist on the ground, they may be poorly supported by ill-equipped hospital or outreach services. In Australia, a recent training trend is to encourage regional and rural service for new graduates in medicine, dentistry and allied health. The consequence is that under-resourced and over-burdened experienced practitioners in rural areas are further burdened by the supervision needs of inexperienced recent graduates, and clients may ultimately miss out (Harris, 2008; Rajkumar & Hoolahan, 2004).

Telemedicine and telepsychiatry have been frequently described as a partial solution to the challenges of health care delivery in remote and underserved areas (e.g. see Preston, Brown & Hartley, 1992). The newest research on rural populations strongly endorses the potential for telepsychiatry to redress the mental health disparity of isolated communities, particularly in the face of providing service where none had been previously available (Bischoff et al., 2004; Greenwood et al., 2004; Thomas et al., 2005), but its contribution to propelling the field as a whole remains limited, due to a lack of large scale controlled data on which outcomes might be compared, and the diversity of rural communities from which results may be extrapolated (Fraser et al., 2002).

In addition, as Werner and Anderson (1998) note, while telepsychology services are attractive as a means to enhance the rural resident’s access to mental health services, significant problems remain at an organisational level. Throughout Australia, for example, health services are implemented at a state-
based level and supplemented with Commonwealth funding under The National Mental Health Strategy. This strategy and its various plans, policies and agreements have been revised at least three times since their first endorsement in 1992.

Variation in the quality of access and availability of technology resources occurs between different regions within the same state (e.g. see Vicary, 2002; Vicary & Westerman, 2004). In Western Australia, for example, the state-wide health system only entered into an agreement to install software to fully integrate all patient health records across the state in 2009 (Hardy, 2009). To this day, practitioners in metropolitan areas supplying services to patients in rural areas have no means by which to contribute file notes, other than writing them by hand and faxing them to the single, hard-copy file holder located somewhere else. An integrated system would allow the practitioner to deliver services and maintain up-to-date records on the patient, regardless of their location in relation to the patient or other specialist providers in a multidisciplinary health service team.

The setup and maintenance costs, in addition to the insecure availability of sufficient bandwidth in rural areas (Simmons et al., 2003), may mean that the adoption of telepsychology may be too ambitious an undertaking for individual rural health providers and clients. Few studies have specifically explored the cost-effectiveness of sharing equipment and costs across professional disciplines or services when new services are established (see Dunn, et al., 2000; Simpson, 2009) despite an increasing trend for “one-stop-shop” medicine, that includes mental health services. To enhance their claims of cost-effectiveness, current services and future researchers should focus on exploring
the costs saved by treating mental health problems early and close to home via telepsychology, compared to the costs associated when mental health problems increase in severity and transport to larger cities for inpatient care is required.

Over the last decade significant changes in the cost and availability of technology have occurred. Indeed, as technology has improved, more studies are reporting the use of portable or hand-held tele-video units that are supplied to individuals for use in their homes, or the use of Internet Protocol (IP) transmissions, rather than reliance on closed telemedicine systems that are accessible only through hospital or university/community outreach or clinics.

Thus far, more research supports the cost effectiveness of telepsychology, compared to face-to-face service, than does not (e.g. see Hyler & Gangure, 2003, for a summary). However, these conclusions are based on research that is nearly a decade old, and positive appraisals remain dependent on achieving sufficient use of the system to reach a break-even point compared to face-to-face services (see Section 2.8 for further review of cost effectiveness studies generally). The inconsistent methodology associated with cost effectiveness studies, and the multiple moderating variables associated with determining “value for money” has made it difficult to resolve whether Werner and Anderson’s (1998) claim that telepsychology in rural areas is economically unsupportable is a fair one.

Through necessity and a lack of alternatives, it would appear that rural and regional communities seem willing to accept the inherent quality-of-life value that technology may bring, and use it, regardless of cost. Rural populations can bring the unique features of their lifestyles, such as physical isolation, limited support networks, easy access to firearms, to the
telepsychology encounter, which may not be encountered in typical metropolitan mental health service provision (Richardson et al., 2009; Shore, Brooks et al., 2007; Shore, Hilty & Yellowlees, 2007). In addition, rural service providers have unique needs and challenges associated with providing assistance, including limited access to expertise, assessment and evaluation facilities and decision support (Hilty, Nesbitt et al., 2007; Hilty, Yellowlees, Cobb et al., 2006), as well as limited opportunities for professional development, education and supervision (Griffiths et al., 2006; Richardson et al., 2009).

Moreover, the unique qualities of “living off the grid” may have appeal to certain mental health consumer groups, and this represents a further challenge to mental health service providers who may be required to support the reluctant patient. Researchers have noted that rural regions may offer veterans self-treatment strategies, such as voluntary isolation, to reduce general stimulation, hyperarousal, and interpersonal conflict and, as such, rural areas may attract a relatively large, elderly veteran mental health population (Morland et al., 2003).

Another unique population of remote living patients is military personnel, who typically live quite separate from other communities, and often at a distance from metropolitan centres (Loberg, 2006). As a group of patients, military personnel generally seek health care from military providers, because they are perceived to better understand illness in the context of military life than do the civilian counterpart systems (Morland et al., 2003). However, as with all remote dwellers, travel to receive military services, which may only be available in large regional centres or cities, can be time consuming and cost prohibitive (Morland et al., 2004).
Grady and Melcer (2005) describe a retrospective analysis of telemental health care service, compared to in-person mental health services, for military personnel from a Naval Air Station in Maryland, USA on a range of medication and treatment variables. Results indicated no significant differences in prescription rates, recommendation types, or physician-ordered tests. However, results for tele-mental health services were significantly better for global assessment of functioning over two or more visits, compliance with medication plans and attendance at follow-up appointments. The development of therapeutic alliance was considered no different in either condition.

It is interesting to note that, despite telepsychology service delivery predominantly appearing to occur between metropolitan and rural locations, the issue of rurality, as with the issue of cultural diversity, is rarely directly explored or documented in study design methods or conclusions. Some exceptions are the studies by Bischoff et al. (2004) and Hilty, Nesbitt et al. (2007). The bulk of telepsychology research demonstrates the effectiveness, reliability or satisfaction associated with interactions between providers in a typically well-serviced area (often metropolitan) and consumers in another distant location. Typically, this location is far from the site of the transmission and involves participants with very different financial and lifestyle encumbrances than those experienced by the clinician providing the service. The distances between practitioner and client might be relatively small (i.e. 75 miles from the telepsychiatry hub – e.g. Werner & Anderson, 1998) which, in urban areas, may mean little in terms of service availability. However, in rural, regional or remote areas, services are sparser, and small distances might represent significant
differences in service availability and in the demographic makeup of residents of that area (Hilty, Nesbitt et al., 2007; Werner & Anderson, 1998).

For example, Fileke (2005) quotes researcher John Hoult, in his review of Australian state-based mental health services:

“We offer our sympathy to those who suffer from serious mental illness and to their relatives in rural South Australia (SA). The situation reflects an awful neglect, an embarrassment to the South Australian government with not a single thing to praise in the rural services except the perseverance of staff, who have to go to work each day facing an impossible task. Leave Adelaide and you leave behind mental health services” (p. 1). This quote describes the disparity between the major cities and regional towns of South Australia, but represents the situation in all Australian states and territories, other than the ACT. Similar conclusions are echoed in the broader literature (Harris, 2008; Mental Health Council of Australia (MHCOA), 2005; National Rural Health Alliance, 2003; Rajkumar & Hoolahan, 2004) and by clients themselves in personal communications (see Chapter 4).

It has been suggested that future research with rural populations not simply consider urban/rural distinctions, which has been a typical approach in the past. Instead, researchers should identify and incorporate exploration of both people and place factors to describe the special mental health service needs of the residents of non-metropolitan regions (Fraser et al., 2002).

2.4.10.3 Incarcerated patients

Forensic incarcerated populations represent another unique isolated community (Loberg, 2006). Despite a small number of studies examining
forensic populations, and the significant methodological limitations of these studies, research has increasingly associated videoconferencing telepsychology with positive outcomes for incarcerated and forensic clients and service providers (Antonacci et al., 2008; Sullivan et al., 2008). Researchers point to the added bonuses of provider safety, cost effectiveness and economical resource allocation with telepsychology. Additionally, they note the potential for increased services to a typically underserved mental health group with disproportionately high mental health needs. Other challenges of working via videoconferencing with the unique mental health needs of incarcerated patients include maintaining adherence to welfare, privacy and confidentiality (Myers et al., 2004) and the importance of on-site support. These issues have been successfully addressed by researchers in several studies (i.e. Brodey at al., 2000; Leonard, 2004a, 2004b; Price & Sapci, 2007).

Brett and Blumberg (2006) describe the significant and successful impact of court-liaison telepsychiatry in preventing the unnecessary and unduly distressing transportation of hospital-ordered, mentally ill offenders in Western Australia over the vast distances covered by this state-wide service. In addition, they highlight the significant economic differences between transporting patients by Flying Doctor Service compared to telepsychiatry services. These observations can be extrapolated to the situation of rural or remote residents generally, for whom a hospital admission may be particularly traumatic, given the transport requirements when services are unavailable in their own home towns (Harris, 2008).

Supporting evidence from the international context can be found in a study by Manfredi, Shupe and Batki (2005). This research describes the
successful pilot project of providing psychiatric evaluation and treatment services to rural, incarcerated men (n=15) in NY state, citing the benefits of reduced costs and discomfort, and improved safety associated with not transporting prisoners to external sites. Subsequently, the local mental health clinic now offers telepsychiatric consultations to all prisoners who desire them, and use of the service is dictated more by the willingness of the psychiatrists to use the service, not its cost. Fortunately, research has shown a willingness and comfort on the part of psychiatrists in forensic settings to use telepsychology (Brodey et al., 2000; Nelson et al., 2004).

As described earlier (Chapter 2.4.7.1), technological quality (including audio and video quality, bandwidth and transmission speed, and camera/monitor placement) may influence the development of rapport and the reliability of assessment conclusions. While all telepsychology environments rely on technological quality to maintain reliability and validity, these issues are particularly salient in forensic settings, when a patient’s release from incarceration, and the security of the community, may be being determined (Jones et al., 2006). The perception of subtle fluctuations in eye contact and body movement, that may be the result of a poorly placed camera and monitor, may be incorrectly interpreted as suggestive of evasion or guilt. Poor quality audio may influence the fluidity of conversation, again, suggesting avoidance or guardedness as a result of requests for repetition (Sullivan et al., 2008).

While forensic settings would appear to have the most explicit legal consequences for failing to use telepsychology reliably and accurately, all mental health settings have an ethical and professional responsibility, in addition to their legal responsibility, to ensure that the technology does not
impede the quality of the interaction, or interfere with strategies aimed to address the needs of the client or provider in any way.

2.5 Discussion of the literature review

What has been described above outlines the findings of research into novel applications of telepsychology (2.4.1), clinical outcomes (2.4.2-2.4.4.), process outcomes (2.4.5-2.4.6), technology (2.4.7), ethics and cost (2.4.8-2.4.9) and the impact of telepsychology on special populations (2.4.10). The research that was selected for specific attention in the review above was literature that related to the significant features to be outlined in the chapters to follow, had relevance to consumers typically found in rural community outpatient clinics in Australia, and which bears a particular relationship to the interplay between technology and psychotherapy.

More specifically, sub-chapters detailing research into child and adolescent telepsychology or telepsychology conducted with older adults have not been included. Some of these research studies are included in Table 1, due to their findings in relation to other features (e.g. cost analysis), or outlined in other sub-chapters (e.g. the reliability of assessing the elderly using telepsychology). These studies are also tabulated separately in Appendix C and D for ease of reading. These particular special population groups were not elaborated for parsimony and due to their very limited relationship to the main intervention case-studies which follow in Chapters 7, 8 and 9 (and Appendices H & I).
Based on the conclusions of the disparate summaries of the literature above, the following general conclusions may be drawn. There is:

1) strong evidence for high patient and moderately-high provider satisfaction for a range of tele-mental health services, though importantly, there is concern about exactly what satisfaction is measuring in light of results showing poor clinical outcomes in some cases;

2) strong evidence for the reliability of clinical assessments (neuropsychological testing, clinical interviews, mental status exams) relative to face-to-face assessments;

3) moderate evidence supporting the effectiveness of tele-mental health to treat specific mental health diagnoses, such as depression and anxiety disorders, using well established treatments;

4) preliminary evidence and anecdotal reports suggesting that unique qualities of tele-mental health may enhance treatment outcomes for certain populations over and above the outcomes for face-to-face treatment;

5) preliminary evidence and anecdotal reports suggesting comparable effectiveness of tele-mental health for specific populations, including incarcerated patients, children and adolescents, rural populations, and older adults, particularly as a compensatory approach to service gaps in real world practice settings.

The weaknesses previously identified in the research literature include 1) a paucity of methodologically rigorous efficacy, effectiveness, and cost studies; 2) few process evaluations linking technique to outcome, and; 3) a relative lack of research into the legal, ethical and regulatory issues inherent in this application of technology to clinical practice (Antonacci et al., 2008; Frueh
et al., 2000; Glueckauf & Ketterson, 2004; Hilty et al., 2003; Hyler et al., 2005; Kuulasmaa et al., 2004; Monnier et al., 2003; Norman, 2006; Pesämaa et al., 2004; Urness et al., 2004).

Very few telepsychology studies achieve rigour through either randomized, controlled designs, or in depth case analysis. None have adopted non-traditional approaches or mixed methods to studying telepsychology, yet some have used both qualitative and quantitative measures. Further, the field has under-utilized standardized clinical outcome measures, instead emphasizing satisfaction as a primary outcome domain (Antonacci et al., 2008; Myers et al., 2008), even when the psychometric properties of satisfaction measures were unknown or the definition of satisfaction unclear (see Whitten & Mair, 2000, for review). In addition, the field has underutilised qualitative methods, often employing “homemade” survey instruments which investigate satisfaction, but rarely are positioned directly, such that comparisons with clinical outcomes and their relationship to each other may be made. Few studies have endeavoured to monitor and report on the adaptations to technology and the changes to program or therapy approaches made in response to telepsychology within and between studies (Frueh et al., 2000). Robust qualitative process evaluations which help translate research into practice are also missing from the research.

The conclusion that the field is progressing well toward establishing telepsychiatry/telepsychology as efficacious could be the result of a positive reporting bias in the literature (Hilty et al., 2003). A number of authors have offered reports of results contrary to expectations or typical field outcomes (e.g. Grealish et al., 2005), have described the features of unsuccessful tele-
consultations as cautionary advice (e.g. Krupinski et al., 2004), and outlined disorder-specific advantages and disadvantages to using telepsychology instead of face-to-face treatment as usual (e.g. Simpson, Bell, Knox et al., 2005). The opportunity to use telepsychology as part of regular practice is increasing, the cost is going down, and clients are indicating a willingness and satisfaction in using it. However, the research consistently reports that while providers may be happy to use telepsychology to reduce the negative effects of providing a service at a distance, such as excessive travel or cost, they remain sceptical about whether it will work for their client’s special circumstances. As providers are the most significant gatekeepers to service (Whitten & Mackert, 2005), this is a problem for the field. To progress the field, research which concurrently explores not only telepsychology from the consumer’s perspective, but also the process of use from the clinician’s perspective (in terms of technological adaptation, therapeutic process and satisfaction), as well as clinical outcomes, will be a useful contribution to the knowledge base in this field. Thus far, such a study has not been undertaken. Such an approach might also explain why, despite the generally positive evidence, practitioners remain reluctant to use telepsychology (e.g. Rees & Stone, 2005; Schopp et al., 2000).

To summarise the research framework which has characterised the published, peer-reviewed telepsychology literature thus far, is to highlight a bifurcated model of experimental versus quasi-experimental paradigms, methodologies and methods (see Figure 2.2 below).
As indicated in Figure 2.2, and evidenced in the literature review, telepsychology (and telepsychiatry) research has tended to use experimental quantitative methods to confirm hypotheses and measure clinical outcomes (e.g. O’Reilly et al., 2007; Ruskin et al., 2004), or it has employed qualitative methods in an exploratory, idiographic, thick description manner (e.g. Bischoff et al., 2004; Boydell et al., 2010).

Some telepsychology researchers have acknowledged the complementary nature of both qualitative and quantitative approaches and used multi-method designs in their research (e.g. Frueh et al., 2005; Mielonen et al., 2000). In such studies, both qualitative and quantitative methods are sequentially adopted to explicate various pre-determined elements of the same research questions. This is in contrast to the more commonly used mixed methods approach, which uses qualitative and quantitative methods in a concurrent or integrative manner.

Despite the collection of both qualitative and quantitative telepsychology data within the same studies (e.g. descriptive satisfaction statements and change scores on standardised measures), there are no studies where sequential triangulation of mixed data has been applied to analysis and interpretation. Triangulation serves to explicate elements of the same research, as they emerge, rather than in an a-priori manner (Cresswell, 2003). Thus far, a mixed-method, integrative, sequentially-triangulated research design has yet
Figure 2.2 The bifurcated methodological framework of the current telepsychology literature and orientation to published studies

NB: Although research may include both experimental and quasi-experimental elements, in previous telepsychology literature, these elements have been added in a sequential manner (i.e. multi-method), rather than in an integrative (i.e. mixed method) manner.
to be applied to an investigation of telepsychology. This is despite the
acknowledgement of an apparent research-practice gap and telepsychology’s
implicit complexity as a healthcare system. This complexity requires an
investigative approach, that no one paradigm or methodology has adequately
covered.

In summary, this literature review served multiple purposes; 1) the large
scale review constituted an iterative study in itself, recognising that the “devil
may be in the detail” when investigating the research-practice gap, and
permitted hypothesis generation regarding “next steps” in the larger field; 2) it
permitted a narrowing of a field of interest, when its inclusiveness and depth
aided the identification of a consistent gap in the research, regardless of
intervention or client type, in the area of processes and practice guidelines for
clinicians; 3) it also demonstrated that, thus far, research had incorporated only
limited exploration of the therapeutic experience, other than in terms of
“satisfaction” from either the clinicians’ or consumers’ perspective. Such
practice gaps have been noted in other research fields and highlight the schism
between research and practice (Goldfried & Wolfe, 1998; Murdock, 2006).

Subsequently, despite having evidence that various pilot trials, and some large
scale controlled trials, of various manifestations of telepsychology had “worked”
(in that the trials had achieved some symptom change for research
participants), there were few documents which recommended if and how
clinicians altered their practice to adjust to the technological constraints of
telepsychology, and none which described non-experimental, naturalistic
occurrences of trials of these adjustments. While many research articles
described small qualitative components of their study methodology (i.e. the
assessment of satisfaction), these studies might be better described as quantitised investigations of qualitative phenomena (Tashakorri & Teddlie, 2003; Teddlie & Tashakkorri, 2006). Quantitised studies are so called because they typically involve Likert scales and standardised questionnaire results, rather than interview, dialectic or narrative data. This observation of whole-field methodological trends further strengthens the conclusion that a comprehensive integrative review would 1) be of pragmatic value to the field, 2) offer a unique contribution to the field, and 3) offer a review of the practices and specific changes to therapeutic techniques and approaches from expert consumers of telepsychology.

Unfortunately, as a practitioner planning to conduct telepsychology, my own comprehensive review of the literature did not leave me confident enough in the available evidence base to conduct telepsychology without further research and evaluation. Following my review of the literature, my understanding of the main areas of relevance for telepsychology research could be grouped into the following sub-headings; 1) technical considerations, 2) participant characteristics, 3) therapeutic factors, 4) therapy-practice (technique) adjustments; and, 5) telepsychology research challenges. No single study examined all of these factors concurrently to provide a contextualised account of their relative and/or cumulative influence. Hence, after completing the literature review, and due to the comparatively embryonic stage of the field of videoconferencing for therapy, broad exploratory questions, rather than specific hypotheses remained. These broad research questions are described in Figure 2.3 below.
The ambitious goal of this thesis then developed into an attempt to answer each of these questions in an integrative manner, so as to address multiple and alternate hypotheses from within the same data set. The chapter which follows will explore the conceptual model of the research process which was developed. It will describe paradigmatic assumptions, methodological typologies, methods, and techniques, while illuminating the reflective, participant-centred, developmental stance underpinning the thesis as a whole and which anchors it firmly to real-world practice.
Figure 2.3 Questions left unanswered by the literature review.

QUESTION 1: Is telepsychology effective?
Does telepsychology result in outcomes at least equivalent to face to face psychotherapy?

QUESTION 2: How do you effectively research a complex health interaction like telepsychology?
Can telepsychology be assessed more effectively using mixed methods?

QUESTION 3: How do you make telepsychology research clinically meaningful and user friendly for practitioners?
How do we implement a developmental intervention research/action research approach that investigates process and outcome, and is useful to practitioners?

QUESTION 4: If telepsychology is so good, why don’t clinicians use it more?
Are telepsychology practitioners satisfied with telepsychology, and do they value its use?

QUESTION 5: When they do use telepsychology, how does it change the clinician’s usual practice or the client’s behaviour?
Does telepsychology require changes to usual clinical practices of psychologists, or the responses of therapy recipients, because of the interference of the technology?
CHAPTER THREE

THE RESEARCH FRAMEWORK: PARADIGM, METHODOLOGY AND METHODS

3.1 Introduction

Methodological and design choices in the current study are critical to the contribution of this thesis to the intellectual discipline of clinical psychology and furthering the practice of telepsychology as a component of routine psychotherapy and clinical psychology service. The literature review in the previous chapter highlighted that one explanation for the research-practice gap in this field is the lack of contextual validity and generalizability of studies as a result of rigid designs and narrow scope of study.

For a long time, opposing paradigmatic tensions have existed in telepsychology research, as they have in Clinical Psychology more broadly. These tensions have created a schism between experimental psychological research, where RCT’s are offered as the gold standard (e.g. Chambless & Hollon, 1998), and the applied qualitative research of practice that occurs in natural, “messy” (Mellor, 2001) environments (Johnson & Onwuegbuzie, 2004; Mellor, 2001; Reichardt & Rallis, 1994). The increasing interest in alternative methodological approaches (i.e. Greene & Caracelli, 1997; Ogles, Lunnen & Bonesteel, 2001; Peterson, 2004; Ponterotto, 2005; Reichardt & Rallis, 1994; Teddlie & Tashakkori, 2003) suggests that the quantitative methods of the positivistic psychology paradigm have been recognised as being limited for answering some of the applied questions of interest in humanistic psychology. The main criticisms are that in controlling for variance and emphasising an
objective (researcher absent?) stance, such research attempts to mimic the reductionist, natural sciences and sacrifice the contextual validity required for practice application (Peterson, 2004; Rennie, 2007). The bulk of clients seen in everyday practice are rarely able to be as precisely or unambiguously categorised according to their characteristics, symptoms or the treatment they receive, as is typically reported in empirical outcome research (Hawley & Weisz, 2002; Pearsons, 2006; Peterson, 2004).

As an alternative to the positivistic paradigm, constructivist paradigms are more traditionally aligned with qualitative methods. However, these are not without their own limitations. Although they prioritise contextual validity, constructivist paradigms have been criticised for being too value bound with cause becoming too difficult to distinguish from effect (Tashakorri & Teddlie, 1998).

What follows is a brief description of the conceptual development of this thesis as an integrated series of studies in telepsychology. By presenting the model in its entirety at the outset, it is hoped that the reader will be able to progress more easily through the detailed descriptions of the components of the model, so that he/she will be able to orient their understanding with that framework in mind. Figure 3.1 (below) provides a pictorial representation of the research framework underpinning the studies which follow and will be repeatedly referenced throughout the chapter. This framework is in stark contrast to that depicted in Figure 2.2 (Chapter 2) summarising previous studies.
As indicated in Figure 3.1 above, this thesis prioritises a paradigmatic framework and methodological approach to propel both the knowledge base and evidentiary process in a direction that is accessible and meaningful to the practitioner. The resultant research framework will now be described according to the various levels of inquiry; beginning with the paradigmatic epistemologies and the methodologies they encourage, followed by the subsequent methods that were chosen to respond to the various research questions which emerged from personal clinical observation and gaps in the research literature (as illustrated in Figure 2.2).

### 3.2 Research Level 1: Paradigm

The empirical method of the physical sciences aims to distil and simplify. Psychology also uses the scientific method, yet its landscape of human
experience is uniquely complex. Psychology endeavours to appreciate the context of these complexities, such that research findings can be applied not simply as ends in themselves, but can inform therapeutic practice (Peterson, 2004; Reid, 2008). Practitioners need to know more than whether an intervention works or not; they need to know why or how it works or fails. This depth of inquiry is typically overlooked in RCT approaches which focus on outcome in large groups, rather than individual idiosyncrasies in effects. A bridge between constructivist and positivist philosophies of psychological science can be found in pragmatic, phenomenological and hermeneutic paradigms. Many alternative research methodologies and mixed methods approaches flourish under these umbrella philosophies (Patton, 2002; Tashakkori & Teddlie, 1998).

The first relevant paradigm employed in this thesis is the pragmatic paradigm, described by Tashakkori and Teddlie (1998) and Fishman (2001; 2005) (see Figure 3.1). This paradigm represents an integrative response to the incompatibility thesis of the opposing constructivist and positivist dialectics (e.g. Cherryholmes, 1992; Cresswell, 1998; 2003). Numerous researchers have proposed that the disconnect between epistemology and method is not as clear-cut as the “paradigm wars” might suggest (Datta, 1994; Gage, 1989; Guba & Lincoln, 1994; House, 1994). Pragmatists have argued that, regardless of the circumstances of the paradigmatic framework or theoretical lens through which pieces of research are viewed, both qualitative and quantitative methods may be fruitfully used in a single study, because the research question is of primary importance (Brewer & Hunter, 1989; Datta, 1994; Hanson, Cresswell, Plano-Clark, Petska, Cresswell, 2005; Plano-Clark, Huddleston-Casas, Churchill,

The second relevant paradigm, the phenomenological paradigm, incorporates a qualitative, practical form of inquiry for studying human phenomena. Phenomenology has a philosophical foundation in which the aim of the researcher is to accurately describe the phenomenon and lived experiences of people, without imposing a pre-determined conceptual framework (Greene & Caracelli, 1997; Jennings, 1986; Spiegelberg, 1960). To enhance the rigour and legitimacy of the conclusions that are drawn, the researcher enters into a process of self-reflection, known as bracketing. Bracketing makes the researcher's biases, knowledge and understanding about the phenomenon under investigation, explicit to the research process (Hein & Austin, 2001). The preface at the beginning of this thesis represents a component of the phenomenological paradigm overarching this thesis.

The third relevant paradigm is the hermeneutic paradigm. The hermeneutic paradigm, as with other qualitative methods, incorporates the ontology that knowledge is not truth in itself, but is constructed from context, culture and history (Rennie, 2007; Wiklund, Lindholm & Lindstrom, 2002). In this way, hermeneutics shares foundation elements with both pragmatic and phenomenological paradigms (Fishman, 2001, 2005; Tashakkori & Teddlie, 1998).

Hermeneutics is concerned with understanding texts (Gadamer, 1975; Wiklund, et al., 2002). Because of the nature of textual data, hermeneutical inquiry guides researchers toward mixed methodologies and, from that, a number of particularly relevant methods. The specific data sources in
hermeneutic phenomenological research include one or more of (a) the researcher's self-reflection on relevant research and phenomenological experiences, (b) participants' oral or written descriptions of their experiences of the phenomenon, and (c) accounts of the phenomenon obtained from diverse textual sources, that in addition to pre-existing research and scientific literature, include literature, poetry, visual art, television and theatre (Hein & Austin, 2001). In this research, data sources have included the researchers self-reflection, participants survey responses and in-therapy accounts, scientific and grey literature, and due to its relevance to teleconferencing, electronic communication and television research. The results of hermeneutic phenomenological research are presented as descriptive insights and “thick description” accounts (Geertz, 1973). When these are combined with mixed methods and action research approaches that triangulate data (Jick, 1979), rich idiographic findings that support nomothetic theory development are produced.

In psychology research, hermeneutics and phenomenology differ in terms of the sources of the data they investigate (i.e. accounts of experiences versus texts) and the analysis of the data (i.e. content/thematic analysis of actual words of participants versus descriptions/texts of the experience). Phenomenology incorporates a number of methods for the analysis of experience, action, textual materials, and other descriptive data, and, in this way, can be seen to partially overlap the hermeneutic approach (Fishman, 2001; Rennie, 2007). It does not dictate any particular methodology over another, but offers a foundation to the mixed methods methodology (Hein & Austin, 2001). Both paradigmatic approaches were required to address the emerging questions of this thesis and their sources of data. Phenomenology
and hermeneutics are complementary in that both approaches assume that the use of a particular methodology is determined by the research question, the purposes of the study and the skills of the researcher, and that the methodology is adapted and modified as the research progresses in order to meet research goals and capture the phenomenon under scrutiny (Hein & Austin, 2001).

In this thesis, and as illustrated in Figure 3.1, when combined, the pragmatic, phenomenological and hermeneutic paradigms imply a number of methodological approaches, which in themselves, suggest particular evaluation and analysis methods. These methods, in turn, feed back into a kind of hermeneutic circle of pragmatic research strategy and design, where the meaning of the whole (which is based in part on expectations created from what has gone before) also informs the meaning of the parts of the research strategy, and vice versa (Fishman, 2005; Rennie, 2007). In an investigation of telepsychology, these paradigmatic influences drive the interpretation of telepsychology as an intervention, in addition to investigating the interrelationships between the researcher, the practitioner, the clients, the technology and the research methodology, as will be explored further below.

### 3.3 Research Level 2: Methodology

The next level in the thesis research framework is methodology, and includes four methodological approaches; mixed methods, developmental intervention research, action research and person–centric methodologies. These methodologies are illustrated in Figure 3.1 and their selection has emerged from consideration of pragmatic, phenomenological and hermeneutic paradigms. The individual methodologies will be explored in detail below.
3.3.1 Mixed Methods

The strengths of quantitative analysis are due to replicability, reliability and specificity, and are argued to be based on uniform procedures, universal rules and temporally discrete units of analyses (Barlow, Hayes & Nelson, 1984; Galassi & Gersch, 1993). By contrast, qualitative analyses have been described as not sharing the uniformity of approach or the discreteness of analysis of quantitative approaches. However, qualitative analyses offer the opportunity for iterative exploration to capture patterns and themes, deviations, interesting (and possibly illuminating) stories and atypical responses (Greene, 2005; Lofland & Lofland, 1995). The mixed methods approach represents a pragmatic “middle ground” and is a methodology which integrates qualitative and quantitative methods to build upon the complementary strengths of each to increase the reliability, validity and utility of findings (Johnson & Onwuegbuzie, 2004; Mendlinger & Cwikel, 2008; Plano-Clark et al., 2008; Ridenour, Newman & DeMarco, 2003).

A key consideration of mixed methods methodology is the approach by which complementary methods and data are combined (Creswell, 1995; Plano Clark et al. 2008; Tashakkori & Teddie, 1998). Although Creswell and Plano-Clark (2007) describe four different strategies for combining mixed methods data, this thesis emphasises the use of a triangulated design (see Figure 3.2).

Described by Jick (1979), triangulation of data is a recognisable methodology used to combine different but complementary data to (a) corroborate results, (b) provide context to results, (c) identify discrepancies between data sources, (d) use one form of evidence to expand on another, or
(e) use multiple layers of data to understand complex phenomena (Creswell, 2003; Creswell & Plano-Clark, 2007; Jick, 1979; Plano-Clark et al., 2008).

**Figure 3.2** Mixed methods: A triangulation design based on Creswell and Plano-Clark's (2007) discussion of mixed methods designs.

Researchers may collect and combine data sequentially or in parallel (e.g. Onwuegbuzie, Slate, Leech & Collins, 2007), or through nested designs (Creswell, 2003). This thesis employs both sequential and concurrent data collection and triangulated analyses, of which the quantitative and qualitative components of triangulation are emphasized equally (Cresswell & Plano-Clark, 2007). Thus, for example, a simple, A-B accountability case study design in Study 2 has capitalized on the strengths of the mixed method approach by providing the opportunity for multiple data sources to be analysed about the same phenomena. Triangulation permitted convergence and corroboration of results, where complementarity permitted measurement of overlapping but distinct facets of phenomena (Greene et al., 1989). The use of multiple, complementary data sources, which provide repeated measurement events,
increased the reliability, validity and case applicability of the conclusions drawn, despite the small numbers of participants on which the results are based (Barnett, Pepiton, Bell, Gilkey, Smith, Stone et al., 1999; Galassi & Gersch, 1993; Slonim-Nevò, 1997).

### 3.3.2 Action Research

Ongoing evaluation and feedback are central to the Action Research model. Within this thesis both summative and formative analysis of a telepsychology service could occur in a mixed methods approach, because during the data collection and analysis stages, evaluation decisions occurred in a reflective practice arc (e.g. Caracelli & Green, 1993; Hanson et al., 2005; Onwuegbuzie & Teddlie, 2003; Tashakkori & Teddlie, 1998). Such moment-to-moment reflections, evaluations and accommodations are the central elements at the heart of Action Research.

Action Research (Lewin, 1944 cited in Dick, 2006) describes a model of evaluation that encourages multiple iterations of an intervention to be evaluated, and for intentional and unintentional elements to contribute to the data set, as data gathered at each stage is fed back into the program (Power, Dale & Jones, 1991; Sharp & Frechtling, 1997). The approach is cyclical and reflective. The cycle of Action Research involves planning, intervention (action), data collection, reflection, hypothesis generation, action, data collection and reflection again (See Figure 3.3 below) and, as the name implies, involves both action and research (Dick, 1993). Rather than presenting random/unstructured observations about intervention content or therapy process post hoc as limitations to the study, an Action Research orientation formally identifies,
describes, and addresses these difficulties as a central part of an intervention’s development (Richardson & Reid, 2006; Sharp & Frechtling, 1997). Both formative and summative evaluations, as they are derived from this methodological approach, increase the validity of conclusions drawn from the small numbers of participants (Richardson & Reid, 2006).

Figure 3.3  *The Action Research cycle (summarised from Dick, 1993).*

Action Researchers (and typically, the participants of the intervention being researched, acting as co-researchers) regularly and systematically critique what they are doing to refine the research questions being asked, the methods being used, and the understanding and subsequent action plans they are developing (Dick, 1993; 2006). The Action Research model is ideally suited to research that is formative, of mixed methodology or quasi–experimental in
nature, as, 1) it allows for developmental hypothesis testing, 2) it maintains the focus of the research on functionally relevant data, 3) it provides a platform for exploring the dynamic, interactive nature of personal exchanges that occur in a therapeutic context and contribute to the outcome, but are rarely measured by standardised assessment tools, and 4) it permits evaluation of the different components of an intervention. Each intervention session can be assessed prior to, and at the conclusion of the interaction, to evaluate successes, failures, opportunities and redundancies. This information can then be used to better target the needs and capabilities of the individual participant in the subsequent sessions (Dick, 1993; Power et al.1991; Richardson & Reid, 2006; Sharp & Frechtling, 1997).

Action Research has also been used to inform the formative components of this thesis by generating stage-based directions in an almost grounded theory manner, as necessary precursors to answering the question of if, and how telepsychology could be done. Each of the stages emerges from an iterative cycle of observation, planning, acting and reflecting. Lewin’s (1946) model of Action Research (see Figure 3.4) corresponds to how this thesis also developed in a stage-based conceptual model.
Figure 3.4  **Steps in Action Research (based on Lewin 1946, reproduced in Lewin 1948: 206)**

The conceptual model, illustrated as Figure 3.5 (which will be iteratively expanded throughout this chapter), demonstrates how the study activity framework developed organically alongside the original research model (i.e. Figure 3.1) and incorporates the elements of the Action Research methodology. The colours of the study activity flowchart correspond with the colours of the conceptual research model as they apply at each level (i.e. Red = Paradigm; Purple = Methodology; Blue = Methods).

Incorporating the three paradigmatic influences, the thesis’ conceptual framework (illustrated in Figure 3.5 below) begins with bracketing of my past influences as a student and researcher (Block A: *Identifying an initial or general idea*). As described in the preface, I am a Doctoral Level, registered Clinical Psychologist with 13 years clinical experience. I have previously published research on the use of Action Research to investigate a novel group treatment for older adults with depression. Both of these historical elements explain my
interest in practitioner-based research in clinical psychology and the use of alternative methods, and why I made similar choices when planning to investigate telepsychology. In an acknowledgement of the Pragmatic paradigm
(Block B: Identifying an initial or general idea), I will now describe my work experience from which emerged recognition of an unmet need, along with a potential, but untested solution.

At the time of the project commencing, I was employed as a Psychiatric Triage Officer on a telephone support and assessment service for rural psychiatric services in the south-west of WA. When trying to refer community mental health clients for further psychology treatment, I found that I was unable to make referrals due to a lack of psychology service providers in the area and the prohibitive costs associated with accessing private clinical psychology services. The local service providers in Community Mental Health Teams (CMHT’s) frequently complained about the lack of referral sources. As a practicing clinical psychologist, this was particularly frustrating. I felt capable to provide the service but was living over 300 kilometres away from the clients. As a consequence of ongoing discussions with local service providers, a possible solution to this gap in service was identified, when I researched the Western Australian Country Health Services (WACHS) through the Department of Health (DOH). WACHS supported a Telehealth Service, which included a network of videoconference-linked community health providers throughout the State. Additionally, my work experience of conducting risk and clinical assessments via telephone was adequate, though unsatisfying, and at times, I desired access to visual information as well as verbal, on which to base my clinical decisions and judgements. Thus, the possibility of piloting a clinical psychology service using a pre-existing telepsychology network emerged as an idea, but more information about how to actually conduct telepsychology was needed.
Exploring the literature base which already existed led to the next action research stage; that of conducting a comprehensive integrative review of all telepsychology literature while also investigating the local conditions through informal stakeholder interviews (i.e. Block C: reconnaissance or fact finding).

After completing the integrative review, implementation and practice gaps were identified in the literature. These literature gaps, combined with a new understanding of the local uses (or non-use) of the technology, obtained via informal stakeholder interviews, led onto planning and hypothesis generation for the next stage of the studies (i.e. Block D: planning). These plans, and the earlier information gathering steps, suggested that a survey of local and international experts might assist with filling the practice implementation literature gap identified in the second stage. This represented the “take action” phase of Block E, in the form of the design implementation and data collection of an online survey of expert telepsychology practitioners. When the survey failed to provide sufficient detail such that the research questions could be satisfactorily answered, the findings from this survey were again reflectively combined with the evaluative outcomes of earlier stages and further planning resulted, which in turn, informed another action stage (i.e. Block F: evaluate).

In this series of studies, the next action stage (i.e. Block G – take second action step) that was suggested by the data was to assess the transcripts of a telepsychology intervention for process and content analysis, applying the knowledge gained from the experts surveyed and the integrative review, to confirm or challenge the conclusions uncovered thus far, and to answer the question of how the technology might influence outcomes.
This particular stage was intended to capitalise on the secondary data being generated from a large scale RCT of telepsychology and was considered to be a minimally intrusive option for clients. The contemporaneous evaluation during this stage revealed 1) the challenges associated with an incomplete secondary data set and analysis; 2) the intrusion of the intervention approach to influence outcome, and 3) the limitations in these findings to satisfactorily answer the practice questions of how telepsychology may be successfully conducted. Further investigation was required (see Block H: evaluate).

The next approach that was indicated was to trial telepsychology with the researcher as practitioner (i.e. Block I: take third action step). The rationale at this stage was to overcome the distance between telepsychology data and practice, and reduce the obscurity of subtle practice nuances that were masked by third party inferences and accounts of the telepsychology experience. By engaging in a reflective–practitioner approach, and conducting direct intervention assessed with multiple repeated measures, a detailed idiographic account emerged. This account took the form of multiple case studies that more satisfactorily answered the research questions of if and how ongoing naturalistic telepsychology can be successfully conducted. To maximise the validity and clinical relevance of conclusions drawn from the small sample that was available, a mixed methods approach was indicated. The formative and summative evaluations, along with both qualitative and quantitative measures, were a logical choice to respond to the initial research question with sufficient micro-analysis. The reflective steps of the action research approach ultimately recommended mixed methods methodology.
Thus, the final steps of the research process (i.e. Block J - *Evaluate*, and Block K - *Conclusions*) served to triangulate the results of all three action steps and present the findings in a practitioner friendly, and empirically sound manner. The Action Research methodology allowed for each of the stages outlined above to unfold with dynamic development of emergent hypotheses and methodological challenges.

### 3.3.3 The Person-centric research framework

This thesis was originally conceived to answer a real-life practice question and, as such, methodological decisions regarding the dual aims of intervening and researching were being made by a clinician. In order to incorporate the therapist’s values and experience into research design, the person-centric research framework was used as a guide to achieve these dual aims (Reid, 2008). Positioned within the hermeneutic and phenomenological approaches to psychology research, the person-centric research framework used in this thesis is a practitioner-derived, values-driven approach to research.

In contrast to the objective, researcher-absent approaches of empirical methodologies, the person-centric research framework emphasises the importance of having the practitioner mindfully central to intervention research. These person-centric elements are incorporated into the conclusions being drawn in order to enhance the practice recommendations and other formative outcomes (Patton, 2002; Reid, 2008). It is an approach that is well suited to mixed methods and Action Research methodologies, as it both overlaps, connects and informs mixed methods with action research. When combined, the three methodological approaches (i.e. Action Research, mixed methods and
person-centric research), logically channel the investigation toward particular research methods and techniques to answer the specific micro research questions contributing to the larger research aim.

The **person-centric framework**, diagrammatically represented below in Figure 3.6 prioritises a collaborative stance, reflective practice, ethical and accountable conduct in designing research methods, accommodating complexity, engaging with emergenic processes, and idiographic/nomothetic methodology.

![Diagram of the person-centric research framework](image)

**Figure 3.6**  The person-centric research framework (from Reid, 2008)

### 3.3.3.1 A collaborative stance.

The person-centric framework supports a collaborative approach to research, and in this way, is similar to the action-research methodology. This
framework considers participants as co-researchers (Patton, 2002) or key informants (Mahoney, 1997). It emphasises the inter-relational qualities of the research process, which in turn, encourages formative and summative approaches and techniques (Reid, 2008; Sharp & Frechtling, 1997). Through collaboration, the perspectives and data from multiple stakeholders can be combined to strengthen the research design, increase the reader’s understanding of the research approach and its findings, and strengthen the quality of the conclusions being drawn (Maloney, 1997; Patton, 2002, Reid, 2008). Typically, this technique of combining data involves triangulation, and represents the overlap between the person-centric approach with mixed methods methodologies. This particular approach was used in the intervention study of this thesis where participants were periodically asked about their impressions of the experience of telepsychology (i.e. formative evaluation), in addition to their symptom change (i.e. summative evaluation), which were then compared at the micro level as well as compared to the therapist’s experience. This approach will be elaborated on further in later chapters.

3.3.3.2 Reflective practice

It has been suggested that deliberately excluding the social and psychological biases of the researcher in the quest for the empirically objective stance may, paradoxically, reduce the objectivity of research and the transparency of the work (Henwood & Pidgeon, 1994; Patton, 2002). Reflectively writing about the social and psychological influences of the researcher on the research enhances transparency and accountability, thereby increasing objectivity (Patton, 2002) and potentially contributes to “fine
moments” (Gilbourne, 2000). Reflective practice is a core part of the therapy experience and of the person-centric framework (Reid, 2008) and has been incorporated into the methodology and methods of each study in this thesis. Most significantly, I had the role of clinician in this research, was the primary deliverer of treatment to participants in the study, and, due to the evaluation design, was a participant who also contributed to the data set. Researchers have argued that, while the participant status of the researcher potentially compromises objectivity, it can also offer the opportunity for noting unexpected and fortuitous outcomes from multiple and interconnected perspectives (Collins, Murphy & Bierman, 2004; Richardson & Reid, 2006).

This thesis incorporates the “thick description” (Geertz, 1973) accounts of the clinician-researcher, combined with the results from the quantitative questionnaires and qualitative survey feedback, transcripts and case studies. As would be typical of normal clinical practice, I noted clinically relevant behaviours as the research intervention progressed. These observations included not just what was seen, but also what was notably absent but expected (Richardson & Reid, 2006). Notable non-occurrences and clinically relevant events were combined in the case formulation/hypothesis testing approach typical of the scientist-practitioner, and changes to practice behaviour and measurement approaches were made in an ethically and clinically responsive manner (Mahoney, 1997; Reid, 2008). As has been described by Reid (2008),

“the reflective practitioner contribution affords micro and macro analysis of the research process and of treatment progress and… often provides critical insights that saves an evaluative process from challenges to contextual validity” (p.12).
3.3.3.3 Ethics and accountability

Ethics and accountability are integral components of both research and therapeutic practice. Ethics and accountability are central to the person-centric research framework, and subsequently are interwoven through all levels of this thesis’ design. This accountability is achieved by incorporating 1) a clinician-researcher approach to data collection, which contrasts the traditional-empiricist, non-practitioner researchers, who may overlook relevant clinical indicators; 2) contextually valid and emic/etic\(^5\) methodological design by responding to a real world problem and real world service consumers as research participants; 3) iterative, reflective evaluation procedures and action stages in a research capacity that correspond, in real time, to clinically relevant hypothesis testing (these procedures encourage continuous strategic changes to technique in a therapy context, rather than post hoc summarising of flaws following slavish adherence to a clearly compromising treatment); 4) explicit evaluation of treatment failures and drop-outs to increase accountability and rigour of conclusions drawn on the whole sample, not only those cases which contribute to successes; and 5) the receipt of weekly clinical supervision during the intervention as a check of my reflective practice and interpretation of clinical events and observations.

Such an approach clearly involves a methodology that extends beyond empirical variance control methods. Such complexity necessitates the addition of qualitative and alternative methods.

\(^5\) The use of a researcher-practitioner allowed access to both etic (i.e. objective, culturally neutral observations of behaviour) and emic (i.e. the culturally specific meaning made by participants about their behaviours) variables (Creswell, 1998).
3.3.3.4 Complexity

Capturing complexity is a central axis of the person-centric research approach and is at the heart of this study’s methodology because of the nature of the research question it is attempting to resolve. The person-centric approach recognises that human interactions are complicated. Moreover, therapeutic change moments may be slow and subtle or jarringly transformative. They are unlikely to be linear or simple (i.e. Bergin, 1997), but may begin and be maintained as a result of seemingly unrelated events (Reid, 2008). Thus, research strategies which use fine tools or discrete methods to produce single swipes or snapshots of phenomena may fail to adequately capture the depth, complexity or interrelationships of the reality under scrutiny (McLeod, 2001).

The person-centric research approach, and this thesis in turn, captures complexity through the use of multiple measures, real-time formative and summative outcomes, qualitative and quantitative data sources, and analysis of between- and within-case narratives (Reid, 2008; Tashakkori & Teddlie 2003). Triangulation of these multiple data sources incorporates contextual variables and attempts to synthesise “thick descriptions”, rather than reducing meaning through variance control, or externally imposed and inflexible rules for data analysis and presentation (Chatterji, 2005; Gertz, 1973; Patton, 2002; Richardson & Reid, 2006). Triangulation of multiple data sources closely mimics the behaviour of the clinician in the therapeutic relationship who combines and transforms patient self-reports, observations and behaviours with standardised testing results and normative information about psychological conditions, at multiple points in time (Kazdin, 2003). Triangulation enhances
the persuasive vigour of research findings by demonstrating convergence and, simultaneously, divergence, across contextually relevant measures (McLeod, 2001; Patton, 2002; Reid, 2008).

3.3.3.5 Emergenic process.

Psychology practitioners appreciate that therapeutic relationships and treatments are unfolding, non-linear processes (Anderson & Lambert, 2001; Kadera, Lambert & Andrews, 1996) and, consequently, the research which endeavours to capture this is also likely to be a “messy, unfolding process” (Mellor, 2001). Emergenesis within the person-centred research approach has clear implications for how studies are conducted and reported, and it is incorporated into this thesis. For example, the action research approach permits iterations of elements of each of the studies feeding back into future analysis. Subsequently, new insights are obtained through multiple sources being combined. This enhances the understanding of, as yet, unresolved research problems and helps to identify new hypotheses to be tested (Glaser & Strauss, 1967; Richardson & Reid, 2006). In this manner, data is analysed and considered as it emerges, rather than as post hoc and ad hoc explanations for therapy failures or data divergence (Miles & Huberman, 1984). Similarly, the mixed methods approach of the intervention study in this thesis reflects the principle of emergenesis through the evaluation of summative and formative outcomes (Sharp & Frechtling, 1997). Emergenesis also permits and encourages responsible and ethical changes to treatment delivery based not on a pre-determined research protocol, but by developing and changing along with
the needs of the client participants and the scientist-practitioner who is implementing it.

3.3.3.6 **Idiographic and nomothetic**

As its name suggests, the person-centric research approach maintains the participant’s experience as central to the analysis, and argues for the complementarity of idiographic and nomothetic methods (Reid, 2008). The person-centred approach also emphasises the importance of flexibility in methodology to answer the research question in the best possible way, not slavish adherence to specific methodology or publication requirements (Patton, 2002; Tashakkori & Teddlie, 2003). The nomothetic level of analysis emphasises group differences and is more typical of quantitative experimental methodologies. Nomothetic analysis prioritises a strategy intended to identify universal laws governing behaviour, where idiographic analysis prioritises in-depth understanding of individual cases. The idiographic case study approach may be disliked by statisticians as it does not immediately permit population based inferences to be made (Ragin, Nagel & White, 2004).

Uniquely, the person-centric research approach suggests that idiographic and nomothetic approaches can be reconciled to answer research inquiry. Idiographic case studies may be illustrative, idiosyncratic or critical incident cases or exploratory case studies which test out tentative models and hypotheses (Datta, 1990; Miles & Huberman, 1984). However, multiple case analyses may also be used in cumulative fashion to identify patterns across individuals, and combined to suggest theoretical generalisations or universalities between cases (Dunn, 1994; Lamiell, 1981; Ragin et al., 2004).
This combination of multiple case-studies to look for generalisable features across groups is known as the idiothetic approach (Lamiell, 1981). Such an approach can be recognised as an extension of the iterative, emergenesis elements of the person-centred research approach, as distinct from stage-based or reductionist empirical research approaches (Miles & Huberman, 1984; Reid, 2008).

The nomothetic and idiographic combination of the person-centred approach used in this thesis also acknowledges the importance of clinical versus statistical analysis of change. The classical p-value statistical significance testing provides a dichotomous result as either statistically significant or not. In reality, a statistically significant change may not, however, move a patient from dysfunctional to functional, despite the effect size being large or statistically significant. Reliance upon this assessment approach alone, particularly in intervention research, may result in an over– or underestimation of the meaning of results. For example, a statistically significant reduction in suicidal planning from daily to once per week may still translate to a significant clinical risk. Thus, the determination of clinical significance in intervention research is based on the practical value or relevance of change due to a particular intervention (Fethney, 2010). Alternative and multiple assessments of an intervention’s success or failure have the potential to overcome such shortcomings.

In this thesis, multiple measures were administered at different times to maximise the likelihood of capturing “fine moments” (Gilbourne, 2001) of the therapeutic process. The scores from multiple measures were also combined with the participant’s narrative description of how this change impacted them, if
at all. From consideration of clinically significant with statistically significant change, both participants and practitioner-researchers can meet their individual needs for meaningful intervention from a process and outcome perspective (Jacobson & Truax, 1991; Reid, 2008).

### 3.3.4 Developmental Intervention Research (DIR)

The final methodological approach drawn upon in this thesis is Developmental Intervention Research (DIR). DIR is an applied research approach that has been designed to link innovative practice in the behavioural sciences with research findings. The DIR approach is included in this thesis at the level of method (See Figure 3.7) as it incorporates the dual aims of; (i) developing a new approach to intervention (i.e. telepsychology for adult mental health clients); and (ii) evaluating its outcomes contemporaneously, so that ethically responsible changes may be incorporated into the intervention as it progresses.

The DIR model is a step-wise research strategy which investigates both the summative outcomes of an intervention, as well as the relative contribution of formative components, to the success or failure of the intervention. The strengths of the DIR method as an alternative to conventional experimental research is that 1) it is appropriate for early stage practice research; 2) it is more flexible than conventional experimental designs; 3) it capitalizes on the availability of small samples; 4) it accommodates the dynamism and variation in practice conditions and diverse populations; 5) it is reflective and iterative, just as clinical practice is; and 6) it explicitly values practitioners' insights (Comer, Meier & Galinsky, 2004:250). DIR assumes that the practitioner and the
researcher are equally invested in the outcome (and are often the same person) and thus DIR overlaps with the action research method. The process of DIR is pictorially represented in Figure 3.7 below.

The process steps of DIR include: (i) problem analysis - identifying and defining the needs of a participating population (i.e. in this thesis intervention research series, community mental health clients in need of clinical psychology intervention for depression); (ii) information gathering and synthesis – identifying the availability of existing strategies to address the identified ‘problem’, starting with what already exists before embarking on something new (i.e. reviewing the pre-existing telepsychology network uses; the telepsychology literature, and surveying experts); (iii) design of a telepsychology intervention prototype that incorporates reporting of step-wise decision making, and changes or issues that may inform future telepsychology interventions and future process issues for practitioners intending to conduct their own telepsychology (i.e. identification of

Figure 3.7 Developmental Intervention Research framework (based on Thomas & Rothman, 1994)
pre-existing manualised CBT treatments for depression; researching/collection of process and outcome measures and methods of distance administration; community liaison and referral; far-site administrative and training visits; telepsychology referral meetings); (iv) *early development and piloting* of the telepsychology intervention (i.e. the first case in the case series); (v) *evaluation and advanced development* of the telepsychology intervention and methods of evaluation (i.e. the other cases in the case series), evaluation and development are inextricably linked; and finally, (vi) *dissemination*, through the reporting of the case series and process outcomes in the thesis (based on Thomas & Rothman, 1994). Thus, DIR reduces the disconnection between the “how and why” of clinical practice with the final perfected research report (Bailey-Dempsey & Reid, 1996; Thomas & Rothman, 1994).

The six elements of the person-centred research approach, in conjunction with the developmental intervention research, mixed methods and action research methodologies, suggest and support the choice of methods through which specific studies have been designed to answer the larger research question of, “Can ongoing telepsychology be done effectively in a naturalistic setting, and if so how?”

### 3.4 Research Level 3: Methods

The third level of the research framework describes the numerous research methods which have been used in this thesis, and which have emerged from the higher levels of methodology and paradigm. For brevity I will discuss the methods in the context of the unfolding research process which drove their selection. These methods will also be elaborated upon in greater detail at the
beginning of each study’s findings, and are illustrated in Figure 3.1. These methods include participant-researcher approaches, survey/interview/ transcript analysis, integrative review, repeated measures case series, triangulation and statistical analysis.

As previously described, the research questions of this thesis emerged from the observation that within the local environment, the technology and opportunity to provide ongoing, psychological intervention were available, yet seemed to be unused by psychologists for that purpose. After reviewing the research literature, and following the expert survey, my suspicions were confirmed that this pattern also appeared to be occurring in the international environment. The local conditions and the pre-existing research (gaps) suggested an implicit investigative plan from the outset; namely, to trial a telepsychology service with pre-existing community clientele.

Such a trial would primarily service an unmet need for rural clinical psychology services. As a research project, a trial would also aim to 1) uncover why more clinicians weren’t providing services in this manner; 2) identify the barriers the technology might pose to conducting psychotherapy, and 3) identify what positives video-technology might bring to a psychotherapy encounter. However, the reality of implementing a service-based field trial meant that preliminary steps were required before this phase of the investigation could take place. This section will outline some of the methods involved in this series of studies which were engendered by the methodological and paradigmatic influences already described.

As is typical in a thesis, an early research step was to commence a literature review. This process resulted in a focussed publication of peer-
reviewed literature (i.e. a traditional literature review that one might find in a traditional thesis) (Richardson et al., 2009 – see Appendix B). The published review is incorporated into the thesis literature review, but presented in greater detail in Study 1, Chapter 2. This is because in addition to the peer-reviewed literature, Chapter 2 covers a broader range of telepsychology literature, including past works not covered by reviews, grey literature, and non-peer reviewed works. The in-depth review of telepsychology as it is applied to clinical issues, had not previously been undertaken. Due to the relatively manageable size of the literature base, a comprehensive, interpretive review seemed to be a useful and unique contribution to the field of telepsychology at this important juncture in its development.

Where this thesis differs from a traditional thesis, in terms of research design, is that it accommodates emergent hypotheses based on data that is collected along the way. As new research questions emerge from the data, so too are new or different approaches to capturing data unveiled.

Where it differs from a traditional thesis approach to research implementation, is that it triangulates findings of multiple data sources (i.e. literature, field observations and experimental manipulations) contemporaneously to respond to real world needs which have equal priority to the utility of research findings. Through multiple iterations of study design, it ultimately incorporates participant/practitioner/researcher stance to maximise the depth and breadth of findings from a small n study.

The thesis also differs from a traditional thesis approach to reporting, in that it makes explicit those typically unreported planning, testing and evaluative moments which provide structure, context and accountability to the research
process as it truly, messily, occurs. Thus, the thesis research design, incorporating the research question, the hypotheses generated, and the responses to each, is described in Figure 3.8.

In summary, the thesis research design has evolved as follows. After a real-world need, and a potential real-world, sustainable solution (i.e. telepsychology) was identified, a literature review was simultaneously conducted with informal interviews of local stakeholders. Despite the apparent value of telepsychology, the literature review suggested that telepsychology was not often used by psychologists in routine intervention practice, and rarely ever in rural WA. Moreover, I found it difficult to immediately translate the research descriptions found in the literature into psychological practice. Although the research clearly suggested positive outcomes for telepsychology, I felt unprepared to conduct telepsychology based on what I had read. Thus, a survey of local and international experts seemed warranted.

Using an open and closed question format, an online survey was devised and sent to a large sample of international and local published experts, as well as local clinical users of telepsychology. The survey was devised with particular attention to eliciting free-form responses regarding the specifics of “how to do telepsychology”. Survey results were presented pictographically (pie charts) and narratively (quotes), and incorporated quantitative and qualitative
**Figure 3.8** Research questions, and their respective responses, detailing the methodologies and methods to be used.
outcomes. In the iterative, reflective tradition of the methodologies outlined earlier, the practice, process and outcome-based information gleaned from the experts’ responses was combined with the general conclusions of the literature review. Because of the direct and repeated contact possible via online surveys, I had anticipated large numbers of returns from the 69 experts contacted for the survey. Despite low survey return rates (49%), the experts who did respond supported the research findings of the literature review in the main. They also offered useful practical solutions for the practitioner, but provided little illumination as to why other practitioners might be disinclined to use telepsychology to its full potential. It seemed to me that merely asking practitioners and telepsychology participants to reflect on their experience of telepsychology was proving limited, and their generally positive feedback contradicted the apparent hesitation to utilise this technology. It seemed that “being in the room” might be a necessary, complementary next step to unravel this puzzle, and further micro-analysis seemed warranted. Two further studies took different approaches to these tasks.

The first approach to be used was deemed the least intrusive way of gathering ‘in-the-moment’ data on psychotherapeutic processes, and involved international data collection and analysis. The second, for reasons which will become apparent, was in some senses, a more intrusive method, and required careful planning and implementation to ensure the experience was a valuable one for the clients and services involved. In both cases, depth of analysis was prioritised over large case numbers.

Initially, a research method that was minimally intrusive for clients was hypothesised to be a responsible approach to micro-analysis. As my PhD
unfolded, I was struck by the fact that the gap between evidence and telepsychology practice remained. To obtain a multi-site perspective, I applied for a Fulbright Scholarship to visit with two telepsychology service and research hubs in the United States. My sense was that immersion in a fully functioning telepsychology service and evaluation process might illuminate previously unidentified issues in practice and clinical outcomes.

While in the US, my experiences centred around the telepsychiatry services provided to rural and remote communities of Hawaii and South Carolina, under the supervision of Dr B. Christopher Frueh. In both these environments, discussions with the practitioners using the technology were positive and future focussed. In both locations the bulk of the telepsychiatry network was funded and used by academic or Military/VA institutions. And in both locations, telepsychology (as a clinical intervention) was not being used as a component of regular clinical service, except in the context of a research project or trial. Given the emphasis on NIMH and federally based funding for telepsychology research in the US, the research projects which were being undertaken in both locations were heavily quantitative in design, with standardised clinical (and at times, medical) outcomes (and preference for RCT or effectiveness study designs), and with relatively minimal attention to process factors.

Given the emphasis on peer-reviewed literature and traditional experimental designs, it was while in the US that I was lead author on a published 2003-2009 telepsychology literature review, written with local published experts (i.e. Richardson et al., 2009). While in the US, I was also able to participate in the first stage implementation of a NIMH funded RCT of
telepsychiatry with depressed veterans, using Behavioural Activation. This was a trial being conducted by Veterans Administration staff (who were also employed by the Trauma Research Centre at the Medical University where I was hosted). During this involvement, I co-authored another published paper which described the hypotheses, methodology and expected outcomes of the RCT (see Appendix B: Egede, Frueh, Richardson, Acierno, Mauldin et al., 2009 for article in full). This process also alerted me to the limitations of the RCT method.

As a secondary data analysis opportunity, the treatment credibility recordings from the early telepsychology participant sessions of the RCT were made available to me for exploratory research. The intent was to use this secondary data to conduct thematic and content analysis of therapeutic interactions to identify the impact of technology on therapeutic technique, process and outcome.

Despite the large sample size of the RCT, the secondary treatment credibility component only represented a random sample of 10% of cases. Due to failures in recording equipment, bureaucratic red-tape, telepsychology equipment and practitioner error, only four complete cases (who had all of their sessions recorded) were available to me for transcription during the time I was permitted to access a Federal institution, such as the VA. Nine cases had begun therapy intervention by this time. The transcripts were subjected to thematic analysis with a particular emphasis on technology and relationship issues. This evaluation is presented as Study Three, Chapter 5.

These collaborative experiences provided invaluable opportunities to understand other practitioners’ and researchers’ perspectives on telepsychology
and evaluation methodology, including the inherent limitations of the strictures of the RCT approach, which was favoured in these funded practice contexts.

The transcript data set was not unsurprisingly, insufficient for firm conclusions to be made. In the tradition of action research, this triggered an evaluation and re-planning approach, and a new study was devised. This is described in Chapter 6 (Study 4).

On this basis, a naturalistic, multiple case-study, practitioner-researcher design of a cognitive behavioural clinical intervention was designed for adults with depression (see discussion of methods earlier in Chapter 3.5).

The CBT model was selected as the overarching treatment approach for the intervention component of the current thesis because it was well supported in the telepsychology literature, as it was in the broader clinical intervention literature for depression in adults, thus reducing the potential influence of an untested therapy on telepsychology outcomes. Following this extensive data collection process, I was better able to answer the multi-layered research questions previously outlined in Figure 3.8.

The intervention-based research pilot, described above, needed to meet the needs of all stakeholders, and to address the evaluative requirements stemming from both the implementation of a new application of pre-existing technology (e.g. videoconferencing) and a responsive approach to intervention (e.g. CBT). A micro-analytic approach that incorporated the most appropriate method to answer questions, regarding both the experience and effectiveness of the intervention as it progressed, was required. Such microanalysis required multiple measures of both symptom change and intervention efficacy, in addition to a fluid approach to emergent problems (Richardson & Reid, 2006).
In order to capture both intentional and unintentional findings, these measures were administered repeatedly on multiple occasions and results from qualitative and quantitative measures triangulated (Dick, 1993; Jick, 1979) to provide thick description (Geertz, 1973) of consistencies, and contextual clarification of inconsistencies. The specific psychometric properties and purposes of each of the mixed measures adopted in the case study series (Study 4) will be elaborated further in Chapter 6, and the results presented in the case studies (Chapters 7, 8 and 9, and Appendices H & I).

### 3.5 Conclusions

It is the contention of this thesis that considering only traditional scientific methods (experimental and objective modes of theory testing) as legitimate methods of inquiry ignores the significant contribution of alternative methodologies and diminishes the participation of practitioners applying rather than contributing to knowledge (Chatterji, 2005; Phillips, 1993; Reid, 2008). Moreover, considering only qualitative methods has limitations. Mixing qualitative and quantitative methods together in one study affords a fuller perspective of what is truly occurring. A complementary method to pre-existing traditional paradigms may provide new and useful forms of knowledge from clinical practice (Fishman, 2005).

The design of this thesis places the experience of the clinician and the research participant on equal footing to the researcher, and considers that the outcomes of intervention are as enlightening as the evaluation of process is in propelling knowledge of the field. The overarching research paradigms selected (phenomenological, hermeneutic and pragmatic) emphasise the
experiential and interpretive realities of naturalistic enquiry and provide conceptual and design guidance regarding the choice of methodologies that best answer the research questions. The Action Research, mixed methodology, when informed by a person-centric research approach, fulfils reflective, ethical obligations of the clinician researcher to meet the needs of the research participants, while gathering meaningful idiographic data which may ultimately be used to inform nomothetic conclusions.

The validity and reliability of conclusions drawn from the small \( n \) case series design are strengthened by a number of design features within this thesis. Firstly, the depth and breadth of the integrative review provides a comprehensive background from which to identify gaps and generate hypotheses. Secondly, the action research approach allows for multiple data sources to be accessed, such that the same phenomena may be investigated from multiple perspectives, and elucidate complexity and subtlety. Thirdly, the mixed methods approach of triangulating qualitative and quantitative data from repeated administrations of both process and outcome measures maximises the size of the data set from which idiothetic conclusions can be made.

The cycle of “research activities” inherent in action research is similar to those of conventional experimental research in human sciences. However, action research and mixed methods approaches differ from other experimental research methods by their valuing of contextual information, experiential reflection, and shared boundaries between participants and researchers. These valued features are considered to be important data reflecting “the real world”, rather than as contaminating variables or biases that need to be controlled (Richardson & Reid, 2006; Wadsworth, 1998).
Hence, this series of studies will focus not simply on whether telepsychology works, but how it works in a naturalistic setting, in a typical manner (i.e. multiple sessions over time) from the perspective of both the clinician and the client participant. In a novel addition to the published research, the thesis will also describe an innovative approach to evaluating the clinical significance and utility of real world interventions that is accessible to the ordinary practitioner. Through both formative and summative evaluation, this approach will help to reveal the key practice elements of telepsychology to enhance the quality and outcomes of the experience for clients and practitioners. Figure 3.5 will be re-presented at the beginning of each chapter to orient the reader to the step-wise progress toward answering the thesis research questions through their respective methods and methodologies.
CHAPTER 4
STUDY 2: AN INTERNATIONAL AND LOCAL SURVEY OF TELEPSYCHOLOGY USE

Figure 4.1 The stepwise action research progression model used thus far, to Step E – the expert survey. This model is used throughout the thesis, and appears at the beginning of the study chapters to follow. Stages which are yet to be completed are bleached out. The entire conceptual model is presented in Chapter 3, Figure 3.5.
CHAPTER FOUR
AN INTERNATIONAL AND LOCAL SURVEY OF
TELEPSYCHOLOGY USE

Following a literature review, I recognised that despite telepsychology being promoted as a solution to meeting the needs of underserviced mental health clients in rural and remote areas (e.g. New Freedom Commission on Mental Health, 2003; p. 81), there appeared a bias against direct client care in the literature (e.g. see Gammon et al., 1996, which describes a clinical service where only 1% of “clinical encounters” included the patient). The literature appeared to describe various types of “routine service”, which rarely seemed to include psychotherapy based clinical interventions which one might assume would be part of the routine mental health service provision. This begged the question; “Was telepsychology being used to work with mental health clients as a routine application of the technology? And if so, what form did that use take?”

4.1 Local experience

At the time of the commencement of Study 1, little information was available detailing the extent or type of usage patterns of telepsychology and telepsychiatry for local Western Australian providers. This dearth of information seemed particularly puzzling, given the size of the technological infrastructure and significant investment in telehealth made by the Western Australian Department of Health (DoH). This missing information was subsequently reported in 2009.
In 2009, there were 245 telehealth sites, 90% of which used IP connections. At the commencement of the research in 2005, 47 of the telehealth sites were used for telepsychiatry purposes (metropolitan and regional/country sites). In regional/country sites, the telepsychiatry encounter purposes were split between clinical tasks, management tasks and educational tasks. In 2005, approximately 550 telepsychiatry encounters were for clinical purposes, with the remaining 950 encounters for educational and management purposes. Clinical tasks include case reviews, clinical supervision and direct clinical intervention, however, the frequency of each is not documented (WADOH, 2007). No recent information is currently available.

The most recent WA Department of Health strategic plan for 2007-2010 identified the use of telepsychiatry as a means to modernise the WA Country Health Service. The report recommended the increased use of telepsychiatry for consultancy and specialist support, patient to family “virtual visiting”, clinical supervision, education and training, peer review and support. Notably, the strategic action plan did not include increasing direct clinical intervention as a planned response to achieving the modernisation objective (ibid.), though Prime Minister Gillard’s Broadband Policy, unveiled during the 2010 Federal Election, moved closer to this.

When I approached the WA Country Health Service in 2005, seeking information about the clinical psychology activities being performed over the WA DOH telehealth network, it appeared that no consistent or continuous clinical service was being provided to adult clients. At the time, when the provision of a

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6 In the WA Country Health Service in 2007, some form of telepsychiatry service was available in nine hospital based environments and 26 community outpatient clinic services (WADOH, 2007).
clinical telepsychology service was floated, access to the videoconferencing network was offered for the purposes of research at no charge. This generous offer was possible because the individual mental health clinic areas were not using their previously allocated budget for telepsychology, and a significant surplus of time/money was available for this use. Such an observation naturally prompted the research question, “If the resource (the technology and teleconferencing time) is abundantly available, why is it not being used?” Local mental health staff were provided with far-site technical support, had regular non-clinical case-conferences via videoconferencing and all appear to have been trained in its use. Despite this support and familiarity, they still tended not to use it for clinical purposes. This real-world situation mimicked that which was suggested in the literature, with no obvious disincentive to use telepsychology, other than possibly negative beliefs about its inferiority to a face-to-face contact, as cited elsewhere (e.g. Rees & Stone, 2005; May et al., 2001). The survey which follows aimed to identify the barriers and incentives to using telepsychology for direct clinical contact.

As is evident from the literature detailed in Chapter 2, the assumption of the field is that telepsychology represents a unique manifestation of psychology practice because of the influence of technology. The broad question underpinning all telepsychology research should therefore be, “How does the technology alter the experience?”

Of key research and practice interest, therefore, has been 1) the extent to which the technology influences or alters the relationship between practitioner and client; 2) how the technology alters the process and progress of psychotherapy; and, 3) under which conditions the technology impedes
practice, such that telepsychology is an unsuitable medium for psychological intervention. These questions have been reformulated as study questions (see Chapter 3, Figure 3.8) and expanded further in the following section.

With regard to the above, and as described in Chapter 2.4.6, the issue of doctor-patient communication in telepsychiatry encounters has been reviewed extensively by Hilty, Nesbitt, et al. (2002) and Miller (2001; 2003b). Based on the literature there appears to be no consensus as to whether the technology interferes with, or enhances, communication between clients and practitioner. Furthermore, there is also very little research dedicated to exploring this issue in mental health and psychotherapy (Ghosh et al., 1997; Miller 2001; 2003b).

An alternative, authentic source of information and experience, beyond that found in the peer-reviewed scientific literature, was sought to personalise the telepsychology practice recommendations. A brief survey of real world, mental health practitioners using the video-conferencing technology on a regular basis for direct client intervention, offered one avenue by which a user-friendly and expert perspective might be elucidated.

4.2 Aims

An online survey was devised and emailed to a total of 69 email addresses. Recipients included 42 internationally published researchers in the telehealth field, other members of related professional interest groups, as well as local service users in the WA Health Department. The purpose of the survey was (i) to sample the variety and numbers of users of teleconferencing technology in mental health-related work practices worldwide; (ii) to document typical uses of the technology and obtain recommendations from “expert
perspectives” on how the technology might influence usual work practices; and
(iii) to document how survey respondents use their knowledge, skills and
applications of the technology in combination, to improve psychotherapy
outcomes. Of particular interest was the extent to which clinical psychology
interventions or ongoing psychotherapy was being conducted via
videoconferencing technology.

4.3 Method

This survey was developed using a free software site on the internet
(Question-pro.com). I wrote the items following the exhaustive literature review.
Items were written which aimed to address practice gaps identified in the
literature, with special reference to ongoing psychotherapy and CBT
approaches to telepsychology, particularly as a component of routine service.
In addition to several closed questions to establish the demographics of
respondents, and their experience as telepsychology users, open-ended items
also asked respondents to indicate which models of psychotherapeutic
intervention they had applied successfully and which had failed, plus, the
changes to their routine intervention practices and how these may be different
to face-to-face encounters. Other items, plus the full survey instrument and the
open-ended responses can be read at Appendix E.

All responses to the survey instrument and the contact details of the
respondents were password secure and confidential on the Question-pro site,
which also monitored the email-out process. Survey email invitations were sent
to the 42 corresponding authors of 147 peer reviewed journal articles published
from 1985-2007. Respondents were sought in this fashion because it was
perceived to be the least intrusive way to target a survey. The corresponding author details were available in the public domain, and direct contact would not infringe on the privacy of the authors, who had already supplied their contact details to the journal in which their paper had been published. Articles were sourced from MEDLINE, PsycINFO, and Telemedicine Information Exchange (TIE) databases. Search terms included telepsychiatry, telepsychology and tele-mental health. The authors of articles that were unrelated to mental health practice or which incorporated non-psychological or non-psychiatric disciplines were not included in the targeted email-out. Only 42 international authors were contacted because not all articles included corresponding authors on their publications, or supplied direct contact details for first authors, and some corresponding authors were the same for multiple papers.

Email addresses of survey recipients were re-coded to be anonymous following mail-out and were used to track responses, and send reminders to complete the survey instrument that was previously emailed. In addition, a postal mail-out of hardcopy surveys from the online site was sent to the five Western Australian Department of Health, rural community mental health clinical regions (Northwest, Southwest, Central West, Great Southern and Wheatbelt mental health services). These clinical managers were asked to dispense the surveys to the relevant users of telepsychology technology in their clinic. Due to shared staffing and the reduced operating hours of some clinic regions, some local practitioners responded for more than one clinic. A total of 17 surveys were returned from a total of 22 individual rural clinics that were contacted. What proportion of telepsychology staff is represented is unknown,
as the total number of surveys which were handed out by individual clinic managers was unable to be monitored and participation was voluntary.

Email reminders were sent every four weeks to the electronically contacted participants after the initial email, over three months. A second reminder letter was posted to each of the 22 clinic managers, requesting the return of completed surveys via postage-paid, researcher-addressed envelopes. Of the total 69 participants who were known to have received the survey, 34 (49%) completed the survey and 6 surveys were returned incomplete. The following results represent the findings of the completed surveys only.

4.4 Survey results

The first question asked respondents to select as many labels as applied to describe their role within mental health. Figure 4.2 illustrates the results of endorsed job descriptions from a possible 18 categories.
Those who indicated an “other category” described themselves as “research professor” and “clinical co-ordinator” (absorbed into Educator/Supervisor category) or “Team Leader” and “Manager” (absorbed into Administrator category). When individual responses were analysed, primary training/workforce patterns were obtained. The largest users of telepsychology were mental health nurses [MHN], (30%) (Note that all community case managers and counsellors were also MHN’s), followed by psychologists (all sub-specialities collapsed = 28%). Psychologists also affiliated themselves with the roles of administrator and educator/supervisor. Psychiatrists contributed 11% to the primary training data, with Medical Officers contributing 4% to the telepsychology workforce. All mental health nurses were from Australia, and
variously affiliated themselves as community case managers in addition to administrative roles. In addition, several reported that they often used telepsychology with other practitioners present, either at the far or near site, when working with clients. Of particular note in the Australian targeted sample, five psychiatrists were contacted, three of whom responded. However, as is typical in country mental health services, all three psychiatrists were responsible for multiple clinical areas. Although all of the Australian psychiatrists contacted may have been given the survey questionnaire at each of the WA clinic locations where they saw clients, and indeed, their clinical activities may have been different at each of these sites, it appears that each psychiatrist who responded, completed the questionnaire only once.

Question 2 requested respondents to indicate their familiarity with video-conferencing as a mental health tool, as indicated by their frequency of workplace use. Figure 4.3 shows the results obtained.

It was interesting to note that of the 19 individuals who indicated that they used telepsychology more frequently than monthly, six of these individuals spontaneously wrote on their surveys that they used it on a daily basis. Linking the data, all these individuals came from the Northwest and Central West
regions of Western Australia and had received a mailed hard copy survey. Had the online survey given the option to indicate “daily use”, it may have been that even more would have reported greater use.

Question 3 requested participants to indicate as many descriptions as applied to their most typical purposes or work product when using videoconferencing technology within a mental health related role. From a possible 11 categories, Figure 4.4 shows the results obtained.

As was suggested by the research literature, the predominant activity for which telepsychology remains used throughout the world, and in Western Australia, are educational and administrative duties. When combined, case conferencing between professionals, professional development and professional training, administrative duties and professional supervision at a distance, account for 63% of the total usage. Thus, potentially, close to three
quarters of telepsychology’s total activity is without direct client participation. Only 6% of usage is directed toward counselling or psychotherapy of greater than 30 minutes duration (i.e. psychotherapy plus supportive counselling), the activity which most closely resembles the typical practices of practicing clinical psychologists, and the entirety of this usage was only reported by clinical psychologists. Intervention of less than 30 minutes occurs only 5% of the total time that telepsychology is used. These brief interventions were reported by case managers and social workers. Activities indicated by the “other” category included psychotherapy research, urgent triage assessment, neuropsychological assessment interviews, various legislatively required review
board hearings (i.e. for Community Treatment orders, mental health review board etc.) and court liaison. It would appear that despite sometimes daily use of the technology, clinicians still use telepsychology predominantly as a tool for communicating with each other, rather than for treatment of their clients.

Question 4 asked respondents to describe the model or approach they had used most successfully when they had used videoconferencing for a psychological intervention or psychotherapy. From the international respondents, the approaches most frequently reported were manualised and non-manualised CBT (however, this appeared to have occurred within research protocols, and may not have been the model of choice for clinician respondents). Among Australian respondents, CBT also figured prominently, however, less reference was made to its use within research protocols. This result suggests that CBT is preferred as a routinely used approach amongst local respondents. Other approaches that were listed included schema-focused therapy, hypnosis, psychoeducation and supportive counselling.

No respondent offered any explanation as to why they chose the psychotherapy model they chose, other than it was a required component of a research protocol. Some respondents indicated that they did not believe that the technology of telepsychology was sufficiently advanced to mimic the qualities of face-to-face interventions. Accordingly, all models of intervention were therefore “limited”, due to issues relating to transmission quality and poor visual and sound reception. Others suggested that face-to-face meetings to establish rapport were necessary between practitioners and clients prior to attempting engagement in psychotherapy. Three respondents indicated that they had only used telepsychology for psychiatric assessments, and not attempted
psychotherapy. Play, art and physical therapies were also identified as problematic by two respondents, and two others responded that they had found telepsychology with young children to also be unsuccessful. These responses stand in contrast to findings reported elsewhere (e.g. Starling & Dossetter, 2005).

Question 5 asked participants to describe which model or approach they had found least successful, when used in videoconferencing, compared to face-to-face consultations. In the majority, respondents appeared to believe that almost any model or approach could be applied to videoconferencing technology, with appropriate accommodations to the medium. Some offered innovative suggestions about how this might be accomplished (such as the use of a strobe light for EMDR with anxiety patients). Two respondents stated that they felt having another worker present during sessions was helpful, e.g. “one needs to make adaptation to work via video, often using a case manager at the other end and best if other worker is face-to-face. Ideally work should be a mix of face-to-face and video (though not essential) but need a good idea of location” [#011] (sic). In the main, research has demonstrated that psychotherapy is possible and successful, even without additional personnel support for the client (e.g. Bouchard et al., 2004; Day & Schneider, 2002; Manchanda & McLaren, 1998).

Not all responses given to Questions 4 and 5 were positive, and limitations were identified by respondents who were otherwise positive about telepsychology. One respondent identified that the videoconferencing medium had proved too disorienting for elderly dementia patients and had to be abandoned because of this. Given the finding that schizophrenia patients with
auditory and visual hallucinations can engage in a videoconferencing session (Yellowlees & Kavanaugh, 1994; Yellowlees, 1997) this begs the question as to whether particular types of sensory dysfunction or cognitive impairment impact on therapeutic engagement in videoconferencing. Again, two respondents indicated that they felt that psychotherapy was not a beneficial use of telepsychology, stating instead, “it's not so much the model, it's the technologies that fails at times” [#026] (sic) and “…face-to face is best - video is more impersonal therefore less effective” [#022]. Of note, these comments were made by clinical psychologists who used the technology 3-6 times per year. This finding, could suggest that negative feelings may be associated with a lack of familiarity with the technology, despite familiarity with the provision of psychotherapy.

Taken together, the comments made by respondents to Questions 4 and 5 suggested that there was ambivalence about how effective psychotherapy was when used in a telepsychology medium. Moreover, a structured intervention (e.g. such as CBT) with human resources support at the near and far sites was important to maximise likelihood of success.

Question 6 asked respondents to describe any modifications to their usual approach or work practices which were necessary in a videoconferencing medium, compared with face-to face consultations. Respondents consistently identified planning and preparation as key differences compared to face-to-face contacts. Issues associated with scheduling and set-up (e.g. adjusting room lighting and arrangement, and establishing the dialup link) were identified as critical to the success of interventions. These issues have also been identified elsewhere (e.g. Capner, 2000; Hill, 1997; Hill et al., 2001; Jones et al., 2006;
Simpson, Bell, Knox & Mitchell, 2005). Adequate information sharing prior to sessions was identified as important, and this included sending handouts or emails in advance to participants, but also obtaining collateral information from other professionals (see also American Psychiatric Association (APA), 1998; Hill, 1997).

The research literature often argues that the technology impacts on how clinicians and clients communicate, and subsequently, communication techniques are modified. Some spontaneous recommendations that were made by respondents with regard to specific technique changes were to “speak at a lower rate, with more clear diction, and must look at CAMERA, not patient, to simulate eye contact” (emphasis by respondent). Jones et al. (2006) would likely support a similar recommendation, and Turner (2001) also emphasises camera technique.

Jones et al. (2006) argue that clinicians must be mindful to avoid verbal gestures (such as ‘hmm’ and ‘uh-huh’) when the patient is talking and instead use non-verbal gestures (such as nodding of the head) to minimise the likelihood when both parties speak at once, that the sound will cancel each other out. The issue of deliberately changing speech style or exaggerating vocal or body communications to compensate for diminished visibility is not consistently agreed upon in the literature, nor was it repeated more than once in the survey respondents’ answers. Omodei and McLennon (2000) reported that clients disliked amplified vocalisations or gestures, and felt that mirrored body behaviours or excessive eye contact created discomfort, whereas Capner (2000) argued that no new counselling techniques or communicative behaviours, other than turn-taking, need be learned.
Other respondents recommended providing information to participants about the medium prior to using it. They also recommended pre-intervention information to each site about whose responsibility it is to “dial in” (i.e. the service provider or receiver).

One of the international respondents to the survey advocated the use of a document camera to discuss formulations and thought diaries during sessions. In contrast, an Australian researcher described having to abandon plans to simultaneously share written material, such as thought diaries and homework, via a document camera, as no such resource existed in the minimally resourced, but typically resourced, Australian rural psychiatric service (Cowain, 2001). As shall be detailed further in the case studies of Chapter 7 and 8, I experienced a similar issue. In my experience, a document camera was available at the near site, but was both unavailable at the far site, and would have required the client to be able to use it untrained and unassisted.

Question 7 asked respondents to describe the main differences (if any) between videoconferencing consultations and face-to-face consultations, in their experience and opinion. Respondents indicated a range of differences from both the professional’s and the client’s perspectives, and captured issues related to technology, therapeutic experience, organizational features and clinical satisfaction. In this group of respondents, those surveyed internationally also tended to use telepsychology within research protocols and seemed more consistently positive about the capacity to use the technology as individual practitioners. In contrast, Australian community mental health team users appeared to use telepsychology in a more daily work product way, were less consistently glowing in their appraisal and identified a number of limitations.
Beginning with technology, most international respondents indicated that any trade-off between quality and efficiency was minimal and acceptable, and often directly related to the transmission bandwidth, and transmission environment. One international respondent reported,

“With high quality videoconferencing you still feel that you can have a good level of eye contact and both verbal and non-verbal communication. With low bandwidth there is more necessity to allow for sound delays, more problems with lip synchronisation, and often a less clear image” [#036].

Respondents cited technical problems with cameras and equipment, sound delays, line disruptions and lack of technical follow-up to assist with “breakdowns”, as well as having to interpret patient’s presentation without the benefit of full “body communication”, as challenges in this medium. Many of these same deficits have been identified by other researchers (e.g. Miller et al., 2005).

At an organisational level, the availability of high quality information, technological and administrative infrastructure, and human resources, prior to “doing health”, was identified by respondents as an issue for videoconferencing that distinguished it from face-to-face interventions. Planning, scheduling, housing and conducting telepsychology sessions require significant time and forethought about many issues that might be taken for granted in face-to-face encounters. For example, several respondents highlighted the need to minimise visual disturbance through the removal of what was cited as the “…impact of "extras" – e.g. excessive furniture, décor that distracts attention from focus of the interaction”. In addition, the need for additional preparation time prior to sessions commencing was another important consideration.
According to those surveyed, additional time is needed for faxing in-session “worksheets”, “establishing the videoconferencing connection”, “organising the switching on to the remote site and setting up the equipment”, and emailing instructions in advance. Respondents repeatedly emphasised the need to prepare clients and families about the process of telepsychology and described a necessary use of time prior to a session commencing. Survey comments included “time spent in familiarising consumers to building where conference housed and process involved” (sic); gaining an understanding of local “geography issues”; preparing the client for “delays and lost transmissions”; “explaining confidentiality and layout of home site, e.g. who else is in the room” (sic). It was frequently suggested by survey respondents that such groundwork is needed to establish rapport with clients.

For the respondents surveyed, the issue of rapport development was closely linked to sufficient time to establish links and minimise technical disturbances. Clinicians stated that, in contrast to face-to-face sessions, telepsychology therapy sessions “need more time – [telepsychology] takes longer for educational concepts to be covered” and “…fluency of communication is slower, there is less scope to accelerate or slow the momentum of therapy, particularly relating to discussing emotions and feelings”. In general, respondents concluded that the development of therapeutic rapport tends to take longer in telepsychology sessions than it would do in the equivalent face-to-face medium. From a clinical satisfaction perspective, respondents cited problems with being unable to catch the nuances of certain symptom presentations and being unable to clearly observe interpersonal interactions in sessions where there is more than one participant in the room. The observation
was made that participants may have “an attitude that they do not have a real counsellor”. Disorientation and disrupted communication was also identified as a challenge in non-therapeutic sessions, such as professional meetings, when several participants may be at either end of the link.

From the therapeutic perspective of the client, respondents indicated that they had received feedback that the conversation can be “more focussed, with fewer nonessential comments...[and feel] somewhat stilted compared to “face-to-face [#010]” because fewer words per minute from both the patient and provider are expressed.

Despite some shortcomings, respondents agreed that videoconferencing provided advantages, such as reduced travel time to provide services. Such benefits have been cited in other studies (e.g. Bose et al., 2001; Jones et al., 2001). The survey respondents’ overall responses could be summed up in the following quote:

“Although there are differences in communication and the therapeutic relationship, I would not say that it is any better or any worse than face-to-face, - just different.” [#006]

The final question of the survey asked respondents what advice they would give to practitioners who are intending to use videoconferencing as a regular component of their practice. Advice was provided in categories of practitioner preparation, technology issues, and client related features.

In terms of practitioner preparation, respondents cautioned against being blasé about logistical issues, such as establishing video links, managing scheduling conflicts, practicing using the technology by conducting “dummy runs”, and having regular video liaison with rural centres for information sharing and professional interaction to become familiar with the equipment, the
interaction style (incorporating pauses, etc) and set up at different sites. Block booking sessions was suggested as a means to avoid double booking of facilities or the need to change rooms with each call. Adequate time before and after sessions was recommended (see also Hill, 1997), as was training and feedback about communicative styles and the limitations of the technology as a communication medium (see also May et al., 2000). Knowledge of privacy issues in videoconferencing, in addition to knowledge of how the technology works and encodes information, were identified as important foundation knowledge for practitioners, and this is reiterated in Capner (2000).

From a technical perspective, respondents advised of the importance of training and supervision in the use of the equipment at all sites (see also Jones et al., 2001), and the availability of a technician at one or both ends of the link to address problems with ISDN lines and transmission. A strong emphasis was placed on using adequate bandwidth (at least 384kbit/sec was recommended) to enhance the observation of visual cues, as well as good quality technology (such as controllable cameras, monitors, etc) to minimize disruptions to sessions due to loss of sound or picture, and attention to camera placement. Interestingly, all respondents who commented on technical considerations did so with a similar caveat – that was, despite controlling for technology, accept that technical glitches will occur, but manage these with a well thought out contingency plan (such as a backup phone contact plan with clients if the link drops out). Minimising room disruptions or the potential for breaches in confidentiality or alliance by having the volume too loud was also advised.

Client related advice included selecting participants for telepsychology with due consideration to mental health diagnosis, ensuring clients have access
to tissues and a note book at the remote site, and having a contingency plan involving other professionals at the remote site, in the event of concerns for risk to self or others. Given the likely shared unfamiliarity with the medium, it was advised that practitioners consult with participants well in advance, explain the process in “user-friendly” language, be concise in their interactions, and be mindful to address all participants and be attentive to responses (even if they are out of shot). It was also recommended that seeking feedback from participants about their experience and comfort with the medium, as well as any changes they might make to improve the interaction, might be beneficial.

A final comment by one respondent sums up the advice provided in this survey:

“Accept that [telepsychology] is not the same as face to face and get over the limitations, unless you want to drive or have your patient drive to make contact. Enjoy being on the bleeding edge!” [#008]

4.5 Discussion

The responses to the survey, though small in number, capture an international and local sample of expertise and regular use of telepsychology. The conclusions of those surveyed predominantly reflect the recommendations in the telepsychiatry literature spanning the last 25 years, although some discrepancies are noted.

In particular, the extent of preparation prior to provision of services, and a priori contingency planning, differentiate telepsychology from face-to-face services. Good quality preparation may be essential in terms of minimising technological disruption and managing the therapeutic challenges which are
anticipated when technology falters (Buist, 2003; Simpson, Deans & Brebner, 2001).

For the most part, the respondents suggested that the quality of telepsychology and the outcomes of those interactions have more to do with the practitioner’s generic intervention and communication skills than with the videoconferencing technology. Many approaches were reported to be useful by those surveyed, including supportive counselling, CBT, psycho-education, mindfulness-based CBT, Dialectical Behaviour Therapy (DBT) and crisis intervention. Very few argued that videoconferencing did not permit psychotherapy at all. However, several recommended against its use with very old or very young participants, and several recommended having another worker sitting with the client at the far site. Such a recommendation has obvious implications for confidentiality and privacy, and raises concerns about the impact of such an arrangement on therapeutic alliance. The survey results add further support to the observation that telepsychology interventions are infrequent in occurrence as part of regular mental health practice. The reason for this is inexplicable, given the prevalence of adequate technology, minimal requirement for additional skills, and evidence of favourable outcomes. One possible contributing factor, identified by Rees and Stone (2005), relates to psychologist’s negative beliefs about telepsychology and therapeutic alliance (see also May et al., 2001). In particular, psychologists may believe that the inability to offer a handshake in greeting, or a tissue when a client gets upset, are just a few of the small behavioural gestures which contribute to a feeling that videoconferencing is too impersonal a medium for the intimacy of psychotherapy. Another possible explanation relates more pragmatically to the
organisational requirements of setting up telepsychology appointments and facilitating IT connections, and the lack of government funded health care reimbursement available to those who might be interested in offering such a service (see Chapter 2 for further explanation).

In conclusion, this survey aimed to further explore the emergent reasons that experienced telepsychology practitioners expressed reluctance to use telepsychology for direct client intervention. Specifically, the capacity to build therapeutic relationships and develop rapport appeared to be a critical issue to be explored in greater depth.

**4.6 The next action stage**

Subsequently, and as a consequence of the reflective, developmental method being used, evaluation begat new planning. The findings of the literature review (Chapter 2) and surveying of experts (Chapter 4) continued to draw attention to a difference between published research and expert practitioner perception about doing therapy via videoconferencing. Given the limited use of videoconferencing for conducting psychotherapy in Western Australia, I needed to look further afield, and conduct observational research in other locations engaging in the research and use of telepsychology. It was for this purpose that immersion in United States telepsychology service was sought.
Figure 5.1  The stepwise action research progression model used thus far, to Step G – Take second research step.  This model is used throughout the thesis, and appears at the beginning of the study chapters to follow.  Stages which are yet to be completed are bleached out.  The entire conceptual model is presented in Chapter 3, Figure 3.5.
CHAPTER FIVE

STUDY THREE: THEMATIC ANALYSIS OF TRANSCRIPTS – TELEPSYCHOLOGY SERVICES IN THE UNITED STATES

5.1 Introduction

By this stage of the investigation, the research questions had evolved. The efficacy of telepsychology appeared reasonably established from the literature review and the survey, however, this positive account further emphasised the disjunction between practice and research. The research design now created questions about the potential barriers or challenges which might be evident in the act of conducting telepsychology, how to accommodate the intricacies of the telepsychology process, and how to report these to other practitioners. The aim was to identify issues that would help explain the failure of telepsychology to be used more commonly as a direct intervention method.

Based on the outcomes from the previous studies (i.e. Chapters 2 and 4), an emphasis on investigating the process features of conducting telepsychology was indicated. In particular, how the therapeutic relationship is developed and maintained across the videoconferencing medium emerged as potentially illuminating issues in this investigation.

As previously described in the Preface and Chapter 3, the thematic analysis of a convenience sample of telepsychology transcripts (the features of which will be detailed further in this chapter) was chosen as an approach to explicating some of the micro-aspects of telepsychology. This particular approach i) offered the benefit of being minimally intrusive to both therapists and clients; ii) used a pre-existing data source that mimicked a manualised
intervention approach which might be found in other similar settings; iii) provided a secondary data source that was unbiased by my preconceived ideas (e.g. see Roulston, 2001) because the study design, participant selection, and treatment intervention were all conducted for a different research purpose; iv) reduced the risk of influencing the therapists’ in-session behaviour, since the decision to undertake this analysis occurred after the sessions were conducted; v) supplied an international (multi-site) data set to enhance generalisability of findings; and vi) did not burden the researchers of the original RCT study. The details of the original RCT, from which this secondary data analysis has been conducted, are included as a published manuscript in Appendix B (Egede, Frueh, Richardson, Acierno, Mauldin, Knapp et al., 2009). My involvement in the RCT included assisting the project co-ordinator, collating the session tapes, recruiting transcribers, transcribing the de-identified tapes and researching and writing up the methodology paper, as published in Trials. I left the United States to return to Australia, prior to the completion of the study (it will be completed in 2011), and at that stage, no primary analysis results had been published, I was only permitted to access and evaluate data that had been obtained for secondary analysis. All ethical considerations for this data collection had been met, as clients had provided permission for sessions to be taped and listened to in detail for later analysis. See Appendix B for further details.

5.2. Guided thematic analysis

According to Braun and Clarke (2006), “thematic analysis is a poorly demarcated and rarely acknowledged, yet widely used qualitative method...within and beyond psychology” (p.77). It is not a method in its own
right, but rather a technique or process which facilitates insight (Boyatzis, 1998). It is described as a highly inductive approach, where related concepts, ideas and statements emerge from the data, in an organic manner, rather than through imposed categories. It involves the transcribing of recorded conversations, interviews or interactions for the purposes of re-reading them to identify and group themes (Boyatzis, 1998; Miles & Huberman, 1994). Repeated readings, often by multiple researchers, allow for comparative thematic analysis, where the researcher may move backwards and forwards between the transcripts, the generated data and the research literature (Tere, 2006) to develop deeper understandings or richer descriptions of naturalistic phenomena. Because of its emergent, reflexive, developmental nature, thematic analysis is comfortably located within the phenomenological and hermeneutic paradigms (as described in Chapter 3).

Although the basic tenets of thematic analysis imply that the data dictates the findings which emerge, in reality, thematic analysis “is not just a collection of extracts strung together with little or no analytic narrative” (Braun & Clarke, 2006:94). Rather than being non-theoretical, thematic analysis is pan-theoretical, in that it employs multiple interpretive approaches and varied perspectives to make sense of the data, as it relates to the research question being investigated (e.g. Boyatzis, 1998). Although it is exploratory, it is not random or anecdotal. Good thematic analysis interprets data to provide a compelling argument to support its primary hypothesis and theoretical assumptions (Braun & Clarke, 2006). In that respect, it may be guided thematic analysis, as themes may be identified from the raw data which deductively interweave with theory and prior research. It is in a guided thematic analytic
tradition that the transcripts from the telepsychology sessions below were analysed.

5.3 The data set

The transcripts from which the thematic analysis was conducted are taken from an ongoing, four-year prospective, randomized clinical trial, comparing the effectiveness of Behavioural Activation for depression delivered either via in-home videoconferencing technology ("Telepsychology") or traditional face-to-face services ("Same-Room") (See Appendix B, Egede et al., 2009, for a full description of the trial as published). This RCT’s research hypothesis is that in-home, telepsychology service delivery will be equally effective as the traditional mode (same-room, face-to-face). Participants for the trial will ultimately include 224 male and female elderly (aged 60 or older) veteran participants, presenting for services at VA primary care clinics and meeting DSM-IV (APA, 2004) criteria for Major Depressive Disorder (MDD). All participants in this trial will be administered protocol-driven, individual Behavioural Activation therapy for depression over an 8-week period. Participants in the trial will also be followed for 12-months after their therapy concludes to ascertain the longer-term effects of the treatment on three outcome domains: (1) clinical outcomes (symptom severity, social functioning); (2) process variables (patient satisfaction, treatment credibility, attendance, adherence, dropout); and (3) economic outcomes (cost and resource use).

In addition to the self-report outcome measures (e.g. Beck Anxiety Inventory, Geriatric Depression Scale and Beck Depression Inventory-2) and clinical interviews (i.e. Structured Clinical Interview for DSM-IV, [SCID]), the
process outcomes (e.g. satisfaction, cost, etc.) for the 224 participants of the trial will be evaluated after four weeks, eight weeks and again at 12 weeks during the treatment intervention period. Follow-up assessments will be made 12 months after commencing treatment. To ensure adherence to the Behavioural Activation Treatment manual, all sessions are audio-taped. It is from these recordings that transcripts were made and analysed.

Treatment sessions for the telepsychology condition will be conducted using an in-home analogue videophone that operates via standard telephone service, also known as “plain-old-telephone system” (POTS). Apart from the video screen, this equipment appears and functions much like a basic touch-tone telephone. It is a “plug-and-use” product, with built-in camera, full duplex speakerphone, 4-inch LCD colour screen (270K pixels) with real-time motion display (18 frames per second), and oversized touch-tone buttons for easy use by all patients.

5.3.1 Behavioural Activation

The behavioural activation treatment for depression is designed to increase exposure to the positive and reinforcing consequences of healthy behaviour, thereby increasing the likely recurrence of such behaviour and reducing the likelihood of future depressed and avoidant behaviour (Lejuez, Hopko & Hopko, 2001; Lejuez, Hopko, LePage, Hopko & McNeil, 2001). The authors describe some of the strengths of the BATD protocol as being that it is relatively brief, straightforward, easily learned by therapists and patients, and able to be implemented over an 8-session period (Egede et al., 2009).
The goals of the initial sessions are to build patient rapport and provide the rationale for activation-based treatment. Subsequent sessions are used to assess factors that might be maintaining depressed behaviour (e.g. determining if a deficit of reinforcing activities or a preponderance of punishing activities exists); assess functional aspects of the behaviour itself (e.g. if the depressed person receiving significant social reinforcement for being depressed); initiate efforts to increase the likelihood of engaging in reinforcing behaviours; and reduce the availability of unintended reinforcement for depressed behaviour (Egede et al., 2009). With the elimination of the behavioural barriers and increases in reinforcing behaviours, an increase in activity is anticipated to result in a decrease in depression. This approach uses various self-monitoring and goal setting exercises over sessions 1-3. Reviews of completed activities and concurrent moods are completed with therapists in subsequent sessions.

Behavioural Activation de-emphasises attempts to directly modify maladaptive cognitions and schemata, and discourages significant time spent on assisting patients with functional analytic interpretations of their behaviour (Hopko, Lejuez, Ruggiero, & Eifert, 2003). To that end, it is a focussed, active intervention which, like behaviour therapy generally, considers that progress is made by the client because of the specific techniques being used and not because of the relationship with the therapist. While generic counselling factors, such as warmth, empathy, authenticity, and acceptance are present in Behavioural Activation engagements, these are not considered necessary for client improvement or success (Corey, 2005). For the purposes of this thesis therefore, the use of Behavioural Activation as a treatment method delivered via telepsychology represents a good test of the assumption that therapeutic
relationship development is the key element that influences the therapeutic outcomes, and consequently may deter practitioners from using telepsychology.

### 5.4 Method

By the time I had left the project, 32 participants had been randomized to treatment conditions and commenced BA treatment. Of the number randomized, 22 had completed Week 4 assessments, eight had completed Week 8 assessments, two have completed Month 3 assessments, and one had completed Month 12 assessments. Of the total eight participants who had completed 1-8 sessions of intervention, none of the eight cases (four from telepsychology and four from face-to-face conditions) had unimpaired recordings of all sessions (11 sessions in total transcribed for telepsychology). Session recordings were impaired because of malfunction or misuse of recording equipment, due to a lack of familiarity with the devices and novelty of the telepsychology process itself. These eight completers were also some of the first participants to begin the intervention. Because of ethical and data storage considerations, I was unable to access any further cases from the time of leaving the United States.

Because of the lack of complete cases available for analysis, several first sessions (S1), middle sessions (S4) and end sessions (S8) in the telepsychology condition were selected for analysis and comparison between cases (11 sessions in total between four cases) to look for points of similarity.

The study, from which this secondary analysis was taken, was undertaken to test the effectiveness of Behavioural Activation delivered via telepsychology or face-to-face. Thus, the theme of “therapy-approach issues”,

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namely, the specific techniques and procedures that are hallmark techniques of Behavioural Activation, represented a major emergent theme from the data. However, as the purpose of this thesis’ analysis was not to conduct an evaluation of Behavioural Activation, but to conduct an investigation of the process of telepsychology, the theme of “therapy-approach issues” will only be discussed in the context of the telepsychology-focussed thematic analysis goals. These goals specify analysis which contributes to answering the questions of;

1) Does the technology impact on the process of therapy?

2) Does the technology impact on the practice of the therapist? and,

3) Does the technology affect the client during therapy?

These questions formed the basis of a guided thematic analysis, following the unearthing of the raw data themes. Raw data themes were generated after transcripts were read over independently, multiple times by three private practice clinical psychologists and one doctoral-level clinical psychology student. Notes and observations were written on each rater’s copy of the transcript documents. Following the readings, I interviewed each of the raters to further clarify their notes and observations, as well as gather their impressions about the three goal questions posed above. Following the interviews, I then re-organised the raw data into the three themes above.

5.5 Thematic analysis

5.5.1 Theme 1: Does the technology impact on the process of therapy?
Several factors were identified that related to Theme 1; how technology impacted on the process of therapy. Technical issues, which interfere with “a sense of presence” (Turner, 2001), are often implied to be the root cause of the fundamental differences between face-to-face and telepsychology interventions. Yet, in telepsychiatry research literature, the occurrence of technical problems are described in limited ways (i.e. “disconnections”, “problems with sound and picture quality”, etc., e.g. Buist, et al., 2000; Pesamaa, et al., 2004; Sorvaniemi, et al., 2005), and are often not recorded at all. Thus far, there has never been described an estimation of the time that technical problems take to reconcile, either within or between sessions, nor has there been an estimate of how intrusive the technical problems are in relation to being “on-task” during therapy, and how this might impact on relationship or outcome.

On the basis of data from the transcripts, four different types of technical problems were identified as being potentially impactful on the development and maintenance of the relationship between therapist and client, as well as on the potential outcomes. The problems and their focus include; 1) the visual confirmation of client and therapist, 2) the auditory confirmation of client and therapist, 3) other technology focus, such as equipment settings, ergonomics, environmental concerns, etc., and 4) talking at the same time.

5.5.1.1 Problems or focus on the visual confirmation of client and therapist

In the transcripts evaluated in this study, approximately 5% of time (average four minutes) was spent in each session checking or remediating
problems with the transmitted image. The excerpt below represents a typical “visual checking” exchange between the therapist (Th) and participant (Cl).

25: Cl: No. I’m having a small picture of you and a bigger one.

27: Th: Okay

29: Cl: And then I have a lot of empty space.

31: Th: Um… hit the view button once for me… (pause). It’s right beside redial. (Pause)

33: Cl: Okay

35: Th: And now what do you see? (#0231)

Such exchanges highlight how important it is for therapists to have familiarity with and, at least, rudimentary knowledge of the technical features of the equipment they are using. Calling for a technician to address simple visual/audio synchronisation issues would be time consuming, costly and potentially disruptive to the relationship between client and therapist.

Clients who had technology-based, visual image problems in early sessions occasionally had ongoing problems in later sessions, although the amount of time spent on checking visual acuity did reduce to an average of less than two minutes per session.

5.5.1.2 Problems/focus on auditory confirmation of client and therapist

The excerpts below demonstrate how visual and auditory technical problems distinguish telepsychology from face-to-face sessions. These distinctions may not be simply explicable as the results of the novelty of the transmission system, or the user’s lack of experience with the technology. The excerpt which follows is from a middle session, and it seems from other session
transcripts with this client that securing a transmission picture with sound proved extremely difficult at the client’s home site.

2:  Th:  Can you hear me Mr. X?... (pause)… Mr. X?… (pause) Can you hear me?… Hello? … Are you there?… (dialing, ringing)
4:  Cl:  All right.  (0307)

In another client’s therapy transcript, as the therapy session commences, the client and therapist are also struggling with the technology. The client makes some suggestions about why the picture is impaired (Lines 10-14), and jokes that as long as he doesn’t move, the picture should be fine (Line 18). The therapist correctly, and humorously, notes that, given the emphasis on recording and completing written forms in this therapy, not moving would be an impractical solution. Clearly, this is an issue that would not be encountered in face-to-face therapy. (See also Section 5.5.1.3. Focus on ergonomics and other technology, below).

10.  Cl:  The female jack on the phone is too large.
12.  Th:  Right
14.  Cl:  And it doesn’t fit, uh, when you put the jack in.  It doesn’t fit snuggly.
16.  Th:  Okay.  So, do you think it’s not gonna work at all or do you wanna try it or....?
18.  Cl:  Well, we’ll, we can...we can try it for a bit.  I want to okay.  I’ll try not to move or haha…. 
20.  Th:  That’s kinda hard when you’re looking at your forms and stuff, but I understand.  We’ll do the best we can.
22.  Cl:  Okay.
24.  Th:  You wanna push start and see what happens?  And if it messes up, I’ll call you back?
26.  Cl:  Alright uh… (Th loses Cl and calls back) (long pause)  Okay, I can see you.
28.  Th:  There we go, me too.  Good morning.
30.  Cl:  Good morning.
32.  Th:  Well maybe just on speaker phone.  Can you hear me okay?
34.  Cl:  Sure
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36. Th: Okay. Um… well I’m sorry you’re having difficulty um we’ve sometimes we have difficulties with these phones. Um, but I appreciate your trying it again. So fill me in, how have you been? Cl: How was my weekend?

38. Th: Uh-huh, how...how have you been? How was your weekend? How was the week?

40. Cl: Oh. I don’t know. It’s been, uh, actually I have...when we talked Thursday. I actually had a down week. I went into a...a state of, I’m not sure what. I just got, (pause) so that, uh. I didn’t really do anything for the weekend.

42. Th: So you just had an overall down time from Thursday until today? (long pause). You just didn’t feel very well? (long pause). Can you hear me Mr. ? (pause) Hello? (pause, cannot hear Cl) (Phone disconnects, tape stops running) (0403)

Even when the client and therapist persevere with the technology (Lines 24-30), again, the picture drops out, and they have to rely only on sound for the remainder of their contact (Lines 32-34). Unfortunately, just when client 0403 discloses that he had a particularly low mood over the previous week (Lines 42-44), the phone disconnects. When the tape resumes, a new voice has entered the room (a technician) who is explaining some of the technical issues to client 0403 over the speakerphone. When the therapist resumes (at Line 91) she returns to the issue of client 0403’s low mood. However, it is difficult to know if his comfort with disclosure was diminished by the technological (and third person technician) intrusion, and if this impeded the growth of alliance and, therefore, commitment to therapeutic goals.

91. Th: Hey Mr... sorry about that. Um... I know... so keep going. You were telling me that you had a down weekend and what do you think that was about?

92. Cl: See... you are not coming up on screen...and you’re breaking up also.

94. Th: So you can’t hear my voice clearly? (talking at same time) Can you pick up your head piece… your hand piece, and see if…

98. Cl: It’s breaking up. Let me try my head set. Hello?

100. Th: Is that better?

102. Cl: Okay, yeah, yeah that’s better.

104. Th: Good. Okay.
106. **Cl:** Alright. Your picture still isn’t…

108. **Th:** Yeah, you’re a little fuzzy too but I can see ya.

110. **Cl:** Oh, okay.

112. **Th:** So, tell me, you said you were having a down weekend. What do you think that was about?

114. **Cl:** I’m… I’m not sure. (pause) Uh… I have those every now and then.

116. **Th:** Uh-huh

118. **Cl:** So, but uh… when I do, it’s uh… just…you know, watch it and see what’s gonna happen, and stuff like that…so (0403).

5.5.1.3 Other technology focus such as equipment settings, ergonomics, environmental concerns etc.

In this excerpt from client #0151, when telepsychology is provided in-home, issues of interruptions and confidentiality arise that often must be identified and resolved by the client. This excerpt provides an example of how the dual issues of interruptions and confidentiality breaches, that would not be evident in a face-to-face office based encounter, may present in home-based telepsychology.

82. **Cl:** So it’s… Now, I’m… if the dogs go crazy… we’ve got six dogs: four miniature pinschers, and one boxer, and one 65-lb… half, mixed breed, and uh…

84. **Th:** They’re all being pretty quiet right now.

86. **Cl:** Oh yeah. Well… if my wife comes in during this conversation. She’ll be coming back from um… her third breast cancer surgery, and they’ll go crazy greeting her. But uh…

88. **Th:** Okay, yeah.

90. **Cl:** Other than that, I’ll just get them out and shut the door (0151).

Alternatively, the above exchange illustrates a positive benefit to in-home therapy which contrasts with office-based therapy. This exchange could be interpreted as an opportunity for this client to connect with the therapist in a
deeper, more intimate way, i.e. to share his home life and interests. The client’s “chattiness” about his dogs and wife conveys a feeling of comfort or being “at ease” in his own home and, in other clinical exchanges, provides detail about which the clinician could enquire and bond more with the client. However, further exploration is not encouraged in a behavioural activation intervention.

The next two examples taken from the transcripts demonstrate how issues of ergonomics and administrative preparation may manifest in home-based telepsychology that may not be apparent in office-based face-to face sessions.

12. Th: Okay. Um… and… let me just go over some of the settings and make sure that we got everything the way it should be. Um...

14. Cl: Okay

16. Th: Are you sitting up comfortably or are you having to kind of lean over the phone?

18. Cl: Comfortably

20. Th: Okay, we want to make sure you are in a comfortable position. Um… and on the screen is there, um… does the picture seem small?...like there is a margin around the video that plays it? Or is it filling up the whole screen?

22. Cl: No. I’m having a small picture of you and a bigger one (0231).

This exchange may have been experienced by the client as explicit positive concern for their wellbeing by their therapist – an interaction which would contribute to the building of alliance. Questions about physical comfort with seating and visual proximity may occur less frequently, or occur in a less detailed, questioning manner during face-to-face encounters, where the therapist may use visual cues (e.g. watching the client for fidgeting) to determine if the client is comfortable, rather than enquiring directly.

And later, following technical interruptions...

212. Th: Alright, yeah, so (talking at same time). Hit that… do whatever view you like best. (long pause)

214. Cl: This don’t bother me. I can see you and myself.
In a face-to-face encounter, the physical environment, and therefore the seating arrangements, field of view, and general comfort conditions are (mostly) in the control of the therapist. The environment can be created (i.e. the seating is arranged) or responded to, based on observations or direct enquiry (e.g. client shifts in seat repeatedly, so therapist enquires after their comfort). In a telepsychology condition, the field of view is restricted to the breadth of the camera angle, so it is not always clear if the client is sitting or standing, fidgeting or calm. In home-based telepsychology, it cannot always be assumed that the client will arrange their own comfortable seating or access to pens/paper etc. The transcripts suggest that clients/participants may become so focussed on getting the technology working properly, that they forget that they are expected to also engage in therapy for an hour. Office-based telepsychology is unlikely to encounter the same issues. In telepsychology-specific offices, a general “ideal layout” is likely to be created in the first instance. This layout typically places seats and tables in front of the camera at the best average viewing distance, or provides access to writing materials on the table etc. In office-based telepsychology, clients/participants may be able to adjust the technology within the office’s pre-existing limits, using the remote controls which are connected to the transmission unit. How successful the clients/participants are at altering camera angles, zoom, sound quality or lighting arrangements at the
office site remains to be clarified; however, pre-therapy technical training, or the presence of on-site technicians, might overcome such issues.

5.5.1.4 Talking at the same time.

When clients and therapists talk at the same time, the consequence is that one or both of the auditory channels is cancelled out, resulting in a muting of both vocalisations. This loss of speech may result in a loss of comprehension between the participants. For example;

210: Cl: It’s, it’s, it’s not like it should be, but I’m um, I got to um, got to uh, get around so I can help build it up, you know?
212: Th: Yeah… [talking at the same time] So…
214: Cl: [talking at the same time] and um…(long pause).
216: Th: …During the time when you really couldn’t leave the house, did you find that affected your mood? (0307)

Talking over each other also reduces the clarity of the interaction for the transcript reader/listener. For example (0307),

370: Cl: [tape quality poor- hard to hear]…put that down, between 1:00… to 2…(pause)… and by then I’d have to get home…
372: Th: [talking at the same time as Client]…You know…
374: Cl: [talking at the same time as Therapist]…get back…
376: Th: When we talked last week, you said something about wanting to schedule fishing. Did you ever get that on there?
378: Cl: (pause)…(client unable to hear?) what?
380: Th: You said you wanted to go fishing.
382: Cl: No, I hadn’t…
384: Th: And that, you might be too busy [talking at the same time as Cl].
386: Cl: [talking at the same time as Th] You know what? I might…could do that in the morning (0307).

While the issue of lack of auditory clarity for a third party listener to telepsychology interaction may not be particularly problematic, it may have some impact on the quality of professional supervision and training of students.
or novice practitioners who use this technology. However, talking over a client is a serious communication problem for a therapist, if this is occurring so much that it is impairing adequate interaction.

As previously described, the question of how much time within telepsychology sessions is spent “on-task”, compared to how much time is spent on telepsychology process and technical issues, has yet to be answered. As evidenced from the excerpts below, this issue is a particularly relevant one.

A general process theme that appeared throughout the transcribed sessions was the repeated complaint by therapists (and thematic analysis reviewers) that sufficient material may not have been covered, because the technical difficulties took up too much time from the sessions.

450: Th: Well, my job is to help you with that being busy part, and staying busy, with things that...um, really make you feel better instead of just...just busy for the sake of being busy. We're going to try and focus on things that help you feel better about yourself and help you channel some of that energy that you have. Um...but sadly we're...we're almost out of time because of all these technical difficulties (0403).

And again...

548: Cl: ...on the line on the checklist.
550: Th: Right
552: Cl: But uh if things do...[long pause]. [Th loses Cl and calls back] Hello?
554: Th: I am so terribly sorry this keeps happening I know that's terribly frustrating for you.
556: Cl: No, that's...that's not your fault. It's just...I'd tell the contractor and all, next time they buy something, they need to check it out.
558: Th: Yeah, and if, it's...uh...it is frustrating when people are talking and they're in one line of thought and it definitely cuts into that. And again, I apologize, and that number that...(0403)

From the client’s point of view, however, repeated technical difficulties and working through these with the therapist may have increased the sense of camaraderie that the client felt. As both the client and therapist are engaged in getting the technology working, both may experience a growth in therapeutic alliance and working relationship.
From appraising all of the sessions available for transcription, the mean length of the transcribed sessions was 632 lines of text, with a range of session “duration” between 137 lines of text (a session conducted on the client’s personal cell phone when the videoconferencing failed to work) to 1083 lines of text. In the research protocol, sessions were scheduled for one hour of therapy contact time. However, each of the tape’s durations varied, and were not started or stopped consistently, nor were tapes turned off immediately after they finished. Subsequently, measuring the duration of the sound recordings does not necessarily reflect the duration or true length of the session. Additionally, the BATD protocol does not have pre-defined session duration and, in fact, the protocol anticipates reduced session length in the later sessions, compared to earlier sessions.

To evaluate the duration of the impact of technical problems on sessions (i.e. the lines of text within the transcriptions relating to any of the four technical issues identified above), a tally of lines relating these problems were made. From this tally, a percentage of the amount of text related to problems was calculated in relation to the session length (i.e. the total number of lines in the transcript).

While not a strict quantitative calculation, Table 5.1 presents a conservative estimate of the impact of technical problems on sessions. The percentage totals relate only to the percentage of spoken word dedicated to technical issues and does not represent the amount of time that technical problems took from the sessions as a whole. At different times, the recordings (and transcripts) appear to commence after the session begins, and after the
Table 5.1  Percentage of time spent on technical issues per case and transcript

<table>
<thead>
<tr>
<th>Case #</th>
<th>Transcript length (lines of text)</th>
<th>Percentage of spoken “time” on technical issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>2301</td>
<td>539</td>
<td>12.3%</td>
</tr>
<tr>
<td>2303</td>
<td>629</td>
<td>5.3%</td>
</tr>
<tr>
<td>2304</td>
<td>373</td>
<td>1%</td>
</tr>
<tr>
<td>0402</td>
<td>1083</td>
<td>0.5%</td>
</tr>
<tr>
<td>0403</td>
<td>671</td>
<td>9%</td>
</tr>
<tr>
<td>0404</td>
<td>137</td>
<td>Unable to estimate*</td>
</tr>
<tr>
<td>1501</td>
<td>1048</td>
<td>6%</td>
</tr>
<tr>
<td>1502</td>
<td>594</td>
<td>3%</td>
</tr>
<tr>
<td>1503</td>
<td>387</td>
<td>0.5%</td>
</tr>
<tr>
<td>0307</td>
<td>568</td>
<td>9.5%</td>
</tr>
<tr>
<td>0308</td>
<td>426</td>
<td>5%</td>
</tr>
</tbody>
</table>

* It would appear that this client’s session recording was so brief because, at the time of the session, Case #0404 was significantly depressed and voicing suicidal ideation. The session tape began but then stopped after the therapist’s first enquiry due to sound problems. When the transcript recommenced, the client began discussing his significant suicidal ideation, helplessness and hopelessness, and the therapist left the BATD protocol and appropriately focussed the interaction on establishing the client’s safety.

therapist and client have spoken (greetings?) to each other. Similarly, technical problems appear to force the therapist to sometimes switch off the recording and at other times leave the tape running. Within the transcripts, transcribers have also estimated the duration of delays during continuous connection, as well as providing estimates of time taken to connect calls and fix dropped calls (e.g. 0307 below).

10:    Th: me?... Hello? … Are you there?... (dialing, ringing)
12:    Cl: All right.
14:    Th: Well let’s try your button this time. Ha ha.
16:    Cl: Somethin’... somethin’.... somethin’ happened to me.
18:    Th: Yeah?
20:    Cl: (pause)...All right, let’s see. I, uh ...(pause)... I turned it all off…
22:    Th: Oh ok.
24:    Cl: All right. There, I see me.
26:    Th: Great. Now you turn your start button. Let’s see what happens.
28:    Cl: Um…The view button, right?
30:    Th: The start button.
An issue raised by the researchers during the thematic analysis related to whether session duration affected the achievement of the goals of therapy. In particular, two of the clinicians analysing the transcripts speculated that when 10% or greater time is spent in a therapy session on technical issues, the amount of material to be covered must be reduced or, if included, rushed through or condensed. Based on the approximations in the table above, over eight sessions, this may be the equivalent of nearly one session’s worth of “therapy” that was missed. Therefore, the client receives a reduced “dose” and, moreover, may be reasonably assumed to obtain a reduced clinical outcome, and/or potentially have a weaker relationship with the therapist.

Alternatively, it is also possible that clients develop their relationship with the therapist through shared frustration at the technology, and working together to achieve successful solutions to technical problems. Interestingly, despite frequent technical interruptions within and across sessions, most of the clients appeared to be patient with their therapist, and did not hold them responsible for the disruption. Nor did the relationship seem strained as a result. Of course, not being able to speak with the researcher or the client after sessions, it is impossible to determine how impatient or frustrated they felt as a consequence of the disruptions, or whether they felt more connected to their therapist through a sense of shared camaraderie and overcoming of
technological obstacles. It is interesting to note that, while the therapists expressed frustration at being unable to complete the therapy tasks as planned, the clients did not make specific reference to having their therapy time cut short, but, instead, expressed frustration at the repeated interruption of the calls by technical problems. Based on the information available, it is unclear whether the clients are concerned that they may not be getting their “full dose” or are just sick of using equipment that keeps failing. Moreover, it is unclear whether clients have a sense of “missing out” on therapy time and have a concept of what a complete treatment package might include. Not being able to access the quantitative outcome data at this stage of the RCT also means that the impact of the interruptions on measures of mood state improvement remains speculative. This shortcoming is addressed later in this thesis by conducting a telepsychology intervention with a therapist/researcher collecting self-report process data contemporaneously with outcome data (detailed in the case studies of Chapters 7 and 8).

5.5.2 Theme 2 - Does telepsychology alter the therapist’s practice?

Within a therapist’s practice, the development of a working or therapeutic alliance is perceived to be critical to positive therapy outcomes. Although it has been defined in various ways, therapeutic alliance generally refers to the relationship which is created between a therapist and a client during therapy, and is evident when the client feels comfortable with the therapist, has a sense of common goals or purpose with the therapist, and feels a sense of safety and trust in the therapy process. The observable components of therapeutic alliance may be described as elements such as bond,
partnership, confidence, and personal characteristics of the therapist or their practice style, such as warmth, empathy, engagement, acceptance and genuineness. The ability to demonstrate these characteristics is assumed to facilitate the application and effectiveness of therapeutic techniques (Manchanda & McLaren, 1998), and they are positively and consistently related to study outcomes (Horvath & Symonds, 1991; Orlinsky & Howard, 1986).

The key issue in the exploration of videoconferencing as a medium for the conducting of psychotherapy, therefore, is whether the expression of the therapist’s characteristics, described above, may be restricted with interactive video, because of the technology’s impact on non-verbal communication channels, such as body language, eye-contact and touching (Baigent et al., 1997; McLaren & Ball, 1997; Miller, 2001, 2003; Turner, 2001).

For example, the visual quality of videoconferencing depends on transmission speed and method (see Chapter 2 for discussion). Low quality videoconferencing may reduce the ability to sustain focussed eye contact, because the picture looks fuzzy (pixelated) or indistinct, or the transmission is broken or delayed. Research has demonstrated that a high level of eye contact indicates liking, trustworthiness and intimacy (e.g. Burgoon, Buller, Hale & deTurck, 2006), and, therefore, reduced eye contact may impede the therapeutic relationship. In addition to transmission issues, a failure to maintain eye-contact with the camera, rather than the image of the client on the screen, is a typical cause of eye-contact problems (Cukor & Baer, 1994) and a unique problem associated with telepsychology.

In a similar fashion, certain postures and body language, such as proximity of seating in relation to others, leaning forward, nodding and hand
gestures which emphasise language, may signify liking or disliking, detachment or warmth, and dominance or composure. Videoconferencing may restrict an individual’s body language or frame an image in such a manner as to obscure this kind of information, and therefore impede the development of alliance (Manchanda & McLaren, 1998; Miller, 2003; Sanders & Bashshur, 1995). To compensate, the therapist and the client may exaggerate movements, frequently nod or grunt (in agreement or encouragement) to compensate for any perceived visual obfuscation, and this may influence the perception of authenticity or genuineness by either party (Omodei & McLennon, 2000). A higher number of utterances also increases the likelihood of auditory “cancelling out”, as telepsychology participants may talk over the sound of each other (Hilty, Marks et al., 2004; Kim & Biocca, 1997). Moreover, leaning too far forward or back may suggest feelings of hostility or disinterest (Burgoon et al., 2006).

Finally, being unable to touch the client, either with a handshake hello or goodbye, or offering tissues or a glass of water, may also impede the development of rapport. In the main, most therapists limit their physical contact with clients, and this may only be particularly problematic for a small minority. However, where it may be increasingly relevant is when the other factors related to poor image quality, such as poor eye contact or obscured body language, are also occurring. In these instances, the ability to touch the client may have compensated for such issues, or added another communicative channel for conveying warmth or concern.

It is the accumulation of factors, rather than one single factor, that is likely to affect therapeutic alliance, but unlike face-to-face sessions, the
technology of telepsychology has the potential to negatively affect all of these factors. Nonetheless, some researchers have speculated that not shaking hands may actually be a positive outcome, unique to telepsychology, because it prevents a show of dominance by a therapist (e.g. Manchanda & McLaren, 1998), and the interpersonal distance may, in fact, enhance communication and reduce inhibition, particularly for those clients discussing personal or embarrassing issues (e.g. McLaren, et al. 1995; Simpson, Deans & Brebner, 2001).

What is apparent from the issues and challenges described above is that such non-verbal communication restrictions do not occur in face-to-face contact. The impediments to non-verbal communication found in telepsychology may, in turn, hinder the development of a therapeutic relationship, and may alter the course of therapy, either by prolonging it or cutting it short (Manchanda & McLaren, 1998).

Using the recordings and transcript data that were available for this investigation, it was difficult to confirm if the absence of non-verbal cues imposed by the telepsychology made a significant impact on the development of relationship. However, what was apparent was the frequency with which the therapist made encouraging utterances (e.g. “uh-huh”) without elaboration (in one session the therapist made single word encouragement utterances 31 out of 99 times), which suggests that this is either the therapist’s natural counselling approach or that the therapist felt the need to encourage frequently, and possibly to compensate for an inability to encourage with facial expression or body language. A research methodology which permits the direct,
contemporaneous questioning of therapist and client about the process features might address some of these unanswered questions.

For example, it was noted during the thematic analysis that, at times, the responses made by clients and therapists were very brief. See examples below from cases #0402 and #0233.

519: Cl: If I go out to dinner to have a drink, I would like, you know, for something prepared properly, so I get enjoyment out of it.
521: Th: Of course… of course

523: Cl: Then uh…

525: Th: It’s kind of special.

527: Cl: Yeah.

529: Th: Uh-huh.

531: Cl: And when it’s not, then it just sort of kills the whole thing.

533: Th: Right

535: Cl: uh…(0402)

And another...

478: Th: So, I wonder if we can put a flea market trip on your calendar and challenge you to go to the normal spot that you go, but then maybe to go and get a bite to eat at the flea market.

480: Cl: Okay

482: Th: Before you leave

484: Cl: Okay, that would be fine.

486: Th: And you know take your wife….

488: Cl: I’ll give it a shot.

490: Th: Take someone with you to help you feel more comfortable.

492: Cl: Okay

494: Th: Add something else to the routine.

496: Cl: Okay

502: Th: Um…
This brevity of each dyad (i.e. the smallest unit of conversation between two speakers; the statement of one and response of the other) and segment (connected content) may reflect a genuine change in the clinician’s normal counselling style, or may be an artefact of the limitations of telepsychology. For example, after experiencing how talking at the same time cancels each other’s voice out, each participant may “train” themselves to provide limited responses to avoid this cancellation occurring. Another interpretation is that telepsychology allows for avoidance or minimisation behaviours from symptomatic clients, because telepsychology clinicians alter their interaction style. Clients who wish to avoid further questioning may offer one word or closed answers (“yeah”, “okay”). Therapists may utter more encouragement sounds (e.g. like “uh-huh”, “yeah”, “okay”, etc.) to compensate for an imagined sense of reduced presence or reduced visual acuity, which may disrupt the flow of conversation or discourage elaboration by the client. In this particular study, clients may also be responding in an idiosyncratic “ex-military” style – short, sharp, accurate answers which one might exchange with a superior officer; a habitual interaction style reinforced over years of military service. Potentially, the cancelling-out phenomenon encourages short, sharp responses, and the lack of camera-driven visual definition or “psychological distance” afforded by telepsychology means that clients are not probed in greater detail, and their responses discourage the therapist from further inquisition. Alternatively, this may be how the Behavioural Activation protocol moulds the targeted and non-personalised types of interactions between therapist and client.
The literature reports that many psychotherapists hold preconceptions about what it could be like to deliver services using distance technology (Day & Schneider, 2000; McLaren & Ball, 1997), and despite consistent reports of satisfaction with telepsychology (see Chapter 2.4.5), many practitioner’s reactions to telepsychology remain “governed by guesses rather than by experience or research” (Day & Schneider, 2000: 203). The therapists involved in this study were post-doctoral candidates in Clinical Psychology with significant clinical and counselling experience. They received 12 hours of training in the use of the BATD protocol but no specific videoconferencing training other than technical use. It is unknown how familiar they were with videoconferencing prior to their involvement in this study, and therefore to what extent they may have rated their comfort with this technology. It is unclear from these transcripts alone whether the therapists are adapting their interaction style to accommodate the telepsychology technology with which they are dealing, or whether they are responding on the basis of preconceived beliefs about how the technology would constrain their natural counselling style, and failing to alter it in the face of contrary evidence.

5.5.2.1 Confusion over forms: Changes to practice.

Conducting telepsychology appears to require more administrative and therapist preparation than a normal psychotherapy session. Typically, forms or paper resources that are used during a session in a face-to-face environment will be brought by the therapist to the session, filed on-site, or will be within easy access of the office. In telepsychology, potential paperwork or forms need to be anticipated prior to the commencement of the session and sent, usually via post
or e-mail, to either the client or the transmission ("away") site, in advance of the meeting. In a manualised therapy process, when sessions are sequential, the delays are significant when a client is assumed to have received paperwork that they do not have. The plans for that session may have to be delayed because of the influence of the technology or the intrusion of distance, and changes to a therapist’s practice are necessitated by the need for preparation or changes to therapeutic plans. An example, taken from the transcripts below, details how the lack of immediacy regarding access to paperwork, and the reliance upon pre-session administration, may result in a delay or confusion, when multiple resources are used. Particularly in this case, the older client’s visual and hearing impairments, combined with poor recall and confusion over the contents of the pre-therapy resource package, result in a session delay, a possible deviation from the research protocol, and a need to re-post the missing resources to the client.

440: Th: Oh, too long. Okay. Well, I want to move on and talk about this treatment; what we're going to be doing together.
442: Cl: Okay.

444: Th: Um… and, I can't remember if I had you fill out a calendar with, um, just kind of showing me what you do during a normal week. Did you do that?
446: Cl: I'll do it. But I never received the forms.

448: Th: Okay. So that packet you said you had, the hierarchy, Activity hierarchy sheet.
450: Cl: Yes.

452: Th: Did you have other papers with that?
454: Cl: Um… I can, uh, I can send that to you.

456: Th: Um… Well don't send it to me, but did you have other papers with that form? There should have been several different papers.
458: Cl: No…um, other than the thing about the video phone [hard to hear]. I've got three forms… The 1-5 Activity Hierarchy,
460: Th: Okay.
In a case study report of telepsychology, Manchanda and McLaren (1998) also reported that the completion of assessment forms by their client proved inconsistent and difficult to enforce. These authors speculated that telepsychology impaired compliance due to the additional time pressure that it placed on within-session tasks and the impression of “distance” that it facilitated. They suggested that the physical passing of questionnaires between the therapist and the client might strengthen the message that completion of paperwork was important, but not performing this handover reduced the motivation for homework completion. It may be that completing paperwork
outside of the telepsychology experience has the effect of “double-distancing” the client.

5.5.2.2. Therapist Change? Behavioural Activation Protocol Issues

During the thematic analysis it became apparent that some of the clinical skills being demonstrated may have reflected changes and issues particular to the behavioural activation protocol, and were not actually occurring as a result of the technology or the individual therapist’s style.

For example, in the transcript of client 2301, when asked about his military history in his first session, the client begins to describe his experiences with another therapist. He reports being unwilling to go into details about “the things I did and the things I seen” with his current therapist. Nonetheless, the client then begins to disclose some details about the horrors of his service which, under normal therapeutic conditions, would undoubtedly be pursued in greater detail.

298: Cl: I will never forget… I will never forget the body pieces that I have had hit on me and things… just crying and… I take back to places I know
300: (hard to hear) and I see the faces every time I shot. And I said, I lost a lot of friends. You learned after six months you don’t make any because
302: they’re not going to be here. The odds are against them, and I said [to her] that I don’t want to get into it.
304: Th: Well, it sounds like you…
306: Cl: I said the medication helps me (#2301).

After a few brief acknowledgements, and a little more detail from the client about his coping mechanisms and feelings about other veterans, the therapist follows the Behavioural Activation protocol correctly, redirects the
client away from emotional disclosure, and introduces the rationale for the
treatment. One can only speculate about the lost opportunities for exploring
deeper or more relevant issues pertaining to the current level of distress (e.g.
such as the post-trauma intrusion and avoidance symptoms described above),
or how this re-direction (though correct according to the protocol) impacted on
the relationship being built and client 2301’s probability of disclosing his deeper
feelings again.

323: Th: Well… (talking at same time) I am sorry for… for everything that you
have suffered, um… and I am glad that you have… um… if you ever do
325: want to discuss those things, that you have a place where it’s safe to do
that. If you don’t want to, then that’s your prerogative. But, this
327: treatment is not really um… like those traditional treatments. I’m not
329: going to ask that you share details of anything in particular. If there is
ever a time that you want to talk about something… talk about
something with me um…that’s fine. But we have a lot of just practical
330: work to do together, and once we get finished with that work at the end
of each session, there may or may not be time for um… chatting or
332: talking about things (#2301).

This exchange gives an impression of being dismissive and
discouraging of personal disclosure, and, I assume, may have had a negative
effect on the client feeling “listened to”. In contrast, during other sessions, a
different therapist demonstrates empathic joining utterances and paraphrases to
demonstrate understanding of client #1501.

198: Cl: Well, the years have not helped any, but, uh, actually, I got the neck
injury in Korea and the back injury with two back surgeries
200: Th: Ooh!
202: Cl: …was from a parachute jump… um… I’ve got surgeries from my right
elbow from shrapnel, and um, both knees are shot. And that needs to be
204: replaced… again, from jumping out of an airplane for more than 10
years. So every injury that I have, is uh, service connected.
206: Th: You took a beating, didn’t you?
208: Cl: (laughing) I am a...(muffled)... to include my cancers, prostate
cancer, Agent Orange, and I believe stomach cancer also from Agent
210: Orange.
This presents as a warmer and more encouraging exchange, despite the potentially disturbing nature of the content being discussed. Moreover, the therapist remains on-task with regard to the Behavioural Activation protocol, by obtaining information regarding the client's physical capacity which may inhibit his participation in the new activities to be scheduled as a component of therapy.

5.5.3. **Theme 3 - Does telepsychology cause changes to the client?**

Previous studies have reported comments by clients stating how they enjoy using telepsychology (e.g. Day & Schneider, 2000; Manchanda & McLaren, 1998). In this study there were also several spontaneous comments indicating that clients enjoyed the telepsychology; but there were not many. One participant (1501) stated that the videophone picture assisted him with hearing better, because the picture enhanced his understanding.
A second participant (#1503), although led by the therapist, described his preference for telepsychology over face-to-face sessions because of the convenience of access.

345:  Cl: No… no, I think I really like the teleconferencing.
347:  Th: It's nice not having to park, isn't it?
349:  Cl: Oh yeah. I don’t have to… it just wears out the whole day for me. I have to allow three hours to get here, two and a half hours—I live 100 miles away. And so…2.5 hours if there are school busses on the road. And I have to allow 30 minutes to find a parking place. And that’s a three hour, and then it only takes me two hours to get back. But it kind of wipes out the whole day, when I come to the VA.
355:  Th: Sure.
357:  Cl: So teleconferencing is, is excellent for me. (1503)

While the transcripts do not include many spontaneous comments about liking telepsychology, it would have been desirable to ask clients directly if they enjoyed, or even preferred, telepsychology over face-to-face therapy. On the basis of the transcript data, I am unable to determine this, although some degree of satisfaction may be inferred from these comments. Nevertheless, these two participants have different reasons for liking telepsychology, and highlight how important it is to tease out the elements of satisfaction, before a researcher may claim that telepsychology is as equally satisfactory to clients as face-to-face therapy.

In the main, the audio and the transcripts suggest that the clients adapted to the videoconferencing technology well and responded to the therapist in a typical manner, as might be observed in a face-to-face session. Their responses within the dyads appeared natural and unhindered by the technology, although one participant (#1503) had more hearing problems than the others, which, according to the client, was due to his poor quality hearing
aid, rather than the sound quality of the technology. It is possible that some clients found the psychological distance to be liberating, and thus disclosed personal information (e.g. frequency of sexual intimacy, traumatic battle experiences, etc.) that may not have been as freely disclosed in a face-to-face setting. Also their comfort in being in their own home may have facilitated more relaxed conversation. The quality of communication intimacy may be similar to that experienced when inviting someone into your home, rather than going to someone else’s home. Without the capacity to directly question these clients and clarify their reasons for feeling satisfied or dissatisfied with telepsychology, the client’s feelings and thoughts about their experiences are speculative.

5.6. Conclusions

What can be concluded from this thematic analysis of telepsychology transcripts is that using a guided thematic analysis approach to evaluate process issues offers the potential for an in-depth and detailed account of the reality of telepsychology practice that would otherwise be obscured by large scale, aggregated accounts of research results. A unique evaluation within this analysis has been to demonstrate how impactful technological problems can be, at least in terms of the time that might otherwise be spent in therapy. This analysis has shown that, within the cases available so far from a large scale RCT, technical problems with the home-based videoconferencing technology may have caused up to the equivalent of one session’s worth of lost therapy time, when those technological interactions are combined over the whole eight sessions of therapy. Four different types of technological problems and foci of response were also identified and included issues associated with 1) the visual
confirmation of client and therapist; 2) the auditory confirmation of client and therapist 3) other technology such as equipment settings, ergonomics, environmental concerns, etc.; and 4) talking over each other. However, as the trial progressed, and the technology glitches were ironed out while the therapists became increasingly comfortable with the technology, the problems may have become less prominent.

With regard to the issue of talking over each other, it appears that therapists may shorten some of their conversational exchanges with clients in an effort to avoid talking over the top of the client and subsequently cancelling each other out. This explanation, however, cannot be confirmed and may be the result of therapist style, the military background of the client group, or communicative adaptation to the Behavioural Activation protocol on which the study is based. Unfortunately, the inability to directly assess the therapist and the client about their experience has left many questions insufficiently answered when considered as an independent study.

The transcript analysis approach used in this study is minimally intrusive, and has provided an interesting and valuable source of practice related material and suggestions. It does not purport to definitively answer any of the questions which were raised by the three themes extracted from the data, namely 1) Does the technology impact on the process of therapy? 2) Does the technology impact on the practice of the therapist? and; 3) Does the technology affect the client during therapy? Rather, it provides one corner of a triangulated data set, and influenced the design of the subsequent study.

What is apparent from the transcripts is that, despite significant technological interference, using a therapy approach which discourages
emotional or cognitive exploration and encourages a narrow, behavioural focus with an aged research sample, the clients and the therapists were tenacious and adaptable. This particular analysis of the larger study did not allow for an evaluation of the question of whether this technologically-mediated intervention was an improvement on face-to-face therapy for some clients, despite some occasional positive satisfaction comments being noted. The transcripts clearly indicate that no deliberate changes were made to the Behavioural Activation therapy protocol to accommodate the video-conferencing technology, and thus, this therapy method provided a good opportunity to evaluate the impact of telepsychology, as distinct from the therapeutic approach. However, deviations from the therapy protocol were made to adjust to the intrusions of imperfect technology, and analysis suggested that on-task session time was reduced. While the therapists appeared to require no additional skills to use the telepsychology, it would be incorrect to claim that telepsychology did not affect the process of therapy or the in-session behaviour of therapists.

5.7. The next phase.

This secondary, thematic analysis study contributes one strand to the broader research goals of this thesis which aims to explore the telepsychology process at the level of micro-analysis. Analysis of another’s research allows for greater objectivity in analysis and an international comparison, but at the cost of accommodating the goal of reflexivity. Within the constraints of the data set, it does not permit an iterative response to resolve the changing research questions when formative issues and solutions emerge and suggest developing lines of inquiry.
As described originally in Figure 3.5, following evaluation, triangulation of results and refinement of hypotheses and research approaches (Block H), the next stage of the research process involves taking a third action step (Block I). Chapter 6 outlines the methodology used to conduct the next intervention phase. The intervention phase is presented as case portfolios in Chapters 7 and 8 and these chapters detail the provision of manualised CBT for depression via telepsychology. This phase will provide an opportunity to add further evidence to support the viability of such an approach to mainstream mental health service provision, plus investigate how CBT adapts to telepsychology, and the changes to practice and relationship that occur because of, or in spite of, the technology.

As a counterpoint to the limitations of the previous thematic analysis methodology, the telepsychology intervention described in the following chapters incorporates a practitioner/participant/researcher and person-centric research approach. Incorporating the Action Research/Developmental Intervention approaches, this intervention aims to respond to changes as they occur in the therapeutic context, and to monitor the consequences of changes. According equal status to formative and summative outcomes, the study to follow incorporates mixed methods of assessment and evaluation. Where methodological gaps or unanswered research questions remain, it is intended, in the third action step to follow, that these gaps will be filled, the questions answered, and the results will be triangulated to answer the five research questions and their related hypotheses, as described in Figure 3.8 (Chapter 3).
CHAPTER SIX
STUDY FOUR: INTERVENTION STUDY METHODOLOGY

Figure 6.1  The stepwise action research progression model used throughout the thesis. Stages which are yet to be completed are bleached out. The entire conceptual model is presented in Chapter Three, Figure 3.5.
CHAPTER SIX

STUDY FOUR: INTERVENTION STUDY METHODOLOGY

6.1 Introduction

The following chapter outlines the global methodological approach of the main intervention study of the thesis. As demonstrated in the preceding figure, this study (Chapter 6) represents Action Stage 3. The primary aim of the intervention project was to investigate the effectiveness, evaluated in terms of outcome and process, of rural telepsychology offered to regular community clients.

From the outset, the desire was to conduct research that investigated a real-world application of therapy using an approach to evaluation that was accessible to the ordinary practitioner. The chosen method resembled the typical idiographic hypothesis testing practices of clinical psychotherapy. To explicate the contributing factors which might explain the causes or maintaining factors for the disconnection between research and practice in the telepsychology field, the methodological focus of this research has deviated from a traditional trial or comparative study to focus on micro-processes and emergent research questions.

To overcome limitations identified in previous chapters (and detailed in the research questions outlined in Figure 3.11, Chapter 3), this intervention study incorporates reflexivity by using a therapist/researcher as participant in the data collection procedure. The practice-driven methodology of this intervention study has developed responsively and iteratively, to resolve the changing research questions that have emerged from the formative issues and
solutions explored in earlier chapters, and which have informed developing lines of inquiry thus far.

To this point, developing research questions suggested that the scientist-practitioner research framework would be well-served by including a data-collection agent who is also providing therapy (i.e. a genuine scientist-practitioner). This dual-role researcher would potentially add timeliness and richness to the data that had been unavailable through other methods.

Using a time-series case study design, the utility of a manualised CBT intervention for depression was explored within an Action Research framework. As described in Chapter 1, a mixed-method approach was adopted to evaluate clinical and process outcomes. The goal of the evaluation was to determine whether evidence-based interventions for specific psychological disorders (i.e. depression) provided via telepsychology can result in clinically significant rates of symptom improvement. Action research permitted the monitoring of both the client participant’s and the therapist’s perspective. The cyclical nature of action research also permitted the monitoring of the process of intervention and the changes which were made to that process. The triangulated data were used to explain how intervention practices and procedures could be modified in telepsychology to maximise the probability of positive clinical outcomes, and how these procedures may become transferable to regular telepsychology practice.

Data was collected in the form of session notes, therapist observations, supervision feedback, and multiple administrations of quantitative and qualitative questionnaire results. The data were triangulated to monitor the modifications required to 1) the manualised treatment 2) the technology 3) and
the typical interaction style of the therapist in order to best meet the needs of typical community mental health clients.

The particular therapy model chosen as an intervention tool has been selected on the basis of a well established manualised protocol and adequate supportive outcome data in traditional interventions. In this way, it precluded the need to consider therapy as a factor in determining outcome, and kept the focus on videoconferencing as the “real” method under scrutiny. The intervention study will use the Nathan, Rees, Lim, Smith and O’Donnell (2001) *Mood Management for Depression – CBT for Depression*. The therapy model chosen has been demonstrated as an effective treatment for depressed adults (McEvoy & Nathan, 2007). The focus of the intervention, therefore, is not to confirm the effectiveness of CBT, but rather, to investigate how CBT approaches are modified to be effective in a telepsychology setting. The extent of deviation in content or process from the manualised treatment will be noted.

### 6.2. Statistical and Evaluation Plan:

An Action Research framework using a triangulated mixed methods design was used to demonstrate clinical effectiveness and salient process issues as they arose. The results are described in multiple time series, single case designs, and are presented graphically for visual analysis. Symptom change was estimated by changes in status from “caseness” to “non-caseness”. In the absence of clinical comparison data, sufficient clinical change will be estimated by a positive shift, that is, two standard deviations from the mean score recorded at baseline (see Jacobson & Truax, 1991).
Due to ethical and practical considerations, a non-traditional approach to research design was required to complete this investigation. For example, randomisation was not possible in this study. The lack of adequate alternative treatment being readily available at the clinic, plus the unknown extent to which pre-existing treatments could be applied to the video-conferencing setting, prevented random assignment of participants to a control or comparison group. The findings from the intervention case studies, therefore, were reported in terms of telepsychology’s effectiveness to achieve outcomes from baseline research, rather than its efficacy over alternative treatment models (Hollon, 1996; Seligman, 1995).

The consequences of lack of randomisation are that the participant sample may be biased. For example, all participants with depression who were referred for intervention were accepted. In this study, the referral process was deemed to be a significant screen for suitability. In a typical, controlled study, participants with multiple diagnoses would be considered unsuitable for participation. Exclusion criteria based on comorbid diagnostic presentation was untenable in this research, because the study took advantage of a pre-existing community-based clinical population and prioritised relevance to typical clinical practice. Evidence demonstrates that approximately 70% of participants diagnosed with psychiatric illness, and who might fall under community care, are also diagnosed with a second psychiatric illness (e.g. Andrews, Henderson & Hall, 2001). In this sense, the participants in this study are representative of community mental health clients.

As a group, participants in this study sought assistance from their local clinic, and so were biased toward help-seeking. The consequence may be that
such participants are likely to rate higher in terms of motivation to change, and, therefore, may be unrepresentative of a random sample of adults with depression. Nevertheless, as a group, this study’s client participants are truly representative of the targeted population (i.e. community mental health clients), and are representative of the population who might ultimately receive this type of treatment. Demographically, there were eight participants overall, six women and two men, the age range was 27 to 52 years. Education levels ranged from 7 years to 14 years of schooling. These factors, and their possible relationship to outcomes, are further explored in Chapter 9.

Repeated measurements were made approximately every second session (sessions were usually scheduled weekly) from intake to termination, and again at follow-up, 12 weeks after termination (See Administration Timeline Table 6.1. below). The frequency of measurement was determined in accordance with:

(i) recommendations from the time-series design (Barker, Pistrang & Elliot, 1994; Kazdin, 2003; Kratochwill & Levin, 1992; Owens, Slade & Fielding, 1996) and treatment planning (Antony & Barlow, 2002);

(ii) the stability of measurement included in the selected outcome measures (e.g. BDI-II requests participants estimate symptom change over the last two weeks); and

(iii) on the basis of research design pragmatics (including participant motivation, burden and cost of instruments); and

(iv) on measures of clinical outcome, treatment adherence, satisfaction with treatment and therapeutic alliance.
### Table 6.1: Timeline of Assessments

<table>
<thead>
<tr>
<th>Measure</th>
<th>BDI-II</th>
<th>STAI</th>
<th>BSI</th>
<th>CORE-OM</th>
<th>Client satisfaction</th>
<th>Client ARM</th>
<th>Therapist ARM</th>
<th>Final Satisfaction</th>
<th>Total Instruments administered per session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>7</td>
</tr>
<tr>
<td>Session 1</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>4</td>
</tr>
<tr>
<td>Session 3</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>6</td>
</tr>
<tr>
<td>Session 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Session 7</td>
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<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>7</td>
</tr>
<tr>
<td>Session 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>Session 11</td>
<td>X</td>
<td>X</td>
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<td>6</td>
</tr>
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<td>Session 13 (if administered)</td>
<td>X*</td>
<td>X*</td>
<td></td>
<td>X*</td>
<td>X*</td>
<td>X*</td>
<td>X*</td>
<td>X*</td>
<td>6</td>
</tr>
<tr>
<td>Termination</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>7</td>
</tr>
<tr>
<td>Follow-up</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>8</td>
</tr>
</tbody>
</table>

**Total administrations of measures by type**

- 6*
- 6*
- 4
- 9*
- 9*
- 9*
- 9*
- 1

**Total Instruments administered per session**: 46

**BDI-II** = Beck Depression Inventory-II; **BAI** = Beck Anxiety Inventory; **BSI** = Brief Symptom Inventory; **CORE-OM** = Clinical Outcomes in Routine Evaluation – Outcome Measures; **Client Satisfaction** = Participant Satisfaction with treatment medium (as measured by Scale developed for the study); **Client ARM** = Therapeutic alliance - Participant version of Agnew Relationship Measure; **Therapist ARM** = Therapeutic alliance – Therapist version of Agnew Relationship Measure; **Final satisfaction** = client satisfaction of videoconferencing process overall (a scale developed for the study).
Also, after every second session, qualitative methodologies were used to evaluate ratings of satisfaction for participants and to compare ratings of therapeutic alliance between client and therapist. Results were triangulated with other relevant data and synthesised into individual result portfolios (Barnett, Pepiton, Bell, et al., 1999), to provide “thick description” of both process and outcome issues (Geertz, 1973). Data will be presented graphically in the portfolios, when relevant, in order to demonstrate change over time, or to compare the therapist's and client's ratings. Studies have demonstrated that the repeated measurement of participants during research activities does not affect clinical outcome, provided it does not detract from clinical contact time (Lambert, Harmon, Slade, Whipple & Hawkins, 2005; Lambert, Whipple, Smart, Vermeersch, Nielsen, 2001).

6.3. Participants

6.3.1. Location

Participants were recruited from pre-existing mental health community team case loads of the South West Area Health Service (SWAHS). The South West Area Health Service encompasses an area of 24,000 square kilometres, around 1% of the landmass of Western Australia, extending from Yarloop in the north, Augusta in the south and east to Walpole (see Figure 6.2).

The SWAHS is responsible for providing health care services to people in the South West Local Government areas of:

• The City of Bunbury.
• The Shires of Augusta-Margaret River, Boyup Brook, Bridgetown-Greenbushes, Busselton, Capel, Collie, Dardanup, Donnybrook-Balingup, Harvey, Manjimup and Nannup. Mental Health Clinics are located in Bunbury, Busselton, Bridgetown and Margaret River townships.

![Figure 6.2 SWAHS region (from Department of Health, Western Australia http://www.health.wa.gov.au/services/map.cfm?Unit_ID=924)](image)

The participant referrals to this project came from the Boyup Brook, Bridgetown-Greenbushes, Donnybrook-Balingup regions. All township shires support less than 10000 people, with a range of people per square kilometre being between 5 to less than 1 person (see regional demographic characteristics in Table 6.2). Clients attended the telepsychology suite
Located at the Bridgetown Office of the South West Mental Health service. The township of Bridgetown is located approximately 270 km south of Perth and about 95 km south of Bunbury, on the South Western Highway (see http://www.bridgetown.wa.gov.au/tourism).

Table 6.2  Demographic characteristics of participant referral catchment summarised from the Department of Health (SWAHS) Annual Report (2005) 2004-2005 (p.26)

<table>
<thead>
<tr>
<th>District</th>
<th>Local Government Area</th>
<th>Estimated population 2004</th>
<th>Projected Population 2011</th>
<th>Population Density (per sq km)</th>
</tr>
</thead>
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<tr>
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<td>Collie (S)</td>
<td>8,938</td>
<td>9,300</td>
<td>5.2</td>
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<tr>
<td></td>
<td>Donnybrook-Balingup (S)</td>
<td>4,723</td>
<td>4,799</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13,661</td>
<td>14,099</td>
<td>4.2</td>
</tr>
<tr>
<td>District Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackwood</td>
<td>Boyup Brook (S)</td>
<td>1,547</td>
<td>1,701</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Bridgetown-Greenbushes(S)</td>
<td>3,972</td>
<td>4,699</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Nannup (S)</td>
<td>1,213</td>
<td>1,398</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6,732</td>
<td>7,798</td>
<td>0.9</td>
</tr>
<tr>
<td>District Total</td>
<td></td>
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</tbody>
</table>

In this project, research participants were provided with clinical telepsychology interventions through the teleconferencing technology available at the Blackwood District (Bridgetown) clinic site (see Figure 6.2) (hereafter referred to as the “far site”). The clinician was situated at the Graylands Hospital telepsychiatry site in Perth (i.e. “near site”), a three-hour drive away. There was no cost to the participant associated with the provision of telepsychology sessions. The costs associated with transmission were incorporated into the annual budget for each clinic’s “generic running costs”, and had already been allocated. The funds available for transmission were unused until the intervention was implemented. Therapy followed a
manualised program in the first instance, and clients and the therapist used the manuals as shared resources to guide the intervention process.

Referrals were assessed and clients were then offered an initial 12-14 session program of individual intervention, in accordance with studies using manualised treatments for depression successfully using programs ranging from 12-20 sessions in duration (e.g. Butler & Beck, 1995; Elkin, Shae, Watkins, Imber, Sotsky, Collins, et al., 1989; Hollon, Thase & Markowitz, 2002). Further psychological input was to be determined on an “as needs basis”, following evaluation and consultation with the Community Mental Health Team (CMHT). This was deemed an important consideration as it reflected the normal service provision of a typical community service. A reducing regime of therapeutic contact and increasing focus on self-managed coping was incorporated into termination phases of the therapy.

6.3.2. Participant recruitment & procedure

When community mental health clients are identified by mental health case managers as needing collaborative care, they are usually offered a range of support options (within the confines of the WA Mental Health Act, 1996, [Government of WA (1996)]. Collaborative care can include psychiatry treatment and rehabilitation, drug and alcohol treatment, occupational therapy and rehabilitation, counselling and clinical psychology services, social work and housing and accommodation support. Referrals to the community mental health teams come from Regional-based GP’s, NGO’s, Hospital Emergency Departments, and self referrals.
In this study, mental health clients were assessed by case managers or psychiatrists as being suitable candidates for clinical psychology interventions. Clients were then offered the option of participating in the telepsychology research project, and their rights and contributions to the project fully explained. If they were not interested in participating in the research project, they were referred by their case manager to a private external provider, or they could decide not to accept any referral or treatment, or remain on a public waitlist.

At the time of the study’s implementation, no clinical psychology services were available within the community mental health teams. The telepsychology intervention represented an additional option for clients, but did not prevent them from accessing “service as usual” (being either nothing at all or access to private providers) at these sites. The case manager then advised the researcher of the clients’ expression of interest and consent to be contacted. An information pack containing an information letter (describing the procedures involved with the research, and contact details for further information), the first series of questionnaires, and written consent form were posted to participants in the mail. Participants sent completed envelopes to the clinic and then the clinic administrator posted these to the researcher.

Participants were given an envelope containing the research outcome questionnaires by the clinic administrator at the commencement of every one of their sessions. The questionnaires were to be completed in the office at the session’s conclusion. At times this envelope contained multiple symptom and satisfaction questionnaires and, at other times, it contained only the satisfaction questionnaire. Completed questionnaires would be sealed in their envelope
and passed to the clinic administrator who would then mail them by registered
mail to the researcher at Murdoch University. Envelopes containing follow-up
questionnaires were mailed to clients with a stamped, therapist-addressed
envelope, so that completed questionnaires could be mailed back at no charge
to the client. The therapist and client never met in any medium prior to the first
telepsychology session. This was a deliberate design consideration in order to:

i) maintain the integrity of telepsychology-based therapeutic alliance
results (i.e. therapeutic alliance ratings do not include a rating from a positive
face-to-face meeting); and

ii) to remove the potential confound of a pre-established face-to-face
relationship that offers a recent point of comparison and might contaminate the
development of telepresence.

Due to the vagaries of real world, distance-managed research, not every
participant was assessed according to the ideal schedule outlined above.
Reasons for deviating from the assessment schedule included:

(i) participants leaving the intervention program earlier than planned,

(ii) missed assessments due to clients failing to pick them up at the end
of sessions,

(iii) or the administrator changing or forgetting to pass on assessment
tools.

Because participants commenced intervention at different times, the
administration of assessments was individually tailored. However, because the
far site (Bridgetown) administered the tests, distribution had to rely on the
administrator at the clinic remembering to provide the correct envelope of tests
and to collect them when completed. If participants left the clinic before
collecting their assessments, they were not always followed up the following week, despite frequent email and telephone contact between the researcher and clinic staff.

6.4. Measures

In the 12-month intervention trial, the telepsychology program was attended by eight participants with a mean age of 40.3 years. Each participant was assessed on multiple occasions using several assessment tools. Participants were assessed using five standardised quantitative assessment tools, as follows:

1. BDI-II - Beck Depression Inventory II (Beck, Steer & Brown, 1996);
2. STAI - State-Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg & Jacobs, 1983)
3. BSI - Brief Symptom Inventory (Derogatis & Spencer, 1982)
4. ARM - Agnew Relationship Measure -(Agnew-Davies et al., 1998)
5. CORE-OM – Clinical Outcomes in Routine Evaluation – Outcome Measure (Barkham, Gilbert, Connell, Marshall, & Twigg, 2005;
   Barkham, Margison, Leach, Lucock, Mellor-Clark, Evans et al., 2001;
   Evans, Connell, Barkham, Margison, McGrath, Mellor-Clark et al., 2002).

Two qualitative assessments tools measuring satisfaction with their current session, plus an assessment of videoconferencing processes overall were developed by the researcher, and were also included in repeated measurement. Details of the questionnaires and assessment procedures are
provided in Section 6.5 below, and included (where permitted) in Appendices E, F & G.

Thus, despite having so few participants in the intervention study, conclusions were drawn from a minimum of 16 separate data points, even when participants were seen for three contact sessions. More typically, however, over the intervention’s 12-month period, and average 11.2 sessions per client, 53 separate points of data were collected for each client. The 53 data points included the perspective of both the participants and therapist. Results of the intervention component of the thesis are presented as individual portfolios of information (Chapters 7 and 8, with additional portfolio examples in Appendices H and I). In these portfolios disparate or small pieces of data about the same participant are combined into a richer whole, before conceptual re-sorting of data and re-analysis (Barnett et al., 1999). Each analysis yields important results. The former alerts to the clinical progress of individuals, the latter to the broader success of particular tele-psychology program components. Thus, the systematic case study approach illuminates individual change, but also sheds light on the important interplay between therapy change processes and the telepsychology technology (Davey, 1991; Greenburg & Newman, 1996; Tyson, 1992).

6.5. Intervention

The first telepsychology session conducted with each new participant consisted of an initial interview that clarified the client’s demographics, history, medications, presenting problems, social factors and goals for therapy. The first session was essentially a psychiatric triage, which was conducted in the
same way with every research participant. After the triage component of the first session, a brief rundown of the bio-psychosocial model of clinical intervention and the manual, plus preliminary psycho-education regarding the theoretical underpinnings of CBT, was provided by the therapist to the client. Time for questions was also provided and appointments scheduled for “same-time next week”. Instructions regarding cancellation procedures and questionnaire completion were also provided. The sessions which followed used the manual as the guideline format for intervention, however work with all clients deviated in different ways from the manual at various times. The deviations will be described in the individual case studies in Chapters 7 and 8 (and Appendices H and I).

At the outset of the study, the manualised intervention, which formed the foundation of the CBT intervention, was planned for 12 sessions. However, as per the reflective, iterative, AR/DIR approach, the length of intervention was planned to be responsive to the client’s needs and therapy goals, not the completion of a manual.

Verbal feedback regarding the participant’s therapeutic progress was incorporated into their intervention session during homework reviews, and as therapist observations. All participants were also shown a comparison of their pre- and post intervention scores at the termination of therapy, as a demonstration of changes to specific symptoms and processes measured by these instruments. Participants could also request a written summary report or telephone interview of their outcomes at follow-up. Clients appeared satisfied with the verbal feedback, as no clients made this request.
Participants were monitored for approximately eight weeks after discharge and treatment would have been recommenced if clinically significant changes in symptom presentation were reported through follow-up assessment. Fortunately, the majority of participants (5/8) in this study responded positively to telepsychology intervention, and were seen for at least eight (\( \bar{x} = 11.2 \)) sessions. Of the other participants, one was referred elsewhere, another two dropped out after four sessions, due to either moving from the region or lack of childcare support options. After completing the research project, and up to the six-month follow-up period, none of the participants required a recommencement of psychotherapy.

6.6. Outcome variables

In this mixed methods intervention study, symptom reduction was assessed by self-reports, clinical interview and therapist observations, in addition to the standardised quantitative and qualitative measures listed below:

**Beck Depression Inventory-II (BDI-II):** (Beck, Steer & Brown, 1996)

The BDI-II is a 21-item, self-report scale designed to assess the severity of depression, as reflected by the presence of positive and negative symptoms. Respondents rate the severity of symptoms from 0-3. Items assess sense of failure, guilt feelings, irritability, poor sleep and loss of appetite, to name a few. It is among the most widely used instruments to measure depression and its items are congruent with DSM-IV’s criteria for major depressive disorder (Groth-Marnat, 2003). Scores on the BDI-II range from 0-63, however clinically depressed respondents tend to score in the 14-28 range (Beck et al., 1996). The BDI has high internal consistency (\( \alpha = 0.86 - 0.91 \)) (Groth-Marnat, 2003).
The BDI-II asked respondents to rate “how they have been feeling over the last 2 weeks including today”, and is therefore able to be administered as frequently as every two weeks.

**State-Trait Anxiety Inventory (STAI-S/STAI-T):** (Spielberger et al., 1983). The STAI consists of two, 20-item self report scales for adults and is an inventory which differentiates between the temporary condition of state anxiety and the longstanding quality of trait anxiety. It is the most widely used assessment tool for anxiety (Groth-Marnat, 2003) and can also help distinguish between depression and anxiety. The range of scores is 20-80, with higher scores indicating greater anxiety. Some of the questions relate to the absence of anxiety, and are reverse-scored. Scores on the STAI have a direct interpretation: high scores on their respective scales mean more trait or state anxiety and low scores mean less. Both percentile ranks and standard (T) scores are available for male and female working adults in three age groups (19-39, 40-49, 50-69), male and female high school and college students, male military recruits, male neuropsychiatric patients, male medical patients, and male prison inmates. The STAI asks respondents to rate how they are feeling at the time of the administration, whereas the trait scale instructions ask respondents to rate how they generally feel. As such, the STAI may be administered reliably at the beginning, middle and end of treatments to monitor state changes, but trait scores are, arguably, assumed to remain relatively stable over this time (Groth-Marnat, 2003; Spielberger et al., 1983).
**Brief Symptom Inventory (BSI):** The BSI is the shortened version of the SCL-R-90. The BSI a 53-item inventory that evaluates nine primary dimensions of emotional-behavioural functioning, with its subscales purported to measure the following areas: Somatization (SOM), Obsessive-Compulsive (OC), Interpersonal Sensitivity (IS), Depression (DEP), Anxiety (ANX), Hostility (HOS), Phobic Anxiety (PHO), Paranoid Ideation (PAR), and Psychoticism (PSY), as well as three indices of global distress, including the General Severity Index (GSI), Positive Symptom Total (PST), and Positive Symptom Distress Index (PSDI). Scores of ≥63 indicate caseness. Scores are interpreted by comparison to age-appropriate norms. Normative data are available for both clinical and non-clinical samples of adolescents (over 13 years) and adults (Derogatis & Spencer, 1982). Test-retest reliability for the nine symptom dimensions ranges from .68 (Somatization) to .91 (Phobic Anxiety), and for the three Global Indices from .87 (PSDI) to .90 (GSI).

Primary Symptom Dimensions that are identified by the Brief Symptom Inventory are as follows;

- **Somatization (SOM):** psychological distress arising from the perception of bodily dysfunction (e.g., cardiovascular, gastrointestinal, respiratory, and discomfort in gross musculature).

- **Obsessive-Compulsive (O-C):** Thoughts and actions that are experienced as unremitting and irresistible by the patient but are unwanted (e.g., checking and double checking actions, difficulty making decision, and trouble concentrating).
• Interpersonal Sensitivity (I-S): Feelings of personal inadequacy and inferiority (e.g., self-deprecation, uneasiness, and discomfort during interpersonal interactions).

• Depression (DEP): Signs and symptoms of clinical depressive syndromes (e.g., dysphoric affect and mood, withdrawal of interest in life activities, and loss of energy).

• Anxiety (ANX): Symptoms associated with clinical manifestations of anxiety (e.g., restlessness, nervousness, and tension).

• Hostility (HOS): Hostile behavior including thoughts, feelings, and actions (e.g., annoyance, irritability, urges to break things, and frequent arguments).

• Phobic Anxiety (PHOB): Symptoms consistent with phobic anxiety states or agoraphobia (e.g., phobic fears of travel, open spaces, crowds, and public places).

• Paranoid Ideation (PAR): Paranoid behaviour that is syndromal in nature (e.g., thoughts that are hostile, suspicious, and paranoid and central).

• Psychoticism (PSY): Symptoms of psychoticism in mild forms (e.g., alien life style, social isolation) to extreme forms (e.g., floridly psychotic states).

The Global Indices of Distress measure the level or depth of distress currently being experienced by the individual. They include;

• The General Severity Index (GSI): combines measures on the number of symptoms and the intensity of perceived distress. It is considered the single best indicator of current distress level.
• The Positive Symptom Distress Index (PSDI): is a pure intensity measure that does not include the number of symptoms. It is a measure of response style that indicates if the patient is “faking good” or “faking bad.”

• The Positive Symptom Total (PST): is a count of the symptoms that the patient reports.

Interpretation of the BSI occurs at three levels:

Firstly, global scores are determined to indicate overall distress. Secondly, the primary symptom dimensions are identified. These can highlight specific areas of psychopathology. Thirdly, practitioners can focus on discrete symptoms by looking at the individual item responses.

Clinical Outcomes in Routine Evaluation - Outcome Measure (CORE-OM):

The CORE–OM (Barkham, Gilbert, Connell, Marshall, & Twigg, 2005; Barkham, Margison, Leach, Lucock, Mellor-Clark, Evans et al., 2001; Evans, Connell, Barkham, Margison, McGrath, Mellor-Clark et al., 2002) is a 34-item, self-report measure designed to assess level of psychological distress and outcome of psychological therapies. The 34 items comprise four domains (with each domain comprising specific clusters): specific problems (depression (4 items); anxiety (4 items); physical problems (2 items); trauma (2 items); 12 items in total), functioning (general day-to-day functioning (4 items), close relationships (4 items), social relationships (4 items); 12 items in total); participative well-being (feelings about self and optimism about the future; 4
items in total); and risk (risk to self (4 items); risk to others (2 items) for 6 items in total).

Each domain contains equal numbers of high (i.e. I feel panic/terror) and low intensity/severity items (i.e. I feel anxious/nervous) to offset possible floor and ceiling effects. All items are scored on a five-point scale from 0 to 4 (anchored ‘all or most of the time’, ‘not at all’, ‘only occasionally’, ‘often’ and ‘sometimes’) and relate to the previous week. Clinical scores are calculated as the mean of all completed items on the form, which are then multiplied by 10, so that clinically meaningful differences are expressed in whole numbers. Thus, scores may range from 0 to 4. Forms with three or fewer items missing are considered reliable, with scores based on completed items. The internal consistency of the CORE–OM has been reported as $\alpha = 0.94$ and the 1-week test–retest reliability as Spearman’s $p = 0.90$ (Evans et al., 2002).

**ARM – Agnew Relationship Measure** (Agnew-Davies et al., 1998). Therapeutic alliance or engagement, as measured by the Agnew Relationship Measure, examines five components of therapeutic rapport:

1) bond (acceptance support and understanding),
2) partnership (working together collaboratively on tasks in therapy),
3) confidence (the client believes that the therapist is competent and is optimistic about progress),
4) openness (the client feels comfortable about discussing personal issues without fear of embarrassment), and
5) client initiative (the client takes the lead in directing therapy).
Items and scales are parallel across client and therapist forms, and the measure assesses broader aspects of the therapeutic relationship than do most previous instruments. Internal consistencies for all subscales, except client initiative, are satisfactory (ranging between $\alpha = 0.77$ to $0.87$). For the client initiative subscale, $\alpha$ ratings were 0.55 (Agnew-Davies et al. 1998). The client initiative subscale fundamentally assesses a client’s degree of insight into their own behaviour and motivation, and this can be highly variable. Such low ratings of internal consistency suggest that self-rated (client) initiative is therefore one of the less meaningful subscales on this measurement tool.

**Participant Satisfaction** with treatment medium, as measured by a scale specifically developed for this study, is comprised of items that assess participant’s evaluation of the sound quality, picture quality and the extent to which the technology may have been distracting. It also asks clients to state their preference for telepsychology, face-to-face intervention or telephone communication. This measure is included as Appendix F.

**Final Videoconferencing Satisfaction**, measured by a scale specifically developed for this study, focuses on the image of telepsychology. It includes items where respondents indicate their preference for different image sizes and are asked to identify qualitative descriptors for each of the images. This measure is included as Appendix G.

**Additional records**: To monitor the participant’s responses to intervention the following information was recorded: dropout rates, time course
of dropouts, and the number of session appointments made, compared to the number attended, were recorded. Written information generated within or between sessions was faxed between participant and therapist from each of the clinical sites, prior to the session in which it was to be used. Changes in the client’s circumstances, or mental health needs, were indicated in responses to questionnaire items and in-session self-report or behaviour. In this instance, clients were to be referred back to case managers for follow-up and potential re-referral to telepsychology for “top-up” sessions.

6.7 Therapeutic alliance

Decades of research have firmly established the pan-theoretical and pan-diagnostic importance of therapeutic alliance to positive clinical outcomes in psychotherapy (Castonguay & Beutler, 2005; Constantino, Castonguay & Schut, 2002). Given that one of the primary criticisms of telepsychology has been the claim that the intrusion of technology and the lack of physical presence in the therapy session impairs the quality of outcomes (Evans 2003; Miller 2003a; Simpson, Bell, Knox & Britton, 2005), the issue of therapeutic alliance creation and maintenance is central to any study of telepsychology. In the present intervention study, the issue of therapeutic alliance was given the ethical and conceptual primacy it deserved. Subsequently, a subset of data that explicitly addressed the issue of alliance was also examined.

A consistent definition of therapeutic alliance is yet to be widely accepted (Andrusyna, Tang, DeRubeis & Luborsky, 2001; Tichenor & Hill, 1998), however, its centrality to outcome has been convincingly demonstrated (Horvath & Symonds, 1991; Lambert & Barley 2002; Lambert & Ogles, 2003;
Sometime described in the category of “common” (Bordin, 1976) or “non specific factors” (e.g. Lambert & Ogles, 2003), this description does not diminish its ethical relevance and explanatory salience. Therapeutic alliance may be the primary vehicle for the active ingredients of an intervention (Simpson, Bell, Knox & Mitchell, 2005). It is a dynamic process suggested to progress through various stages or activities, and it varies over time, according to the therapeutic demands and goals (Bachelor & Salame, 2000; Bordin, 1976; Horvath & Marx, 1991). While research has demonstrated that, when graphed, the shape of the strength of the alliance is not cyclical nor similar in every case (e.g. Bordin, 1976; Golden & Robbins, 1990; Horvath & Marx, 1991; Kivlighan & Shaughnessy, 2000), studies have consistently shown that therapeutic alliance does change over the time-course of therapy (Bachelor & Salame, 2000).

Research has demonstrated that the process of therapy may be influenced by non-specific factors, techniques, expectations and client or therapist characteristics, and these in turn may be the core components of therapeutic alliance (Ackerman & Hilsenroth, 2003; Bee et al., 2008; Lambert & Barley, 2002; Stamm, 1998). It is yet to be fully explicated whether these non-specific factors are as potent in telepsychology as they may be in face-to-face encounters. In this thesis, my ratings of satisfaction and therapeutic alliance, in addition to client ratings of satisfaction and alliance, will be monitored in the form of field notes, questionnaires and observations incorporated into the case studies, and these measures will be tracked to determine if changes occur over time. Additionally, relevant technical and operational aspects of the process of
conducting telepsychology will also be recorded in the case study portfolios, to further untangle the influence of the technology on the therapy encounter.

The Action Research design of this study emphasises particular recommendations for the ethical capture and evaluation of therapeutic alliance, with the supposition that good therapeutic alliance results in good clinical outcomes. For example, Constantino et al. (2002) report that certain patient factors correlate positively (e.g., psychological mindedness, quality of object relations) or negatively (e.g., interpersonal problems, perfectionism) with the quality of the therapeutic alliance, and therefore the quality of outcomes. Thus, they and others recommend that therapists should assess for alliance-related factors, as a predictive tool to identify those clients for whom establishing a good therapeutic alliance might prove difficult and who, therefore, might be at risk for poorer clinical outcomes (see also Simpson, Bell, Knox & Mitchell, 2005).

Researchers note that certain therapist factors are also positively (e.g., warmth, flexibility) or negatively (e.g., rigidity, self-directed hostility) associated with alliance quality. They argue that it is, therefore, critical for therapists to recognise their own contribution to the development of a therapeutic relationship and reflect on themselves and their practice (Ackerman & Hilsenroth, 2003; Constantino et al., 2002). Such techniques may include moment-to-moment self-reflection, self-observation, and process-observation; situations that are ideally suited to an Action Research framework. Similarly, a failure to respond to the client’s needs through strict adherence to a particular intervention protocol, in the face of a strain to the therapeutic alliance, is likely to interfere with therapeutic alliance, and, ultimately, clinical outcomes.
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(Castonguay, Goldfried, Wiser, Raue & Hayes, 1996; Piper, Azim, Joyce, McCallum, 1991). Again, the Action Research approach overcomes such problems by offering an iterative and reflective framework in which the therapist may attend to any emergent relationship problems, while also propelling the therapeutic outcomes. In face-to-face therapy the use of meta-communication strategies and self-involving process comments may be useful (e.g., Castonguay, Constantino & Holforth, 2006; Safran, Muran, Samstag & Stevens, 2002). However, the application of such subtle processes may be less successful in a medium which may not be as visually or auditorily fine-tuned, such as telepsychology. These elements will be explored in the individual portfolios of the intervention study (Chapters 7 and 8, and Appendices H & I), and their contribution to specific process features and outcomes will be reported.

6.8. Conclusions

Each of the two chapters to follow represents a single case in the intervention study as a whole. The cases have been organised in portfolios, a manner reminiscent of thematic analysis, but which explore or expand some of the issues which were described in Chapter 5, for example, the features of the client, or therapy/telepsychology-specific features. Each of the case portfolios aims to answer the question of how telepsychology is done, and will endeavour to focus, triangulate and concentrate the multiple observations and conclusions drawn from all of the studies so far. The cases were selected to present (i) a very successful case (chapter 7), (ii) a not-so successful case (Chapter 8) and (iii) a case which permits cross-case analysis because it shares clinical
features with another case (Chapter 9). The three cases are also representative of the kinds of issues and in-session presentations that were common across all clients of this particular rural service.

The Discussion and Conclusion Chapters (Chapters 9 and 10) which follow the portfolios, contain summaries of the findings of the thesis overall, so that the scientist/practitioner may successfully implement telepsychology into their own practice and evaluate and assess its effectiveness in a manner that permits the translation of practice into good quality research.
CHAPTER SEVEN

STUDY FOUR:
PORTFOLIO #1: JUNE - WHEN TELEPSYCHOLOGY WORKS

7.1. Relevant History

“June” (a pseudonym) was a woman in her mid-fifties with a pervasive, long term, depressive illness characterised by low mood, sadness, amotivation, anergia, significant weight gain, indecision and memory difficulties. She reported that her depression commenced approximately nine years earlier, following an unfair dismissal from her workplace.

June felt lost and betrayed by her employer, and subsequently had her first episode of depression. At a similar time, she was diagnosed with degenerative arthritis. Although she found new employment after a short break, the work was unsatisfying, and below her previous responsibility level. She soon resigned, and her subsequent depression continued, maintained by her perceived loss of status and control, feeling “replaceable”, having compromised self esteem and grief associated with ageing.

Prior to her first episode of depression, she described herself as an active person, with several different groups of friends associated with her different hobbies. These friends were not “integrated” with each other and so, as her contact with each hobby/activity decreased, the circle of friends associated with the activity also diminished. Prior to her job loss, she rode horses, did ballroom dancing, and was also studying at TAFE. She contrasts this “athletic and fulfilling” lifestyle with her current one, and wishes she could return to “how she was 10 years ago”.

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June appeared to have been an emotionally resilient person who had attempted to reduce the impact of both disabling conditions by making significant changes in her lifestyle. Though her arthritis was degenerative, and even after the triggering depressive episode, June relocated towns, developed a small, new circle of friends, joined the volunteer fire brigade (over time having to reduce her role from physical to administrative), as well as volunteered for St John Ambulance (as per reduced activity above). Unfortunately, the last 12 months had seen her cease all activities due to other health issues, including gall stones, bronchitis requiring hospital admission, and blood clots in her lungs.

June reported that her arthritis prohibited significant activity (she could not bend her knees). At the time the intervention began, she was only able to bend from the waist, but struggled to do so, due to excessive weight gain. She attributed her weight gain to a combination of coping with depression by comfort eating (i.e. large portions, high caloric foods) and from the avoidance of exercise due to the pain associated with movement. She also felt that she was depressed as a consequence of these issues.

June desired to regain control over her weight and acknowledged that her depressive thinking (especially hopelessness and helplessness) contributed to her current problems. She received fortnightly, government-subsidised home help to assist with household chores, but otherwise, rarely attended to home duties, stating she felt overwhelmed by them. She predominantly spent her time at home playing computer games, reading or visiting her partner (who has his own residence). Otherwise, she described herself as “house bound”. She was in receipt of a Disability Support Pension
which was initially granted to her due to her diagnosis of depression, and then her arthritis.

7.2. **In-session presentation**

June presented as a well-groomed, heavy set woman, with a gentle Scottish accent. Throughout the sessions she was occasionally breathless, but often joked and laughed about her situation in a self-effacing manner. Despite her hearty laughter, June sometimes gave the impression of being close to tears when describing a comical or ironic situation, and she often wrang her hands and rubbed her eyes. At other times, her mood was more obviously dysthymic. She maintained good eye contact appropriate to the therapy situation and expressed thoughtful responses to my questions. She presented with some evidence of therapiised vocabulary and had read a number of self-help books on depression. Her mental state was otherwise normal, although she was occasionally unsure in her decision making, and was occasionally forgetful.

At the commencement of therapy she described her overall SUDS (Participative Units of Distress) mood ratings during a typical day as being 3/10 (where 0 = worst, 10 = best). She stated that her mood did fluctuate from very bad, to OK, but rarely to the level that she perceived as historically “good” for her. During the risk assessment, June denied any current or past thoughts to harm herself or others. June described her personal beliefs, her fear of dying, and her inaccessibility to a means to harm herself, as protective factors against self-harm or suicide.

June’s goals for the intervention were to return to a “state of mind” and physical capacity reminiscent of her capacity 10 years ago. In addition, she
wished to break the “vicious cycle” of low mood, comfort eating, weight gain, and inactivity. Her strengths were that she was motivated to change, she was socialised into therapy, was medication compliant, had limited but adequate social support, and had adequate foundation knowledge of “good health” attitudes and behaviours.

7.3. Intervention

This intervention, based on the manualised CBT approach to depression (Nathan et al., 2001), had at its core, several overlapping strategies which would assist June, and all participants, in several ways. Firstly, supportive counselling was provided to reduce the feelings of hopelessness and the emotional pain that accompanied her depression. Secondly, cognitive therapy modified the pessimistic ideas, unrealistic expectations, and critical self-evaluations that created and maintained the depression that June, and each of the participants experienced. The aim of this aspect of cognitive therapy is to assist the depressed client to recognize which life problems are critical, and which are minor. Pain and grief were prominent issues that June needed to address simultaneously with her depression. Cognitive therapy also helped June, and the other participants, to develop positive life goals, and a more positive assessment of their strengths and weaknesses, personality, behaviour and lifestyle. Thirdly, problem solving therapy targeted change in the areas of the person’s life that were distressing and which contributed to the depression. This element of the approach often incorporated behavioural therapy to enhance activation and develop coping skills, or interpersonal therapy, to assist in solving relationship problems (Franklin, 2003).
June had had no prior experience with videoconferencing technology but was a regular internet user, and reasonably technologically savvy. She was one of the few clients seen in this project who, once shown how to use the remote control for the videoconferencing unit, successfully modified camera angle, zoom, and volume control to enhance her experience of the telepsychology session. She achieved this after being given a quick tutorial by the on-site clinic secretary. During the first session, June encouraged me to size the image and volume to resemble a face-to-face interaction. On subsequent sessions, she successfully used the remote control to alter camera zoom and volume as she preferred, seeking feedback from me along the way. In the early therapy sessions, June rarely talked at the same time as I did. Ironically, as we became more familiar with each other, we did tend to talk at the same time, and cancelled each other out occasionally. This interaction pattern began occurring from about Session 6 onwards.

June’s clinical interview presentation suggested she was a woman with reasonable coping skills and a jovial manner. At many sessions, however, it appeared that her joking, self-deprecating manner masked the true extent of her physical pain and her feelings of hopelessness and helplessness. She presented at a number of sessions in deep despair, was very tearful and hopeless about the future. These clinical impressions were supported by her scores on the standardized assessments.

Prior to the first session, June completed the Brief Symptom Inventory (BSI), Beck Depression Inventory (BDI-II) and the State-Trait Anxiety Inventory (STAI). She was then assessed on three other occasions and at follow-up. At the first assessment, June scored in the moderate range for depression (20-28
is moderate\(^7\) (see Figure 7.1), and at the highest percentile range for state and trait anxiety (100\%) (see Figure 7.2).

![June - Beck Depression Inventory - II (BDI-II) Scores from Session 1 to follow-up](image)

**Figure 7.1**  *June’s Beck Depression Inventory – II (BDI-II) Scores from Session 1 to follow-up*

A number of general observations can be made from the data in Figures 7.1 and 7.2. Firstly, despite the intended assessment schedule and having the questionnaires packaged and available at the far site, June was not assessed as frequently as planned. She did not return the standardized measures included in the Session 3 package, but did complete the therapeutic alliance measures (ARM). She was administered the Session 7 package at Session 8, and the Session 13 package at Session 12. In total, she was administered the standardized assessments at baseline, Session 9, Session 12, Session 15 and follow-up, in addition to the satisfaction assessments at Sessions 3 and 5 (see Table 6.1 Timeline of Assessments (Chapter 6) for description of included

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\(^7\) In the BDI-II, a total score of 0-13 is considered minimal range, 14-19 is mild, 20-28 is moderate, and 29-63 is severe.
Secondly, June’s SUD’s ratings at the first session suggested a level of low mood that possibly ought to have resulted in a higher baseline score on the BDI-II than 23. One possible explanation for this may be evident from June’s elevated somatisation score on the BSI. June’s focus on somatic concerns and negative participative rating of her distress may reflect her chronic pain condition. For June, the pain (i.e. the *hurt*) she experiences may be cognitively indistinct from the distressed emotion about the pain (i.e. the *harm* she perceives). Thus, her “depression” is heavily weighted by her perception of pain, and less so by cardinal DSM-IV diagnostic criteria, and hence, her lower score on the BDI-II (a DSM-IV criteria based measurement). Conversely, given that depression increases the perception of pain (e.g. Berna, Leknes, Holmes, Edwards, Goodwin & Tracey, 2010), the emotional symptoms of depression may have been masked by her somatic concerns. Thus, June scored lower on
the BDI-II, which does not capture pain-based somatic concerns, than might be suggested by her SUD’s rating. Her BSI scores (see Figure 7.3) indicated that she did not reach caseness in any psychological domain except somatisation. This finding may be interpreted as June being only mildly depressed.

Thirdly, June’s scores on the BDI-II and the STAI reduced fairly quickly to lower scores. While this is unlikely to have been due to the intervention alone, there is research evidence that supports rapid symptom relief early in the psychotherapy process, across treatment modalities and patient populations (e.g. Hardy, Cahill, Stiles, Ispan, Macaskill et al., 2005; Stiles, Leach, Barkham, Lucok, Iveson, Shapiro et al., 2003; Tang & DeRubeis, 1999). The missing BDI-II, BSI and STAI data at Session 3 may have displayed a less steep rate of improvement, but, as June did not complete this assessment block, this is speculative.

June’s baseline scores suggested she possessed adequate coping skills and minimal symptomology in all domains except somatisation (65) and phobic anxiety (48) (See Figure 7.3). Given that her initial presentation of depression was influenced significantly by ongoing pain and the mobility reduction which was associated with her chronic arthritis, this result was not unexpected. Her next highest score was obtained at follow-up on the psychoticism subscale (51). These two subscales appear to be related to June’s relatively socially-isolated lifestyle. Other than her partner as company (and later, as sessions progressed, that of a young woman who moved in with her), June spent most of her time alone on a small rural property in the lower south-west. June was not
clinically agoraphobic, but often stated that she preferred to stay at home, and attempted to limit her trips into the nearest town (located 40 kms from her home), if possible. Interestingly, she became unable to avoid repeated travel to

![June - Brief Symptom Inventory from baseline to follow-up](image)

Figure 7.3  *June’s Brief Symptom Inventory (BSI) scores from the four measurement occasions from Baseline to follow-up.*

and from town in later sessions, when she agreed to assist her young roommate to participate in a methadone treatment programme.

What is apparent from the BSI graph is that her scores on all domains reduced over three measurement occurrences and remained below caseness (i.e. a score of ≥63) at follow-up. The change from the first measurement to final measurement for somatisation was greater than two standard deviations (SDs) (i.e. 1 SD=10 points) in somatisation (T1 =42; T4 = 28) and greater than one SD
for depression \(^8\) (T1=42, T4=28), and phobic avoidance (T1=48, T4=38).

Jacobson and Truax (1991) consider a symptom change outcome to be clinically significant when a drop of two standard deviations is achieved. A reduction of seven points on the BDI was determined to represent a clinically significant sudden gain by Tang and DeRubeis (1999). Between Session 1 and Session 5, June’s score on the BDI-II dropped from 23 to 13, a change of 10 points, and a clinically significant improvement (as per Tang & DeRubeis, 1999).

Over the course of June’s therapy, sessions stretched from weekly to fortnightly. At the conclusion of therapy, her scores on the BDI-II had reduced from 23 (moderate depression) to 8 (minimal). At follow-up 12 weeks later, her score had reduced to 2 (asymptomatic) (See Figure 7.4).

**Figure 7.4**  *June’s total scores of STAI and BDI-II from Baseline to follow-up*

On the STAI, her scores on state anxiety had reduced from 100% to 68% to 24% by Session 12, but raised to 59% at Session 15. At follow-up 12

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\(^8\) T\(_1\) = Time 1 (Session 1); T\(_2\) = Time 2 (Session 9); T\(_3\) = Time 3 (Session 15); T\(_4\) = Time 4 (follow-up)
weeks later, June’s anxiety had reduced to 8%. Her trait anxiety scores also followed a similar trajectory, beginning at 97% at baseline, reducing to 39% at Session 12, lifting to 83% at Session 15 and dropping to mild levels, 14%, at follow-up. The possible contributing factors to these score changes will be reviewed in detail below.

With regard to June’s scores on the CORE-OM at the first session, June scored at a level exceeding clinical cut-off for all subscales except “Risk to self” (see Table 7.1). At the conclusion of therapy and at follow-up, all scores fell in the healthy range (well below clinical cut off) (Barkham, Margison, Leach, Lucock, Mellor-Clark et al., 2001; Evans, Connell, Barkham, Margison, McGrath & Audin, 2002; Core Partnership, 2007).

**Table 7.1 Table of June’s CORE-OM subscale results***

<table>
<thead>
<tr>
<th>Subscale (clinical cut-off - females)</th>
<th>Wellbeing (1.77)</th>
<th>Problems (1.62)</th>
<th>Functioning (1.30)</th>
<th>Risk to Self/others (0.30)</th>
<th>Total (1.29)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline 2.0 (clin)</td>
<td>2.0 (clin)</td>
<td>1.6 (clin)</td>
<td>0 (sub-clin)</td>
<td>1.62 (clin)</td>
<td></td>
</tr>
<tr>
<td>Session 5 1.0 (sub-clin)</td>
<td>1.66 (clin)</td>
<td>1.0 (sub-clin)</td>
<td>0 (sub-clin)</td>
<td>1.05 (sub-clin)</td>
<td></td>
</tr>
<tr>
<td>Session 12 1.25 (sub-clin)</td>
<td>1.08 (sub-clin)</td>
<td>1.0 (sub-clin)</td>
<td>0.66 (clin)</td>
<td>0 (sub-clin)</td>
<td></td>
</tr>
<tr>
<td>Session 15 0 (sub-clin)</td>
<td>1.71 (clin)</td>
<td>0.5 (sub-clin)</td>
<td>0 (sub-clin)</td>
<td>0.4 (sub-clin)</td>
<td></td>
</tr>
<tr>
<td>Follow-up 0 (sub-clin)</td>
<td>0.5 (sub-clin)</td>
<td>0.42 (sub-clin)</td>
<td>0 (sub-clin)</td>
<td>0.32 (sub-clin)</td>
<td></td>
</tr>
</tbody>
</table>

*Table includes clinical vs subclinical cut-offs for females (Evans et al., 2002).

These results suggest that June benefitted from the intervention, and that on intake, her assessment of her problems, in addition to her negative
ratings of wellbeing and daily functioning, were significant enough to be considered clinically relevant levels of impairment.

7.4. **Relevant Session Events**

7.4.1. **Sessions 1-2**

In the first session, I interviewed June to obtain her history, her problem list, her strengths and her goals for intervention. At the end of the first session, I enquired about her expectations for therapy. These expectations continued to be explored in Session 2, when June expressed ambivalence about participating in psychotherapy.

June’s presentation in the second session was lower in energy, tearful and more obviously dysthmic. She attributed this to difficulties initiating sleep due to free-floating anxiety. During this session, I discussed the need for June to decide whether she wished to proceed with therapy. I asked her to consider the benefits of doing nothing versus doing something; thereby establishing the “detached observer” framework (e.g. Freeman, Freeman & Geraty, 2006) which dovetailed into the cognitive approach of CBT generally.

Despite her initial reluctance, June came back for a second session. I congratulated her decision and affirmed and validated her return, as per a brief therapy framework (e.g. Bor, Gill, Miller & Parrott, 2004), while also using a motivational interviewing approach to her commitment to change (Miller & Rollnick, 2002).

Some further examples of how the therapy techniques described above were implemented during the session are as follows: June reiterated that a lack of motivation and a lack of caring about herself were her main problems at
present. Because the picture clarity of the screen was good on this transmission day, I was able to see her beginning to get tearful, and pointed out that, when she described herself as not caring, she began to cry. Thus, her negative self-statement was reframed in terms of the incongruence of visible distress associated with expressing a lack of self care (Miller & Rollnick, 2002). June agreed with this reframe, and made the statement that she did care, and wanted to change, and that she was willing to use the therapy sessions as a means to commence this process.

Over the first two sessions of exploration of June’s depression history and her perception of her current issues, a number of themes emerged. Although these themes were quite confrontational early in the therapy process, I felt that June would benefit from a discussion of these themes. Moreover, the telepsychology environment felt intimate enough to permit an emotional discussion. I highlighted the recurrent patterns in June’s behaviour and attitudinal themes of avoidance of risk (i.e. her relationship has minimal contact to avoid conflict; her daytime activities = minimal challenges to stimulate her mind; and her physical activities = minimal risk of inducing pain by avoidance). The overarching theme that was identified by these observations was one of avoidance of activities, people, and challenges, due to her fear of pain. June considered this a significant though distressing insight into her desired life compared to her present life. She valued her fearless independent self and wanted to aim for a return to those feelings of self-worth again. Although upsetting, this realisation further enhanced her commitment to change. Additionally, she was more willing to review her goals to make them more behaviourally specific and achievable.
June agreed that a return to her physical and emotional state of 10 years ago was an ambitious goal which might exceed the confines of the research project. I worked with her to look at ways to break down the achievement of this larger goal by focussing on her secondary goal (i.e. to break the “vicious cycle” of low mood, comfort eating, weight gain, and inactivity).

This goal redesign suggested, as per the manualised approach described above, that therapy could begin with a focus on behavioural activation, while providing an opportunity to observe and identify the unhelpful negative cognitions which created and maintained her depression. In Session 2, June also demonstrated a greater willingness to increase her physical mobility and engage in physical activity, than she had at our initial interview in Session 1.

For example, whereas at the first session she had indicated that a return to her favourite pastime activities of horse riding and dancing were “out of the question”, she seemed willing to consider horse riding as a potential means of cardiac exercise. She perceived that it also offered a solution to what she had seen as an impossible activity – now she acknowledged that, as long as she was assisted to get on and off the horse, she would not struggle with the physical demands of riding. Given her arthritic pain and reduced mobility, I was not convinced that this was a realistic plan, but agreed to investigate and refer, as required, to “Riding for the Disabled” on behalf of June.

Secondly, June reported that she had been doing a correspondence interior design course for the last six months. She believed that her depression had resulted in her “getting stuck” on a memory-based assignment, and had
put off starting it. June appeared to have strengths in artistic design as well as numeracy and book-keeping. As she talked about her interest in colour and design, she became increasingly animated. She began enthusiastically describing the many room makeovers and renovations she had performed on her own home, as well as for relatives and friends.

By applying the CBT framework of supportive counselling, cognitive reframing and problem solving, described above (Chapter 7, Intervention Section 7.3), I challenged June to reframe the importance of completing this course, reassess her skills and apply them in novel or unique ways (i.e. emphasising her strengths for seeing numerical patterns and sequences, but applied to a visual medium). June then agreed that she could tackle the assignment from this new perspective and, agreed with me, that a deadline of one week would be sufficient to get it done.

As she had already set herself the goal of finishing the interior design course within the next six months, she became more enthusiastic about her chances for success. Because of this, she reported that she was feeling elevated in mood, and described positive feelings of self-worth, simply by having made a decision to act. June reported feeling surprised that, although she thought “nothing much happened” during the first two sessions of psychotherapy, she was now looking forward to ongoing sessions and thought she felt slightly better.

Using the goal setting template in the manual, with each of us writing on our own copy at our respective site, June was assisted to create the following therapy objectives in Session 2:
1) To increase duration of gardening, increase frequency of incidents of gardening,

2) To increase aerobic activity to assist with mood, fitness and weight loss by horse riding (with assistance to get on and off the horse),

3) To increase frequency of cooking balanced meals (stir-fry) for self to assist with weight loss goals of losing 30+kgs,

4) To increase frequency of cooking new and interesting food to increase motivation and interest,

5) To complete her interior design assignment by the next session, and

6) To complete her interior design correspondence course within 5 months.

**Figure 7.5** Subscale scores of the Agnew Relationship Measure (ARM) from therapist and client ratings after Session 1.

*Nb: Therapist rates clients openness to the therapy experience and level of disclosure, as well as their perception of how confident the client is in their skills as a therapist.*

At the first session, it was my impression that a strong therapeutic alliance developed quickly between us. In contrast to other clients, but
appropriate to her expressed ambivalence, June rated many subscales of therapeutic alliance (i.e. bond, partnership, confidence) slightly lower than I did on the first assessment occurrence (see Figure 7.5 above). With regard to alliance, June was assessed on five assessment occasions. The lower therapist rating on the openness subscale is in all likelihood a score that reflects my observation that June’s jovial demeanour masked her level of emotional distress. It may also reflect her expression of ambivalence about engaging in therapy and, subsequently, my sense of her possibly holding back on information. It is interesting to note that we both scored her initiative as low after Session 1, but felt similarly regarding a sense of connection (bond) and shared session agenda (partnership).

With regard to her satisfaction with the telepsychology experience, June was asked the following questions: 1) How clear was the image of the therapist during most Sessions? (0= “poor quality” to 4= “very clear”); 2) How would you rate the sound quality overall? (0= “poor quality” to 4= “good quality”); and 3) How well were you able to focus on what was being said without being distracted by the telepsychology technology? (0= “not at all” to 4 = “very well”).
In Session 1, June reported finding the sound quality moderate (2) and the picture quality a little unclear (3), but did not find the technology distracting at all (4). Over the course of all sessions (See Figure 7.6), June did discriminate between the picture and sound quality, rating sound quality more variably than picture. Overall, however, she did not find the technology distracting to her sessions.

June was also asked questions in the same satisfaction questionnaire which emphasised the therapeutic relationship features of satisfaction ratings. The questions were as follows: 4) How easy was it to talk with your therapist? (0= “difficult” to 4 = “easy”); 5) How useful were the therapy sessions overall? (0= “not useful” to 4= “useful”); 8) How much control did you feel you had over the session? (0= “no control” to 4= “a lot of control”) (see Figure 7.7).
In the first session, June’s expressed ambivalence about whether she wanted to pursue therapy was evident in her “0” rating on Question 5, “How useful were the sessions overall?” Fortunately, over the course of all the sessions, June found it easy to “talk with” me (and the subsequent measure of openness on the ARM relationship questionnaire reflects this comfort- see Figure 7.11). In a similar fashion, June’s subsequent ratings of the usefulness of the therapy in which she was engaged were 100% positive from Session 3 ratings to the end of therapy. Her ratings of in-session control may have reflected a feeling that I was leading the agenda of the session in areas she was not keen to progress. These will be explored in detail further below as they relate to particular issues.

Finally, June’s ratings of satisfaction with the technological experience of telepsychology were measured by the following questions: 6) How would
you rate your overall satisfaction with telepsychology? (0= “not satisfied” to 4= “very satisfied overall”); and 7) How comfortable did you feel receiving therapy over the videolink? (0= “very comfortable” to 4= “very uncomfortable”) (see Figure 7.8).

Again, June felt satisfied overall with the telepsychology experience and comfortable with using the technology and, after the first session, gave the highest rating possible for both questions until termination. Given June’s frequent use of the videoconferencing remote control to manage her picture size and volume during the sessions, this result is not surprising. Her outside-session familiarity with using Skype, an internet telephone and videophone service, might also have contributed to her level of comfort.

![June - Satisfaction with telepsychology technology from Session 1 to Session 15](image)

**Figure 7.8** June’s ratings of overall satisfaction with telepsychology and comfort with the technology from the Satisfaction Ratings Scale from Session 1 to Session 15.

### 7.4.2. Sessions 3 to 5
The three sessions (3, 4 & 5) were characterised by attempts to follow the manual. Ultimately however, June complained that the exercises felt irrelevant and unrealistic for her problem list. Subsequently, therefore, while a CBT model was followed during the sessions (as described above), the manual was only used for occasional reading and reinforcement of in-session work.

Sessions 3 to 5 emphasised the behavioural changes indicated by June’s goals. These included scheduled study, meal planning and home-cooking, scheduled chores/activities (one in the house, one outside the house), and obtaining a medical clearance to commence “riding for the disabled” horse-riding.

These sessions also saw the introduction and ongoing application of cognitive monitoring and challenging unhelpful or negative cognitions. Some examples of in-session cognitive activities included: 1) reviewing achievements versus listing failures; 2) reality testing her expectations about her physical capacity for activity over the course of a day; 3) reinforcing through self-praise and healthy rewards; and 4) identifying opportunities for mastery and pleasure. A more detailed example, which occurred over Sessions 4 and 5 follows:

Based on the Session 2 observation about June’s cycle of inactivity and avoidance leading to depressed mood, a pattern of boredom, leading to negative self-appraisals and perceived failure which further leads to depression, was evident in June’s behaviour cycle. It was hypothesised that intervention which increased her sense of consistent daily achievement would reduce the impact of these patterns that were contributing to her low mood.

In Session 3, June wrote a list of realistically achievable chores to be scheduled over the week and completed each day. She considered that her
cluttered home was contributing to her low mood. She also noted down the other events and activities in which she engaged during the day. Her perception was that “nothing happened”.

At Session 4, June believed she had failed her homework task because often her scheduled activities were bumped and not achieved on the day she planned to achieve them, but one to two days later. When this happened, and she reviewed her expanding list of failed achievements, her mood plummeted and her feelings of negative self-worth became more prominent. I asked June to show me her weekly timetable of activities, as well as her list of planned activities. Unfortunately, the picture clarity was too poor for me to be able to read what was on-screen, so the session was interrupted while the clinic receptionist faxed copies of June’s timetable and her list to me at the near site. This felt disruptive because I had to interrupt our conversations twice to check the fax machine in a different room. This approach, however, was the only option available to us, as there was no document camera at the far site. Once I received a copy of June’s completed timetable via fax machine, an opportunity to reframe and challenge the negative cognitions became apparent. What June had failed to notice was that, on the days when she didn’t achieve her planned tasks, she was interrupted by visitors who required her physical labour (i.e. unloading firewood, shifting tin, re-stacking carpet) or her active engagement (i.e. Government supported gardener, Community Mental Health Nurse, support workers, cleaners). Although the planned tasks were delayed, they were replaced with other significant activities. June gained insight into how she undervalued all these other uses of her time and labour. She was encouraged to maintain this plan for another “experiment”, to see how
structuring her time might improve her sense of achievement and mastery, and give her an improved motivation to achieve long term goals.

At Session 5, June reported that she had re-worked her timetable to acknowledge unplanned interruptions as valuable and important tasks. Once these patterns were identified and reframed as unplanned, but still valuable achievements, June reported that her mood lifted and she felt more motivated and hopeful. Without a document camera, June had to hold her list up to the camera, so that I might read from it. This involved close-up camera movement from my end (the near site). The picture was not ideal, but the list content was not as relevant to ongoing session plans as previous paperwork had been, and I did not require my own copy. Had I required a copy, the session would have had to be interrupted again, so that June could ask the clinic receptionist to fax the paperwork to me at the near site. This may have caused concerns regarding her confidentiality, as well as interrupting the flow of the session.

7.4.3. Sessions 6 to 8

Session 6 began on a high note for June, when she reported feeling elated by the experience of horse-riding again after a 20-year break. She was thrilled that she was still able to ride (riding in 10-minute blocks with 10 minutes rest in between) and recovered from the muscle strain within three days. This experience had run-on effects for June’s motivation, but also facilitated her acceptance of the permanence of her arthritis without the previous feelings of hopelessness or helplessness. She began making changes around her home to improve her mobility, such as building ramps from her front and back door to spend more time in the garden, had begun timetabling her activity to manage
her pain proactively, and increased her acceptance of offers of help from her partner and friends. She reported that using the monitoring and challenging strategies of the CBT model helped her to do this, while the behavioural activation gave her proof to challenge her erroneous self-beliefs. It was from this point on that the client ratings of bond, confidence and openness on the subscales of the Agnew Relationship Measure (ARM) were at their highest levels with regard to alliance with the therapist and the therapy process. My field notes reflected surprise and delight that June had gone through with her plans to attend “Riding for the Disabled”. Previously, I had not had a great deal of confidence that she would go through with it, and I also rated her client initiative (on the ARM) at its highest at this time.

Session 7 heralded fortnightly contacts between us, and a re-working of her self-reward structure for achieving goals. June had been working on exercise and diet goals (portion sizes and increasing fresh foods). Due to the financial pressure on attending “Riding for the Disabled” on a weekly basis, June had decided to use this as a reward, rather than a weekly exercise. The cost of petrol for the 100km round trip, in conjunction with the $50 insurance plus the cost of the ride, made horse-riding a six weekly to bi-monthly event for a client on a pension. June was reassured after proving that she was capable of riding when she wanted, and was satisfied for this task to be her reward. She continued to self monitor and applied CBT strategies to everyday challenges.

What had become apparent about the telepsychology interactions was that June was increasingly comfortable and engaged with them. For the most part, my experience when engaged in sessions was that the quality of the
relationship and the therapy experience was just like being there. However, as we progressed, June’s gregarious, hearty laughter had derailed our progress, and my impression was that this was less manageable due to the technology. It is from this session onwards that my field notes record frustration at feeling unable to redirect the client back to task. June continued lengthy laughing periods, often at her self-deprecating comments, throughout the sessions. I speculated that, had I been in the room with her, she may have better read my body language and curtailed her laughter faster. Although I discouraged June’s self-deprecation, I encouraged June’s use of humour as a cognitive coping strategy to highlight the irrationality or silliness in situations/thoughts. When June began a long and hearty laugh, her sound cancelled out my vocal interjections and it felt harder to reduce the time she took for “long laughing” because of the lack of “presence” in the room. Often, when June began a hearty laugh, she turned from the screen and was almost oblivious to my visual non-responsiveness and, at times, my vocal interruptions as well. I was unable to use body language to curtail these often uncomfortably long, hearty guffaws, and felt like the session was slipping from my control. The “distance” of telepsychology felt prominent to me, as therapist, during these times. Interestingly, between the Session 5 and Session 9 measures of satisfaction, June’s ratings regarding the distractibility of the technology, her comfort with telepsychology, and overall satisfaction remained at their highest levels, further supporting her obliviousness to this issue.

Session 8 occurred after a serious setback regarding June’s health (blood clotting in her lungs following a medication change) and her subsequent forced immobility. As a consequence of her forced immobility, her arthritic pain
had also increased. Although her previous positive, motivated mood had reduced, June was able to acknowledge changes in her coping from earlier times, including accepting more help from others, and not feeling defeated by the health setback, just disappointed. She demonstrated a good applied knowledge of recognising and challenging negative thoughts. She remained future-focussed and planned to return to her levels of activity once she had recovered sufficiently. From the field observations, I noted that because of June’s lower mood and obvious fatigue, I had an impression that her movements and demeanour were more subtle. As a consequence, I was mindful that I had to zoom-in closer to her face to be sure to see small changes in expression, such as tears or wet eyes, bottom lip trembles etc., so I could respond appropriately, and not risk a delayed response which might give an impression of minimising or neglecting her distress. I was also aware that I increased the number of observations I made about her appearance and manner, to clarify that what I was seeing was congruent with her emotional state, e.g.

“your shoulders seem really slumped today, and your eyes look quite dark on screen; you look much more tired than I have seen you looking for a long time, is that how you feel?”

The necessity to check congruence between physical appearance and demeanour with the internal state of a client is not an unknown occurrence in a face-to-face therapy environment (i.e. Corey, 2005). However, my observation during this session was that I was checking more often, and zooming in to compensate for a feeling of distance, than I would normally do in a face-to-face session. It was only after all the client sessions were over for the day that the
technician at the teleconferencing studio remarked that the picture had “seemed a bit fuzzy today” when he had made the connection call earlier that morning. Perhaps I had compensated for a loss of visual acuity that was technological, but had attributed it to a change in the client’s demeanour and mannerisms. Until the technician made that comment, I had not been aware that I had also noticed a less defined picture. As the other clients that day had been cheerful or no different to their usual presentation (unlike June), I had not been as aware of making compensatory changes with them. This observation suggests, therefore, that it is not the absolute clarity of the picture which determines whether a therapist engages in different strategies or techniques, but rather, the combination of the client’s presentation, and the relative importance of the visual clarity to the meaning of the session, which alters the experience and the therapeutic technique. This conclusion is supported in the telephone and internet counselling literature which demonstrates positive engagement without benefit of a visual image (see Barak, Hen, Boniel-Nissim & Shapira, 2008 for review; e.g., Rochlen, Zack & Speyer, 2004).

7.4.4. Sessions 9 to 11

The results from the standardised measures administered at Session 9 indicated that June had improved since Session 1. June’s scores on the BDI had reduced from 23 (moderate) to 13 (low/asymptomatic), her state anxiety reduced from 99% to 68% and her trait anxiety reduced from 97% to 79%. Her anxiety was still moderately high, and she explained that she felt worried and harried due to her “week from hell”. When June arrived for the session, her appearance was dishevelled and she looked very tired. Unfortunately, the
picture quality during this session was not as clear as it had been during previous sessions. June’s ratings of picture and sound quality on the satisfaction measures were also 3 out of 4 – lower than the previous measure (See Figure 7.6). I needed to zoom in quite significantly to determine how harried and dishevelled her appearance was. After further enquiries, June admitted that she had been neglecting her self-care due to having low motivation, but she had also not showered for four days because she had no running water in her home. A significant cold change had resulted in June’s toilet, house pipes, and outdoor fishpond being frozen.

Because of the weather change, June had experienced significant joint pain, and had spent much of the last two weeks in the city (Perth) for medical appointments. It was in Perth she was asked by a friend to take in her daughter “L”, a drug user planning on attending detox in the South West, to avoid mixing with her past drug-using associates and avoid relapse. June trusted “L’s” intentions and agreed to allow her to stay with her while she underwent detox. June felt she recognised the risks to herself and would be able to manage the emotional and physical challenges that “L” would bring with her to her home. June thought that “L” could help with chores and provide company to June. These issues were ongoing topics for the sessions, particularly in terms of cognitive challenging, boundary setting, assertiveness, and self care. In this way, again, the manual was unhelpful in terms of the exercises, but offered a framework in which to address June’s particular problems.

June’s reassurances to me, about her plan to allow “L” to stay, felt unconvincing, but even with close-ups it was difficult to observe if her facial
expressions or body language betrayed her doubts. I had a feeling that she did have doubts, and I also noted that I might have got a clearer sense of these doubts in a face-to-face environment. Given her harried and obviously tired state, I was unwilling to be too confrontational about her doubt at this session, and focussed on positive encouragement, praise and self-care strategies. Despite my doubts about June, my ratings of her participation in the sessions had increased, although my impression of her initiative had decreased. It was at this stage that my rating of confidence in being able to assist June to address her initial goals, particularly in the face of the significant lifestyle change of supporting a quitting drug user, also decreased (see Figure 7.9. below). I felt that she was taking on too much, and that her own issues were being buried by over-involvement in other people’s problems, which was a pattern she had replayed in previous relationships. Perhaps it was this feeling which resulted in

![June - ratings of confidence as measured on the Agnew Relationship Measure (ARM)](image)

**Figure 7.9** Comparison between the therapist’s and June’s ratings of “Confidence” as measured by the Agnew Relationship Measure (ARM) from Session 1 to Session 15 (Max score = 49).

(Nb: Confidence items ask the therapist to rate their perception of the client’s confidence in the therapy and in their skills; the client rates confidence items that assess how optimistic they feel, and how confident they feel about the therapist’s abilities)
my reduced rating of her initiative in therapy at resolving her own problems.

As previously mentioned, initially June had rated all aspects of the therapeutic alliance lower than I did at the first session. June had lower expectations than I did for the success of therapy when we began the process. Over the course of therapy, the alliance ratings indicated that this trend was reversed; June had higher expectations than I did for achieving her goals. By session 9, June had rated her bond with me at its highest point, and this exceeded my rating of bond with her (see Figure 7.10). This score remained the same for the next two measurement occurrences.

![Figure 7.10](image)

**Figure 7.10**  The therapist's and June's ratings of “Bond” as measured by the Agnew Relationship Measure (ARM) from Session 1 to Session 15 (Max score = 42).

*Nb: Bond refers to the extent to which the client feels friendliness, acceptance, understanding, and support in their relationship with the therapist, and the therapist extends these feelings toward the client.*

Her rating of her openness remained stable (scores of 34 and 35) over the six measurement occurrences. On the basis of her consistent scores across all sessions, it seems that June believed she was being honest and
disclosing her inner thoughts and out-of-session behaviours truthfully and accurately to me, and felt comfortable to do so (Figure 7.11).

Figure 7.11  The therapist’s and June’s ratings of “Openness” as measured by the Agnew Relationship Measure (ARM) from Session 1 to Session 15. (Max. score = 35).

(Nb. Openness refers to the client feeling that they can express themselves and reveal things about that may be embarrassing; the therapist rates how well they think the client is being open toward them.)

Figure 7.12  The therapist’s and June’s ratings of “Partnership” as measured by the Agnew Relationship Measure (ARM) from Session 1 to Session 15 (Max. Score = 28).

(Nb: partnership is where the client and therapist agree on the goals of therapy and agree to work hard to achieve them)
Moreover, June’s self-assessment of her partnership with the therapist, and her ratings of her own initiative to implement what she had that learned in sessions outside of therapy, climbed steadily over the telepsychology sessions (Figures 7.12 and 7.13).

For the most part, it appears that my ratings on the partnership subscale of the alliance were generally in agreement with hers; however, my ratings of her initiative to direct the therapy were more variable. When interpreted together, these two subscales suggest that, regardless of whether it was the client or therapist who felt they were directing the course of therapy, the client appeared to be “going along” with the therapy agenda and participating relatively consistently in the session activities and goals.

**Figure 7.13** Comparison of the therapist’s and June’s ratings of “client initiative” as measured by the Agnew Relationship Measure (ARM) from Session 1 to Session 15. (Max. Score = 28).

(Nb: Initiative refers to the feeling the client receives from the therapist that they can take the lead in therapy and search for and implement solutions of their own. The therapist rates how well the client does this).
Between session 1 and session 9, small positive changes had also occurred with regard to June’s scores on the Brief Symptom Inventory (BSI) (see Figure 7.14). Most significantly, June’s score on the somatisation subscale had reduced from caseness (65) to well below caseness (45). Given her frequent bouts of ill health, some of which had required hospital admission, this was a surprising change. In fact, her behavioural activation had increased and she was engaging in more physical activity, despite the pain. This is a positive outcome for chronic pain sufferers who typically reduce their physical activity and social networks in response to an almost automatic response to “retreat and rest”, in an effort to recover and avoid exacerbation of their pain. A major obstacle in coping with chronic pain is to overcome the anxiety associated with activity, and the unrealistic expectation for many sufferers that they may one day be completely pain free. Cognitive coping with chronic pain requires that clients accept the attitude that “certain activities can and will be undertaken despite pain” (Phillips & Rachman, 1996: 87). June seemed to have adopted this attitude and I would speculate that this, subsequently, and somewhat paradoxically, reduced her hypervigilance to somatic concerns. The change from session 1 to session 9 is both statistically (>15 points/ 2 SD) and clinically significant (movement between levels).
Figure 7.14  June’s scores on the subscales of the Brief Symptom Inventory (BSI) from baseline and Session 9 (approximately mid-therapy).

Other clinically significant, though not necessarily statistically significant, reductions in scores between session 1 and session 9 occurred in the depression subscale (a drop of 12 points, from a score of 42 to 30), and anxiety subscale (a 6-point reduction from 43 to 37) and this pattern is consistent with other objective and participative ratings. As I hypothesised during intake, June’s depression and anxiety were closely related to her assessment of pain and coping, and so changes in one also appear to occur in the others. Other subscale ratings tended to reflect smaller, though positive, reductions in distress. Given that June did not have high scores for the majority of subscales on the BSI measure, this is an adequate and expected outcome.
Session 10 began after an unintended one week break, due to June suffering from a severe cold. June reported that, despite her illness, she had been able to complete another assignment in her course, and was on track to complete her interior design course by her planned end-date. She reported that her cognitive motivation remained intact, despite her “physical derailment” and, in contrast to previous years, she was able to stay focussed and positive, rather than retreat to bed feeling helpless and hopeless.

It was pleasing to hear June describe herself sharing her knowledge and insights with others. As a therapist, the best outcome of psychotherapy is when a client demonstrates applied knowledge of their in-session achievements. In combination with positive measured outcomes, such clinically relevant client behaviours indicated to me that we had achieved a degree of success with this intervention. During session 10, June described numerous examples where she had clearly integrated the information and the clinical insights she had gained, and then applied them to herself or shared them with others outside the session.

Reassuringly, June reported that she had been prioritising her own needs and self care, even though “L”s detox at home had been challenging. June had noticed that her own mood was often closely aligned with “L”s mood. June described that she often buoyed “L” up for several days, only to struggle for a few days herself afterwards, during which time, “L” supported June. June was feeling very pleased by her efforts to reinforce her every day achievements and setting firm boundaries with others, such as “L”, her partner and other friends. June recognised a need to pace herself and to accommodate her physical limits and fluctuating health.
June continued to demonstrate cognitive improvements, and to work toward her behavioural goals and positive mood changes in session 11. Based on elements covered in the manual which focussed on assertive behaviour and self-esteem, June described an incident of handling a conflict situation with an elderly friend. She was proud and pleased with herself for sticking to her assertive decision.

She demonstrated awareness and challenging of faulty thinking when she engaged in catastrophising and mind-reading. Moreover, she perceived that her own expectations for herself and others had “mellowed”, and she reduced the frequency of her “shoulding” (i.e. application of unrealistic expectations). She also felt she no longer expected herself to be completely self-reliant, and felt more at ease asking and accepting help from friends. It is reasonable to expect that these changes would have contributed to the improvement in her mood, as was reflected in her much reduced BDI-II score at session 9.

Based on background material and guidelines from the manual, June was able to recognise instances when she engaged in activities for pleasure and others for a sense of mastery and achievement – and encouraged others in her life to do the same. Again, she had demonstrated applied knowledge.

7.4.5. Sessions 12 to 14

Session 12 began on a low note for June. Two weeks earlier, “L” had been aggressive with local hospital staff who then refused to administer her Subutex injections. Subsequently, June had been driving “L” every day on a 80 km round trip to the next nearest hospital able to administer the drug.
June’s arthritis in her knees was exacerbated by long drives, and her pain was significant. At this time, petrol prices had also soared to over $1.50 per litre, and June was struggling financially because of the driving. She appeared tired and unkempt and stated that she felt she was “having a nervous breakdown”.

Again, her presentation at this session was significantly different enough to require close-up monitoring with the camera, to determine the true extent of her distress. My field notes were as follows:

“Needing camera control to monitor facial expressions to seek visual confirmation of extent of negative affect. Given nil Hx of suicidal ideation/current denial of suicidal ideation → nil concerns for safety. She looks bad though- neglected”

For the first and only time over the course of all the sessions, June rated herself as being “at risk” on the CORE-OM (0.6) (Table 7.1). Her Beck Depression Score (score = 16) indicated mild depression and was at its lowest level for all the in-therapy measurements (Figure 7.4). Her anxiety measures at Session 12 were also at their lowest, in comparison to all other in-therapy measurements (State anxiety = 24%; Trait anxiety= 34%) (Figure 7.4). I rated her the highest in terms of “bond” on the Agnew Rating Measure (ARM). My notes reflected concern for her presentation and the situation with her house guest and, maybe because of her visible distress, I felt closer to her.

She was quiet and did not engage in her usual self-deprecating humour. In contrast to previous sessions, I noted that I was speaking more than she was. Because of this, we did not experience the problem of talking over the top of each other, and so did not lose sound as we had done previously.
Because she was uncharacteristically quiet (in volume, as well as frequency of utterances), I had to increase the volume of the transmission at the far site, so as to clearly hear her responses (as her body language was unfamiliarly subdued).

Part of June’s mood change appeared related to her struggles with her house guest. June felt that “L” had pushed her to agree to allow her boyfriend, also an ex-drug user, to move in, after he recently ceased using heroin. June felt anxious around him, because she found him unapproachable and aggressive. She was also feeling stressed because her house had become untidy and unclean because of the two young people.

In response to her sense that she had relapsed, and acknowledging her feelings of being exhausted and only able to engage in limited responses, we focussed the session on reviewing her achievements, but also recommenced basic self-care relaxation strategies. This approach involved a review of psychoeducation for anxiety and depression, and training in relaxation strategies.

To begin relaxation training I followed the instructions for diaphragmatic breathing detailed in the manual, demonstrating to June the accurate placement of her hands on her diaphragm muscle and showing her the small expansions and contractions between her fingertips as she exhaled and inhaled. This process is normally a simple one in the office; the psychologist demonstrates and the client copies. Small adjustments to technique are modelled and verbal feedback provided. But in a telepsychology environment, this was not as simple. To begin with, the client had to pull her camera back to change the view of me, to capture more than would normally be seen at the far
end site. I also had to move my desk aside so she could see a full body image of me. If she had been unable to manage the camera (which fortunately she could), I would have had to move my table aside to show a full body view, and manage her camera remotely from the near site. Because of needing to see more of my body on the screen, I had to demonstrate the movement of the diaphragm (and fingers resting on them), in the air in front of me, and in an exaggerated fashion. I also had to ask the client to sit away from her table, so I could zoom in on her chest movements to provide verbal feedback on her practice behaviours. The process took longer and required numerous camera manipulations, and changing the furniture layout. Unlike a face-to-face encounter, it was still difficult to see the small movements that are characteristic of diaphragmatic breathing, even when a close-up was possible. This common relaxation component of treatment for anxiety and depression was a logistical challenge in the telepsychology environment. Teaching diaphragmatic breathing, therefore, was difficult, but not impossible. June rated her sense of control over the session as lower than on previous sessions (Figure 7.7). Perhaps my intentionally directive style, combined with the complications of camera manipulation, contributed to her feelings of reduced session control.

In contrast, however, it was during this session that June rated the picture clarity higher than on previous sessions (Figure 7.6). Perhaps this was due to the frequent manipulation of the camera, the frequent verbal checking and reassurance seeking that enhanced the visual experience for June. June continued to rate sound quality and the distractibility of the technology as the same as previous sessions – as highly positive as possible.
Session 13 saw an improvement in June’s mood, but not her physical condition. Her knees had worsened and she struggled to stand for long periods. She had re-negotiated “L”’s treatment with the local hospital, regarding the frequency of her dosing, and this had substantially reduced her driving time and costs. Ongoing issues with “L”’s boyfriend were proving a challenge and June was encouraged to practice assertiveness and enforcing personal and practical boundaries in her home. She was dissatisfied with the living arrangement, but could also identify the advantage of having “a man about the house to do the heavy lifting”, while she was physically incapacitated. The focus of the session was on identifying her vulnerabilities and looking to protect and nurture herself. This session was described in the field notes as a “review and reinforce” session.

Session 14 saw June present at therapy “a little sheepish, euthymic but not elevated. Grounded. Seemed sad but OK” (from field notes). Over the course of the session we reviewed the previous two weeks. As I had anticipated and attempted to warn June to protect herself from, arguments between June and “L’s” boyfriend, who was continuing to use drugs while still in the house, had escalated and ultimately caused them both to move out. Money had gone missing from June’s wallet and she suspected the boyfriend. Both “L” and her boyfriend left the house in anger and June considers her relationship with “L” to be severely ruptured. Both parties ultimately abused June for “sticking her nose in” to their drug-using business.

June was shaken by these events, but demonstrated healthy coping strategies for not relapsing to depression or anxiety. Of note, June reported that she caught herself using faulty thinking patterns, like “shoulding’' and
“musting”, after several arguments with the couple. Insightfully, she recognised her thoughts were making her feel guilty and miserable. In response (as she had been advised to do via the manual and in-session), she reframed these thoughts in terms of her knowledge of addict’s behaviour, and an objective look at her own responses in these arguments. She reported that, by using this approach, she was able to talk herself out of negative and unhelpful cognitions and recognised that she was now behaving in a way that was far different from how she would have reacted to their abuse in the past.

Most positively, from a therapeutic gains point of view, although June was still feeling used by “L” and her partner, she was able to distinguish feeling sad from “feeling depressed, overwhelmed, or incapable of ever getting out of the hole”, as she did when she first started therapy. She also felt some relief to have her personal space back and did not experience guilt when she acknowledged this. She believed she would have felt guilty in the past, and recognised this as a positive clinical gain she achieved from the therapy. As we reviewed her experiences and responses, it became apparent June was continuing to be self-reflective about the relationship between her thoughts and her feelings.

Despite her ongoing arthritic pain, her changed living circumstances had forced her to rely on herself again, and her physical activity had also increased. In combination with her healthy and positive cognitive strategies, her behavioural activation and sense of achievement was also lifting her mood. June reported she was engaging in increased activity outdoors and described doing some gardening, seeing her partner for dinner again, visiting with old friends and re-engaging with interior design interests. Although we did not
collect standardised outcome measures, June’s self reports supplied strong
cognitive and behavioural indicators of emotional improvement and the
reduction of depression and anxiety. June agreed to have her final therapy
session in two weeks due to her improved mood, enhanced coping and
demonstrated resilience.

7.4.6 Session 15 – The final session

The final session was a review of June’s gains and how successful she
had been in achieving her goals of therapy that were set at session 2.

Therapy was terminated at this time by joint agreement. June had
received positive feedback from “L’s” mother that “L” was safe and well. June
reported that she felt happy that she had a positive effect on “L”, despite the
“chapter” not ending as she would have hoped.

June had also arranged to see the orthopaedic surgeon regarding her
knees, but her use of other medication may have impacted her being permitted
to undergo surgery. This set of circumstances lead to a discussion about the
need for her to lose weight to undergo surgery, and she became despondent
and tearful during this discussion. June acknowledged that this had been one
of her goals for therapy, and she was disappointed she had not done
something more specific to this goal, particularly as the sessions were ending.

During this exchange, June’s negative affect became more apparent.
She expressed hopelessness about her weight, stating that she was expecting
no change to her situation. She still felt very concerned about the health impact
of her weight and its relationship to her pain, but denied that she felt as
depressed or helpless as she did prior to commencing therapy. With minimal
prompting from me, June was able to engage in cognitive reframing to identify the positive exercise and lifestyle changes she had made, which included increasing her activity levels, increasing the frequency of healthy home-cooked meals (e.g. Goals 2, 3 and 4 all partially achieved and maintained) which would ultimately contribute to a weight loss success. It was during this portion of the session that, in addition to June’s sobs cancelling out sound, we also lapsed back into speaking at the same time as each other, and thus cancelling the sound out. Both of us asked the other to repeat themselves on several occasions, and I felt more conscious of needing to wait for her to finish expressing herself in sobs, moans, sighs or speech. I also felt I needed to “get closer” to June as we were saying goodbye, and so placed my camera in a closer position to her face than I had done previously. I was aware that I could not shake her hand, and did not feel as if I could convey my pleasure at her achievements sufficiently. I felt as if the technology got in the way at this last session.

When asked to review gains from the therapy sessions, June reported that she felt a better sense of control over life. Even if her guests left her with a mess inside, she had forced herself outside and her garden was back the way she liked it (Goal 1). This change had also lifted her mood. Assertiveness and confidence had resulted in improved relationships with her friends and partner, a new pain management protocol with her GP, and she had re-negotiated with a community care agency (HACC) to have regular assisted cleaning to help her maintain control in the house. She had completed several assignments from her interior design course (Goal 5). Due to “L” and her boyfriend staying in the house, combined with her poor health over winter, June was unable to
complete her course as planned. She had two assignments left to submit, but planned to complete them in the next few weeks (Goal 6).

Overall, she reported feeling much improved, that she would miss the sessions, and that the therapy had helped her. I reinforced the many changes June had made, her accomplishments over the last seven months, and provided some feedback regarding her standardised score changes up to Session 12 measures. Although June stated that she was a little sad about ending therapy, she felt confident that she no longer needed therapy at this time and was happy to terminate contact after this session.

At the conclusion of Session 15, June scored at asymptomatic levels on the BDI-II (8), but her state anxiety had climbed to 59% and trait anxiety to 83%, as measured on the STAI. The confidence she claimed about future coping (above) was challenged by these scores. As she minimised her levels of distress when directly questioned, this increase in anxiety may have reflected anticipatory worry about the sessions ending and the potential loss of support, or because of the distress raised by the discussion about her, as yet, unachieved goals.
Figure 7.15 Measures of the change in June’s anxiety and depression as measured by the STAI (maximum score = 100%) and BDI-II (maximum score = 63) from baseline and Session 15.

On the CORE-OM at Session 15, June scored in the healthy range on all subscales except the problems subscale, where she scored 1.71, which was above clinical cut-off (1.62) (Table 7.1 and Figure 7.16).

Figure 7.16 Measures of the change in CORE-OM subscale scores from Session 1 to Session 15.
These unexpected increases again suggested that June was most vulnerable to negative mood states when dealing with health or interpersonal issues. Perhaps the combination of worry about surgery and weight loss, distressing reminders about her recent conflicts with “L”, and the concluding of therapy sessions, increased her self-rating of the future problems June considered she still had to address. However, her lower (and, therefore, positive) scores on the wellness and functioning subscales make interpretation of the score on the problems subscale difficult.

June’s scores on the Brief Symptom Inventory also showed a significant improvement on her mood (see Figure 7.17).

**Figure 7.17**  June’s changes in BSI subscale scores from Baseline to Session 15.

On the BSI, all of June’s scores were below the level of caseness (scores of 63), and most were lower, if not equal to, the subscale scores she obtained at Baseline. Importantly, her scores on the somatisation, depression,
anxiety and phobic anxiety subscales were reduced. Somatisation was reduced to statistically and clinically significant levels (i.e. >2 SD’s = 20 points).

But, in conjunction with the other standardised measures and qualitative self reports, it could be reasonably claimed that other subscale changes were clinically significant. Again, the reduction in somatisation scores would seem to suggest that June’s scores on the problems subscale of the CORE-OM have more of an interpersonal, rather than health or pain, focus.

With regard to her satisfaction with the telepsychology experience, June appears to have ended sessions with slightly higher positive ratings on average, on the various subscales of satisfaction, than when she began. Of particular note is her sense of the usefulness of sessions, which increased in positive ratings from 0 to 4. Given her familiarity with the technology (i.e. see Question 3 distraction, Question 4 ease of use) and her comfort with its use (i.e. Question 6 overall satisfaction and Question 7 comfort with the technology), this positive rating is not surprising (see Figure 7.18).

![June - Satisfaction with telepsychology from Session 1 and Session 15](image)

**Figure 7.18** June’s ratings on items of the Satisfaction Scale from Session 1 to Session 15.
June consistently rated the sound quality as only “OK”, and picture quality “good”. Despite these lower ratings, and obvious intrusion of the technological experience, she was not distracted by this intrusion, nor did this diminish her ratings of overall satisfaction.

As previously described, satisfaction with therapy, and the conditions in which it occurs, will have a significant impact on the quality of the therapeutic alliance, and, subsequently, on the delivery of the active change ingredients of the treatment. The results from the satisfaction survey would suggest that the therapeutic alliance that developed over the course of the sessions was a positive one.

Total score changes from session 1 to session 15, as measured on the Agnew Relationship Measure (ARM), are presented in Figure 7.19 below. This figure demonstrates a positive increase over time in the strength of the relationship as assessed by the client, and a steady maintenance of total alliance ratings by the therapist.

![Figure 7.19](image-url)  
*Figure 7.19 Comparison between the therapist’s and June’s changes in the total alliance score as measured by the Agnew Relationship Measure (ARM) at Session 1 and Session 15.*
When the subscales are separated and comparisons made between the client and therapist ratings from Session 1 compared to Session 15, we see the following changes (Figure 7.20 below). Over time, June’s alliance with me increased, while my assessment of our alliance, on average, stayed relatively the same.

When the total scores are converted to percentage scores, it is apparent that June’s ratings across the five subscales of bond, participation, confidence, openness and initiative were all higher than mine at the conclusion of therapy (Session 15). This phenomenon, where clients generally give higher ratings of alliance than therapists, has been observed in numerous other studies (e.g. Bachelor & Salame, 2000; Hilsenroth, Peters, & Ackerman, 2004; Tichenor & Hill, 1989; Tryon, Blackwell & Hammell, 2007). At the beginning of therapy,
June’s self-ratings were lower than mine for bond, participation and confidence, but higher than mine for openness and initiative. June rated the usefulness of the therapy session on the Telepsychology Satisfaction Questionnaire at Session 1, at zero out of four, and her overall satisfaction with the telepsychology at two out of four. Together these results suggested that she viewed her own contribution to therapy (in the form of her initiative, openness, and comfort with using the technology) as positive from Session 1, but was less positive or hopeful about others (i.e. the therapist’s or the technology’s) contribution to the therapy.

Overall, June’s satisfaction with telepsychology overall, her ease of use and comfort with the technology, and freedom from distractibility and sense of the usefulness of the sessions, were at their highest rating levels at the conclusion of therapy. Moreover, her sense of bond, participation and openness were rated at 70% or higher. Her standardised outcome measures, coupled with her self-reports of attitudinal and behavioural change, suggested that therapy had been successful for this client. These changes could also be observed during the session, and a review of her goals indicated that most had been achieved, and that the foundations for achieving the others had been laid.

7.4.7. Follow-up.

June was posted a package of questionnaires to complete and return approximately 12 weeks after finishing telepsychology. Her scores on the standardised BDI-II and State-Trait Anxiety Inventory had fallen to asymptomatic levels (i.e. BDI-II score = 2; STAI-State score = 8%; STAI –Trait score 14%). Her scores on the BSI at follow-up continued to suggest an even
greater improvement in symptoms, or at the least maintenance of gains, three months after the completion of therapy (Figure 7.21).

![June - Brief Symptom Inventory (BSI) subscale scores from Baseline to Follow-up](image)

**Figure 7.21** June’s scores on the subscales of the BSI at 3 month follow-up compared to baseline scores.

However, June scored higher on the psychoticism subscale (4 points higher from 46-50) at follow-up than she did at any other time, an unusual result, though she was still below caseness. According to the BSI developers, the definition of the psychoticism subscale is that it represents a continuum from a mildly alienated and socially isolated lifestyle to florid psychotic presentation. In a normal population it more typically measures social isolation (Derogatis & Melisoratis, 1983). Given that some of June’s problems at the beginning of therapy were related to a narrowing of social contacts, avoidance and physical isolation on her rural property, it is possible that her score on this subscale
reflected a return to an isolated lifestyle. June’s Global Severity Index (GSI) score, a measure of her overall levels of distress, remained lower at follow-up (score = 36) than at baseline (score = 43), thus it is unlikely that June had developed disturbing symptoms, but she may have reduced her social contact with others due to an exacerbation in physical ill-health.

At follow-up, scores on the CORE-OM indicated that June had progressed from a clinically significant range of problems at baseline to a healthier, sub-clinical level across all domains (See Table 7.1).

For an unknown reason, June did not complete the final satisfaction survey which targets the technological elements of the telepsychology encounter.

### 7.5 Discussion

#### 7.5.1 The intervention approach and therapy outcomes

Given that June’s initial problem formulation suggested a desire to address issues associated with her weight and pain management, a behavioural approach was taken, prior to commencement of the cognitive elements of the manual. Early successes regarding a return to pre-illness leisure activities increased her confidence with the intervention approach, while enhancing her motivation to engage in the later cognitive tasks. A change to the manual’s content order was necessary to meet the needs of the client, and facilitated in the development of therapeutic alliance. It is possible that, given the client’s initial expressed ambivalence about the value of engaging in psychotherapy, in addition to overcoming the challenges of becoming au fait with the technology, a failure to modify the intervention to be responsive to the
presentation of the client might have resulted in a less successful clinical outcome, or potentially an early termination.

Overall, this case demonstrates how positive clinical outcomes can occur in telepsychology when an intervention approach is taken that is responsive to the needs of the client. June came to the sessions with knowledge of computer and webcam technology, and confidence to use the technology to her advantage. In addition, she had a willingness to try the suggestions of the therapist and engage with the therapeutic process fully, despite an initial reluctance. The approach suited her needs and was responsive to her problems and, although deviation from the manual was necessary, much of the content was covered. It is hypothesised that the opportunity to modify the manual and incorporate other techniques and strategies, such as the problem solving model, interpersonal role-playing and motivational interviewing techniques, enhanced the therapy process, and might have circumvented dropout from therapy. Slavish attachment to the manual might have alienated an already ambivalent client, thus prompting dropout, early termination or poor therapeutic alliance and subsequent negative outcomes.

7.5.2. The technology and telepsychology experience

Items on the satisfaction rating scale were scored on a Likert scale from 0 (“not at all…”) to 4 (“very…”), with a rating of 2 representing the middle of each scale. Over six assessment occurrences, June rated picture clarity and sound quality variably, suggesting that changes in technical quality of the telepsychology sessions were apparent and rateable, and these may ultimately
have influenced the ratings of various therapeutic alliance subscales, and may have differentially impacted on ratings of level of control in session.

Of significant note is that June rated the first session as (0) “not at all helpful”, and that she rated receiving therapy over videolink as only moderately comfortable (2), with sound (2) and picture quality (3) less than ideal. She had stated to the therapist in the first session that she was not hopeful that she would experience any relief in her symptoms, as she felt that their longstanding presence and the situational and, therefore, unalterable nature of their cause would limit the impact of telepsychology intervention. At the end of the first session, she stated that she felt ambivalent at best about the quality of outcomes she might achieve in the sessions, but stated that she liked me as her therapist so would come again. On the second measurement occurrence, four sessions later, June rated the technology and therapeutic experience at the highest level of satisfaction (4) across all dimensions on the satisfaction scale. Unfortunately, as June did not complete the final satisfaction questionnaire I was unable to determine how issues of camera placement, picture size and the specifics of the technology enhanced or interfered with her telepsychology experience. Based on her other satisfaction appraisals, June had indicated that, in comparison to the telephone, she would rather participate in telepsychology, because she could identify with the person she could see. But, given a face-to-face option, she would have been just as happy with a regular office session as telepsychology.

June recognised and rated changes in the quality of the telepsychology experience as a consequence of the technology, as opposed to variations in content. Her most positive ratings of satisfaction coincided with her highest
ratings of therapeutic alliance, suggesting that the quality of the technology experience was related to an overall sense of the quality of engagement with the session and the therapist. A criticism of this case might be that, by the time June commenced therapy, her depression was of a moderate level only (i.e. 23 on BDI-II) and less than caseness (i.e. case ≥ 63) on the BSI (i.e. score of 42 on depression subscale). However, her anxiety levels were significant and her ratings of somatisation were the only subscale to reach caseness on the BSI (e.g. somatisation = 64). At intake her standardised score profiles were more suggestive of the kind that might be seen in the depressed elderly, where sadness is expressed on questioning, but where somatisation and anxiety are more prominent in testing profiles (Shahpesandy, 2005). Given her history of depression, secondary to degenerative disease coping and role-change grief processes, these issues are also of significant concern among the elderly population, and so such a profile is not surprising in the context of June’s presenting problems.

The following chapter describes another case where chronic pain, anxiety and depression are the prominent presenting issues. In contrast to June’s portfolio, the case to follow highlights the shortcomings of telepsychology and the important client and context features which contribute to success in any therapy context, but especially in telepsychology.
CHAPTER EIGHT
PORTFOLIO #2: BEATRICE – WHEN TELEPSYCHOLOGY DIDN’T WORK

8.1. Relevant History

Beatrice was a 38-year-old woman referred by her psychiatrist for therapy for depression associated with chronic pain. The middle child of three sisters, Beatrice suffered physical and emotional abuse from her father until aged 6, then sexual abuse from ages 7-12 years at the hands of her stepfather. Although she disclosed the abuse to her mother, she was not believed until he was caught in the act, years later. Beatrice says she does not feel angry toward her mother for failing to protect her or believe her, and excuses her as “doing what she had to do to survive”. Beatrice’s family moved repeatedly and she changed schools and homes over 10 times from the ages of 7-15 years. Beatrice described herself as a timid and fearful child, who struggled to make friends due to the family’s itinerant lifestyle.

As a child, Beatrice was told by her parents that she was “dumb”. Beatrice recalls being unable to concentrate at school and, thus, doing poorly, but feels that her lack of concentration was due to living in a constant state of anxiety because of her abusive home life. She was physically tense, apprehensive, intimidated by teachers and other children. She rarely engaged with others and recalls feeling very lonely and isolated.

Beatrice has limited emotional support in the rural area where she lives. Her relationship with her sisters (who were also abused) and her mother appears vague and distant by her own description, but not unpleasant. Her
family live in the State’s capital city, Perth, so her main social contact and support is her *de facto*, Jim. Leaving school at Year 11, Beatrice worked at a meat processing plant where she met Jim, who has been her *de facto* for 13 years. Beatrice describes Jim as understanding, patient and kind.

Following a workplace knee injury, Beatrice moved to a town approximately 85 kilometres from the telepsychology service clinic. Although her knee was the original pain source and she received four corrective surgeries to fix it, compensatory postural change has resulted in several bulging discs in her back which provide a constant direct pain in her back and referred pain down her right leg. Additionally, she feels qualitatively different pain associated with multiple hernia surgeries conducted over the previous 12 months.

Beatrice photocopied and mailed approximately 35 pages of medical reports, attached to a handwritten note on pink, children’s teddy bear stationary, signed by her as “Miss B. Smith”. The reports suggested a pattern of help-seeking over the last seven years for changing or related conditions, often with multiple opinions being sought for the same condition. Occasionally, it appeared that increasingly invasive assessment procedures with surgery were being recommended, but more typically, an emotional/psychological component to her pain was implicated within the reports. The supply of the reports gave an impression of the desire to be believed, and for her situation to have a legitimacy afforded it. The notepaper attached to the reports gave an impression of childlike immaturity. The reports also outlined that, although numerous medications for depression, anxiety, pain and gastrointestinal problems had been prescribed and commenced, Beatrice would typically cease
them after 4-5 days against advice, with only paracetamol being consistently taken by her. Her explanation for starting and ceasing the medications was that “they didn’t work”.

8.2. *In-session presentation*

Beatrice presented as a physically tense, underweight, neatly dressed woman in her late 30’s. She grimaced frequently during the initial interview and often had to stand or walk about to relieve the pain associated with her back and knee.

Beatrice described herself prior to her injury as an uptight, jittery person who would always do things quickly. She reported that she most frequently felt unable to relax or be quiet and still, and was often overwhelmed by racing thoughts. She described her personal history and current distress in a fairly monotone, and straightforward manner, with minimal affective change. Her cognitions had depressed, helpless themes. Despite occasional statements that she had to “soldier on”, Beatrice also stated that she felt hopeless, pessimistic about recovering any quality of life, and that she had exhausted her help-seeking options. She acknowledged feeling fatigued and ready to give up, but denied suicidal ideation, urges or intent.

In addition to completing household chores, Beatrice claimed to use a cross trainer machine to walk daily to improve her fitness. Her self-reported activity levels were unexpected, given her description of the level of physical discomfort that she was in, and the chronically present nature of distressing imagery and thoughts relating to her abuse as a child. She reported that she was unable to work due to her physical and emotional incapacity. She
evidenced no formal thought disorder in the sessions. In the initial session and as sessions progressed, it became apparent that Beatrice used emotional dissociation and depersonalisation as frequent coping strategies, and her expressed cognitions suggested significant somatisation and alexythymia.

Beatrice believed she was depressed because of her ongoing chronic pain issues, and, in particular, the frustration associated with the failure of her multiple surgeries and treatments to result in an adequate recovery. Beatrice’s therapy goal was to cope with her pain better, without medications. She did not wish to address her past abuse history at all, but preferred to stay focussed on her depressed feelings associated with managing her pain every day. While she acknowledged that her past unresolved trauma history might have contributed to the severity of her current health status, she was reluctant to address past abuse issues, unless guaranteed that it would relieve her depression and help her manage pain on a daily basis. An initial observation in the field notes speculated that the possible “psychological distance” of telepsychology may have resulted in the therapist seeming less convincing or reassuring than she might have been in a face-to-face encounter. Under alternative face-to-face circumstances, Beatrice may have been more willing to explore a broader problem formulation than she was willing to in telepsychology. An alternative explanation may be that the “distance” of the telepsychology permitted Beatrice to be more assertive with the therapist, and more able to refuse exploration of certain personal issues.

8.3. Intervention
Beatrice’s presentation strongly suggested a psychological problem profile which included depression and adjustment difficulties, stemming from a complex PTSD type disorder and chronic pain. At her request, and as per the client-centred approach to intervention research, addressing the longer standing abuse issues was placed secondary to improving Beatrice’s daily functioning, although I strongly encouraged her to consider the psychological impact of her past as pertinent to her current coping.

Beatrice’s clinical interview presentation was supported by her scores on the standardised assessment (see Figure 8.1).

**Figure 8.1** Beatrice’s scores on the Brief Symptom Inventory (BSI) over 3 measurement occasions (Baseline, Session 3 & Session 5).

On the Brief Symptom Inventory (BSI), caseness for a particular symptom is indicated by subscale scores of 62 or above. At Baseline, Beatrice scored at the level of probable caseness on subscales which purport to
measure Somatisation (68), Obsession-Compulsion (63), Depression (62), Phobic Anxiety (68). Over the course of therapy, Beatrice’s scores increased such that all the subscales except interpersonal sensitivity (61) reached caseness. It has been reported that clients will often appear to get worse before they get better (e.g. Corey, 2005).

By Session 3, Beatrice’s scores suggested that she became more negatively symptomatic than positive. Despite the overall lack of success regarding Beatrice’s intervention, all of Beatrice’s scores on the BSI (other than somatisation and phobic anxiety) fell below caseness by her final session.

Beatrice stated that she was attending therapy at the insistence of her psychiatrist (and thus, it was “not her idea”), in order to be assisted to learn how to better manage her pain, and her subsequent depression. She was not sure how this might be achieved, and seemed pessimistic about being helped. Thus, the client-centred approach to intervention and research were critical considerations to maintain Beatrice’s control over her own treatment, and empower her to make choices regarding how the intervention might proceed.

In response to her goal descriptions, I introduced a biopsychosocial model of chronic pain (Hansen & Gerber, 1990; Turk & Monarch, 2002), which also overlapped with the biopsychosocial model of depression that underpinned the CBT approach of the intervention protocol. When I explained that the goal of the intervention would be to reduce her avoidant thinking and behaving style which maintained her low mood and problems with managing pain, Beatrice tentatively accepted this plan. In order to encourage her agreement, I re-explained the theory and the expected outcomes in alternative ways, and answered Beatrice’s questions as they arose. Because of her
fidgeting, it was difficult to read her facial expression, but the field notes describe me frequently asking for Beatrice’s comprehension of the material being discussed, as well as her acceptance with the rationale being offered.

Although Beatrice’s long standing abuse issues were beyond the planned protocol of the telepsychology intervention, an understanding of her current issues with pain implicated her past traumatic history with her current coping (e.g., Turk & Monarch, 2002) and, as such, required a therapeutic response. To that end, one of the goals of therapy would have been to develop a sufficient therapeutic relationship with Beatrice to raise these issues as relevant to her current problems and commence working toward reducing their impact on her. Although it was technically beyond the scope of the research intent, nevertheless, I considered it an appropriate addition to the CBT protocol to assist Beatrice to develop preparatory skills and expectations to eventually deal with the long standing abuse and trust issues evident in her presentation, should she choose to do so at a later time. This therapeutic decision was based on research which demonstrates that CBT is also a recommended approach for assisting adult survivors of childhood abuse (e.g., see Cloitre, Cohen & Koenen, 2006). Moreover, despite the client’s reluctance, a failure to explore the interconnectedness of the presenting issues, in conjunction with the limits of this particular intervention, would have been unethical. This modification of the intervention protocol was only possible because of my practitioner/researcher stance as the therapist. In addition, the genuinely collaborative approach of the CBT model facilitated a shared understanding of the issues and agenda setting between client and therapist.
More directive therapeutic intervention models may not have been flexible enough to permit this.

**8.4. Relevant session events**

**8.4.1 Session 1**

The intervention commenced with an exploratory clinical interview which established the presenting problem, relevant history, triggering, contributing and maintaining factors for the problem, coping strategies and strengths, and goals for intervention. Prior to the session commencing, the client was provided with baseline measures which were completed in the office waiting room. After the initial telepsychology interview, the client was then given the post-session baseline measures (i.e. Agnew, CORE-OM and satisfaction questionnaire). These were also completed in the waiting room. She was also administered assessments at Session 3 and Session 5. Because her presentation was so unusual, I requested that Beatrice be administered another baseline administration package to repeat the BSI after Session 3. Session 5 was her termination session and so she was administered a termination assessment package (see Table 8.1, for the three measure scores over three administration occasions).

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<th>STAI-State</th>
<th>STAI-Trait</th>
<th>BDI-II</th>
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<tbody>
<tr>
<td>Baseline</td>
<td>88%</td>
<td>93%</td>
<td>27 (moderate)</td>
</tr>
<tr>
<td>Session 3</td>
<td>93%</td>
<td>99%</td>
<td>34 (severe)</td>
</tr>
<tr>
<td>Session 5</td>
<td>100%</td>
<td>99%</td>
<td>25 (moderate)</td>
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Almost immediately after the first session commenced, Beatrice complained to me that she would be unable to tolerate a planned hour of talking, due to the pain in her back and legs. This was an unexpected complication, particularly given the amount of information about the telepsychology process that had been sent to the referring psychiatrist, the mental health team who also endorsed Beatrice’s suitability for telepsychology, and to Beatrice herself, who had never previously indicated her potential difficulty with sitting for extended periods of time. Thus, in addition to collecting information about Beatrice’s problems, setting goals and commencing psychoeducation about CBT and depression, the first session had to incorporate an additional aim to cooperatively develop a plan for managing Beatrice’s pain during the telepsychology session. Though unplanned in the manualised approach, the situation actually presented an opportunity to begin modelling the collaboration approach and applying cognitive and behavioural strategies to a client-specific problem.

A preliminary functional analysis of Beatrice’s pain management strategies suggested that behavioural avoidance and anxious anticipation were contributing to her problems. For example, Beatrice claimed that sitting for extended periods of time was excruciating, and that when she was at home, she either lay down or walked continuously. However, she then revealed that she did not require a rest stop during the hour and 20 minute drive from her home to the telepsychology appointment that day. This evidence suggested that under optimal motivational conditions, Beatrice could manage her pain adequately to achieve desired functioning, and that other factors might be reinforcing her continued pain presentation.
Beatrice requested, after 20 minutes into the first session, that she get up from behind the desk and walk around the room to relieve the pain. During the first session, I attempted to pan the camera around the room and follow Beatrice’s walking and standing movements. This was distracting for me as therapist (I was also attempting to make notes while engaging with my client), as well as disruptive to the sense of fluidity in the verbal interaction. I also noted that it felt that her need for movement eroded my development of the therapeutic relationship with her and, possibly, as reflected by Beatrice’s early termination and refusal to engage in “deeper” issues, her relationship with me.

The small delay between pressing the remote at the near site (i.e. where the therapist was seated) and the camera commencing moving at the away site (where the client was seated) resulted in a sense that I was always “chasing” a facial view of Beatrice, and often “overshooting” her when she stopped. Beatrice did not comment that I appeared distracted by trying to manage the technology, but she did guess that she must have been out of camera shot while walking around at times, and commented as such.

One of the impressions about the initial interview sessions that I recorded in field notes was that Beatrice’s behavioural pain indicators (e.g. facial grimacing and wincing, bracing, rubbing, wrinkled forehead, restlessness) seemed disingenuous or exaggerated at times. I felt that Beatrice’s frequent restlessness, combined with the loss of visual clarity due to “fuzzy picture reception,” made it difficult to assess the genuineness of Beatrice’s pain. Moreover, as she was mostly within camera frame only from the waist up, it was difficult to assess congruity between her vocal complaints of discomfort and any lower body physical posturing. It was on this occasion
that a face-to-face contact may have proved more accurate, or at least allowed earlier, clearer judgement of her discomfort and level of pain.

![Beatrice - Session 1 ratings of the subscales of the therapeutic alliance measure (ARM)](image)

**Figure 8.2** Ratings of therapeutic alliance as measured by the Agnew Relationship Measure (ARM) made by the therapist and Beatrice after the first session.

On review of the ratings of therapeutic alliance made by Beatrice and me about our experience of the first telepsychology session (Figure 8.2), the scores suggest that Beatrice’s restlessness and frequent movement around the room reduced the sense of client openness and disclosure equally for the therapist and client. Although I “warmed” to Beatrice from the first session (i.e. high ratings of bond), my appraisal of the degree to which Beatrice openly and honestly engaged in the tasks of the first session are reflected in the scores I gave in the Agnew Relationship Measure (ARM) about Beatrice, and elaborated further in my field notes. As previously described, my impression was that Beatrice may have been exaggerating her pain experience and the
degree to which she was impaired; thus resulting in giving her low “openness” ratings. Additionally, Beatrice frequently expressed helplessness and hopelessness; both factors which influenced my giving ratings of low client initiative and low confidence (that Beatrice would be able/willing to implement the therapeutic strategies I recommended). Ultimately, it was the consistency with which Beatrice displayed the behavioural pain indicators and vocal complaints over multiple sessions which convinced me that whatever the objective nature or source of her pain, participatively, Beatrice experienced and expressed her pain consistently and significantly, even if it appeared to be in an exaggerated manner.

Beatrice’s positive experience of the first session, and her sense of alliance with the therapist and the therapy goals, was also possibly impaired by the disruption caused by requiring movement, and the limited visual range available while moving during telepsychology. Interestingly, in contrast to my therapist ratings, Beatrice perceived that she was more actively involved in the therapeutic tasks of that first session, as reflected in her higher ratings (than mine) of confidence, participation and initiative. She did not “bond” as highly with me as I did with her, and her own rating of openness was the same as mine. This pattern of responses suggests that 1) Beatrice did not easily feel trusting of me as therapist (as might be expected on the basis of her history), or 2) that she was withholding some aspects of herself or her story, or 3) that she was either intentionally or unintentionally misrepresenting herself (which would support my question about whether she was exaggerating her discomfort or disability).
8.4.2. Session 2

In Session 2, Beatrice agreed to trial 10-minute blocks of seated “work”, separated by two minutes of “rest”, which involved Beatrice walking to alleviate her back/knee pain in the interim. During this time I advised her that I would also leave the room. This approach was taken to test if the behaviour would continue despite no apparent secondary attentional gain. The behaviour continued even when it would have appeared that I had left the room and was beyond the range of the camera or monitor. However, while leaving and entering the room I paid close attention to Beatrice’s behaviour at the far site. She seemed unable to see me observing her. Beatrice appeared to be focused on relieving the pain in her back and knee, rather than seeking a response from me or any other observer. However, she moved across camera quickly and was often off camera. When this occurred, her behaviour could not be observed in its entirety.

This approach of working in 10-minute separated blocks gave a “stop-start” quality to the interaction and I found it an uncomfortable way to conduct psychotherapy. My impression was that time was wasted by disengaging and re-engaging alliance at the beginning and end of these brief blocks of time. Beatrice agreed to extend the “work” time to 15 minutes, but soon complained that this was too long for her to manage and preferred the 10-minute blocks.

This disruption would have been less problematic in a face-to-face session where; 1) the client may have been able to recline (i.e. many regular psychological treatment rooms are equipped with reclining chairs or sofas for relaxation type activities); or 2) the client would have been able to continue interacting with the therapist who could see her three dimensionally in a shared
space, rather than observing through a narrower, two dimensional camera space.

Using the biopsychosocial model as a framework for interpreting the interconnection between thoughts, feelings and behaviours, as per the CBT approach, I commenced the psychoeducation component of the intervention. At Beatrice’s request (made during Session 1), this component also incorporated educational readings about the aetiology and pathways of chronic pain. The aim of psychoeducation was to provide a rationale for Beatrice as to why the focus of intervention would be on her cognitions, and how they influenced her behaviours. This approach also introduced the concept of relaxation as one strategy, other than dissociation or depersonalisation, to cope with pain, fatigue and negative emotions.

In the context of the telepsychology intervention, relaxation was included as a positive and useful adjunct to the behaviour therapy, as well as being potentially beneficial for pain management, and therefore reducing her depression. It was also emphasised that the relaxation was a small, first step to help her prepare for future attempts to address her longer standing issues of abuse, fear and trust.

Beatrice was extremely hesitant to try relaxation, as she had previously tried Progressive Muscle Relaxation (PMR) with a hospital-based therapist and claimed that after the session she had been in excruciating pain for several days. After much discussion and reassurance from me that I would not force her to engage in something that was beyond her capabilities, Beatrice agreed to trial a guided-imagery relaxation at the next session (we ran out of time to commence it during Session 2 because of this discussion) on the condition that
the relaxation part of the session would involve only attention to various muscle
groups, as opposed to physical manipulation. It was hypothesised that a PMR
exercise, which involved increasing her hyper-vigilance to bodily awareness,
would also increase her somatisation and not be beneficial to achieving a
relaxed state. However, Beatrice’s tendency to dissociate from emotional
content, along with her apparent alexithymia9, might benefit from a
sensation/body orienting relaxation. This somatic relaxation might offer a form
of emotional conditioning exercise, in addition to laying preparatory groundwork
for a “positive pairs” exposure strategy, to be used when addressing longer
term abuse issues.

Discussion of the CBT model also prompted me to observe and feed
back to Beatrice about her seeming to struggle to describe her emotions, and
her tendency to minimise her distress as well as her joy. Beatrice reported
being unaware of her restricted affective range. I repeated some of her
statements, including her tendency to describe a long litany of physical
ailments, all suffered at a ≥7 out of 10 level of pain, as “a nuisance”. She had
also labelled the lifestyle restriction of her pain, her fear of intimacy and her
inability to have children, as “a nuisance”. When I suggested that she seemed
to underst ate the emotional importance of these factors, Beatrice accepted this
observation but could not generate alternative emotional labels, adjectives for
her distress/pain or affective descriptions, other than “a nuisance”. When I
suggested that she may have developed a pattern of self care from her early
abuse experience, which may have included numbing herself or controlling her
emotions (e.g. see Briere & Scott, 2006; Cloitre et al. 2006), she said that she

9 Alexithymia is reported to be a symptom fairly typical of adult survivors of childhood abuse (Cloitre,
Cohen & Koenen, 2006), as has a restricted affective range (Briere & Scott, 2006).
remembered feeling like she watched herself being molested
depersonalisation), and that sometimes she “zones out” (i.e. cognitive-emotional
disengagement, dissociation) and “time just goes by” (“missing
time”) (see Briere & Scott, 2006). She agreed that my theory had merit, but
she had no thoughts or feelings about how her past might have helped or
hindered her current pain-related issues. Her struggle with emotional
expression and insight were identified as particularly challenging for a CBT-
based psychotherapy model, where identification of feeling states and the
thoughts which produced them are necessary therapeutic tasks to changing
depressed mood.

Without prompting, Beatrice said she would have preferred to have seen
me face-to-face, because of the issues associated with her being unable to lie
down during therapy, and Beatrice offered to visit my office next time she was
in the city. This offer was declined on the basis that the service agreement
between me, as the therapist, and Beatrice was only to connect via
telepsychology. It was not apparent that this exchange ruptured the therapeutic
alliance between client and therapist from my perspective; however, this may
have been the case. Results taken from the satisfaction measure at the
conclusion of this session indicated that Beatrice had selected lower ratings
after this session than she had after her first session, regarding
telepsychology’s ease of use, her overall perception of usefulness of the
session and level of in-session control (Figure 8.3).

Although she rated her personal comfort with using technology higher
than after her first session, she indicated that she would prefer face-to-face
interactions over telepsychology interactions. Her reasons were that face-to-
face interactions were “more personal” and that telepsychology made her feel “a little embarrassed” when she used it.

Figure 8.3 Beatrice’s ratings of satisfaction with telepsychology over 3 measurement occasions

8.4.3. Session 3

When Beatrice attended for her third session, two weeks had elapsed since the previous session. Beatrice had a pre-planned two-week break from telepsychology because she had been visiting specialists in Perth for her pain and injury issues. While she was in Perth, she was trialled on antidepressants by these specialists, and, again, she ceased them against advice after four days. She also expressed little positive expectation for the specialist’s assistance to relieve any of her negative physical or emotional discomfort, but stated she was grateful for the specialist’s time and interest in her. Her
comment gave me the impression she was unmotivated to change the status quo.

As with previous sessions, this third session was planned to work with 10-minute seated work time separated by 2-minute (physical) breaks to accommodate Beatrice’s pain levels. After the difficulties with camera tracking that occurred in earlier sessions, the client was asked to stand, rather than walk around, during this session. This was requested so that I could “zoom out” with the camera and keep her in frame, so that a pause in the therapy did not occur even if Beatrice was taking physical “rest” from sitting. I attempted to zoom and pan the camera to follow Beatrice when she got up from behind the table. The field notes indicated that this negotiated process did not improve my sense of continuity with the therapy content, as I had hoped it would, and Beatrice seemed unable to maintain therapeutic engagement while frequently moving around.

During our interaction, Beatrice often interrupted discussions to enquire as to when the 10-minute “work time” block was over. After completing the first two rest blocks, she requested to be permitted to walk around, and not just stand. When she did so, she was encouraged to move slowly so that I could follow her movements with the camera. Two further unsuccessful attempts to pan and track Beatrice ultimately forced a solution where I kept the camera in a wide-shot to keep her in view. However, the loss of visual acuity in the wide-shot was significant and it was hard to make out Beatrice’s facial expressions, or not lose some sound volume and clarity when she moved away from the microphone. Tracking her movement interfered with the continuity of the
session, and it was hard for me to keep focus on therapy content and maintain awareness of interpersonal processes.

The third session introduced relaxation as a core component of the planned CBT intervention. While relaxation is a typical component of CBT, it has been demonstrated that relaxation, breathing retraining, self-regulation and auto-hypnotic intervention can be delivered as effectively via telepsychology as in face-to-face conditions for clients with chronic pain (Appel, Bleiberg & Noiseux, 2002). To prepare for an imagery-based relaxation exercise, I asked Beatrice to visualise and describe one happy memory from any period in her life. Over a 20-minute period, Beatrice was unable to visualise or describe in any detail other than single-word responses (i.e. “pets” and “birds”), and was unable to describe any “feeling words” associated with these images, nor could she see herself in these images. For example, when pressed to describe the setting, or features associated with feelings (i.e. warmth, moisture in the air, etc.) she was unable to elaborate. Reassuring her and sympathising, I encouraged her to keep practicing viewing herself in the image and finding more detail for the visualisation, while telling me what she saw. After a few minutes of offering only that she liked birds singing, she stated “...it’s too hard to tell you anymore”. This exercise was set as homework to be reviewed at the following session. From this exercise response and during future sessions, it became increasingly apparent that a cognitive-based intervention was difficult to engage in with this particular client, due to her incapacity or unwillingness to identify and label feelings, or reflect on the cognitions that had elicited them.

Beatrice seemed frustrated and irritated after attempting this exercise. Ten minutes were allocated to debriefing and reassuring her about the
continued value of visualisation and relaxation practice. After this session, Beatrice’s scores on the State-Trait Anxiety Inventory and the BDI increased (Table 8.1).

In addition, her scores on the BSI also increased (see Figure 8.1. above), such that all subscales exceeded “caseness” (i.e. >62) except “depression” (score = 61). These scores may have reflected her distress following being unable to complete the visualisation exercise. Her satisfaction scores after the third session also decreased regarding sound quality, ease of use, distractibility, usefulness, controllability and overall satisfaction, compared with the first session, but increased in ratings of comfort compared to the first session. All other scores remained the same.

This score pattern suggests that, despite Beatrice becoming familiar with the telepsychology technology and the telepsychology experience, her physical symptoms and avoidance behaviours were influencing her perception of the performance of the telepsychology technology and of the quality of the telepsychology experience. In this particular instance, it seems reasonable to conclude, therefore, that familiarity and comfort are not sufficient to maintain satisfaction for some clients.

8.4.4. Session 4

In the fourth session, I spoke to Beatrice about her progress in therapy thus far. If we followed the CBT manualised approach according to the session plan, we would have completed the initial assessment and goal setting interview, psychoeducation about the nature of depression, (What is Depression?, pages 1-4), the relationship between behaviour, thoughts and
mood (The Vicious Cycle of Depression, pages 5-7), and the introduction of the concepts of pleasure and mastery in activity (Behavioural Activation: Fun & Achievement pages, 8-10). Thus far, we had only completed the initial interview and psychoeducation, along with a discussion of the relationship between thoughts, behaviour and mood in the context of pain management. Relaxation was not a typical single component of this particular mood management programme, but had also been commenced to assist with the management of pain.

As had been her same presentation at every session, Beatrice appeared low in mood and agitated, was responsive to questions but did not elaborate on responses unless prompted. She stated that when the telepsychology sessions ended she always felt relieved. She was afraid of the effect of the sessions on her emotions and thoughts about her childhood abuse. She also stated that she felt relieved that she no longer had to sit for long periods of time.

Beatrice spontaneously commented that she felt that her sessions would “be better” if she lay down. She seemed unable to tolerate the full 10-minute blocks and often fidgeted in her chair, although the full extent of this fidgeting could not be determined because she had to sit behind a table to be in camera view. Although she acknowledged that she didn’t lie down for any other specialist appointment, she claimed that she didn’t have to participate in other appointments for so long a period of time.

Session 4 progressed to completing a “sunshine over the body” visualisation/relaxation exercise. This exercise took approximately 13 minutes to complete. I noted in the field journal that it was difficult to ascertain Beatrice’s comfort at the start of the exercise, due to a sense of being “too far
away” from her, and having to zoom in to get a clear view of her. Beatrice started fidgeting and moving in her chair in the first three minutes. She did not appear to be engaged with the relaxation. I made this conclusion on the basis of combining physical cues and assuming under-the-table movement (based on above-table movement), combined with facial movement. The visual quality of the image and Beatrice’s relative distance from the screen made the picture too blurry and unclear to definitively confirm that she was flickering or grimacing in pain.

After the visualisation exercise ended, she rated her SUDS again (7/10 prior – 8/10 post) and described her “most prominent feeling state” as that of “feeling seized up”. She had to stand immediately and walk off the pressure. She claimed that her head was relaxed, but she was conscious of pain and discomfort in her back and legs. She was unable to describe any positive experience from the exercise.

As a typical component delivered during a comprehensive CBT intervention for depression and anxiety, a relaxation script delivered via telepsychology is generally simple and comfortable to do. However, in this case, and for this client, I perceived that Beatrice was not fully engaging in the technique and that this was only partly due to the distraction of her chronic pain. With this particular client, and possibly due to her lack of emotional insight, I speculated that the lack of “presence”, which has been reported elsewhere in telepsychology encounters (e.g. Turner, 2001), may also have contributed to the lack of engagement with the visualisation.

I also recorded in field notes that I “had a sense” that the teleconferencing almost did not allow for diagesis (or the suspension of
disbelief) to occur. A lack of diagectic effect meant that neither Beatrice nor I could become fully immersed in the moment, as one might when fully, emotionally engrossed in a movie. It was during this moment that I felt the telepsychology transmission seemed “artificial”, and perhaps this was due to the “scripting” (in the relaxation script, and manual generally) or the one-sidedness of the interaction.

These experiential reflections around the process of delivering components of an intervention were possible due to the participatory research methodology. The feeling of an absence of diagectic effect in telepsychology may be explained as 1) an interpersonal anomaly; 2) a therapeutic quirk, bad practice or ruptured alliance; or 3) a genuine artefact of the telepsychology process. My impression was that Beatrice’s personality and pain management behaviours, combined with telepsychology’s poor catchment of movement (and my difficulty with manipulating the camera fluidly), decreased the sense of presence and suspension of awareness of the technological environment. In summary, a combination of all three explanations probably contributed to the loss of therapeutic connection. Further observation and reflection on the delivery of scripted relaxation techniques is warranted to elaborate on whether telepsychology does impact on the effectiveness of the delivery of this well established therapeutic intervention technique. Relaxation scripts were used in other cases and these will be elaborated in the Chapters to follow.

Therapeutic alliance is reported to be of particular importance in working with adult survivors of child abuse (Briere & Scott, 2006; Cloitre et al., 2006). Results from the parallel versions of the Agnew therapeutic alliance scales (see Figure 8.4) suggested that Beatrice rated overall alliance higher than I did.
on both testing occasions, with bond increasing by the second assessment, and equalling my rating. Although her openness increased over testing, it still remained the lowest average client-rated score on the Agnew Rating Measure, and probably reflects the previously mentioned alexithymia and depersonalisation noted in session.

![Figure 8.4](image)

*Figure 8.4 Comparison between the therapist’s and Beatrice’s mean alliance subscale scores at Session 1 and Session 5, as measured on the Agnew Relationship Measure (ARM).*

In the early stages, I recorded lower evaluations of the level of initiative and responsibility that Beatrice was taking for engaging in therapy than she did about herself. On the second assessment, both Beatrice and I had evaluated her level of initiative more equally. These ratings suggested that we were both appraising Beatrice’s issues, and her commitment to address these, in an equivalent manner. My field notes recall feelings of frustration and concern
that I was not progressing therapy with Beatrice adequately. My ratings on the confidence subscale of the therapist version of the Agnew Rating Measure captured this lack of confidence about being able to assist the client adequately. Fortunately, my ratings of confidence were always lower than those of the client, which implies that the client had hope that she would benefit from the intervention and was confident in my skills to assist her to do so.

8.4.5. Session 5 – The final session

At the fifth session, Beatrice again presented with no obvious differences in her emotional and physical presentation. By this session (which became the final session) Beatrice indicated that she was still unable to visualise any pleasant recollection or image and was unwilling to engage in “feeling talk” with me. The main positive future-focussed statement that was elicited during this session was Beatrice’s hope that when she next saw her city-based physiotherapist, the therapist would be able to develop her exercise therapy more. Beatrice remained focused on her somatic concerns and sought medicalised options for change, rather than psychological ones. Although she remained reluctant to try or sustain medication, she nonetheless believed that one pill should have been able to achieve relief for her in all facets of her life and problems. Beatrice was unable to recognise the unrealistic nature of this expectation and was unable to explore the cognitive distortions underpinning her unhelpful assumptions and unrealistic expectations.

To terminate the session and our further contact, Beatrice was asked to reflect on her experience of psychotherapy. She stated that she felt uncomfortable and afraid to proceed with therapy any further. She could not
elaborate on what this fear or discomfort looked or felt like to her, nor could she speculate as to why help-seeking made her “feel worse”. She made no connection between her history and present pain concerns, yet reported frequent recollections from her past interrupting her thoughts everyday. She said she felt relieved when sessions were over, but always experienced significant intrusive thoughts and imagery about her abusive childhood on her drive home, and during the days following the session. She could not see a link between her worry/anxiety and her participative appraisal of physical pain. She did not want to experience this anymore, but only wanted help for her pain. She felt she was not getting benefit from relaxation training and that it, paradoxically, caused her more pain. She considered that continuing with therapy would be of little benefit at this time because she was unwilling to explore “emotional issues”, and she felt that it would be better if she could lie down during the sessions (a physical accommodation that was not possible with the existing telepsychology service).

I reiterated the rationale of the intervention from the cognitive behavioural model, and concurred that the session’s aims were to identify unhelpful thoughts associated with emotions. I also concluded that Beatrice seemed focussed on her physical sensations, was unable to describe her emotions and was unwilling to explore her thoughts. Subsequently, she seemed unsuitable for this particular research intervention, despite being referred by her psychiatrist. I agreed with Beatrice that, at this time, the telepsychology format seemed unsuitable for her, because of her apparent physical needs, and because she was unwilling to “get on board” with the
intervention rationale being offered. I concurred with the client’s conclusion that there was little benefit of proceeding with the intervention at this time.

Despite her unwillingness to engage in exploratory or insight-oriented therapy during telepsychology, Beatrice claimed to still be interested in getting “help for her past”. She was willing to be referred back to the psychiatrist to be recommended for long term psychotherapy with a face-to-face therapist, who was experienced with adult survivors of childhood abuse and appropriate therapies. This seemed extraordinary, given her unwillingness to explore her past at all during our sessions, but she seemed to attribute this reluctance to the telepsychology environment. Interestingly, while she claimed she did want to engage in psychotherapy for issues related to her past experiences, she did not plan to ask for a referral to a therapist from her psychiatrist for “another 6 months or more”. Based on her anxiety ratings at the end of the five sessions, (Figure 8.5 below), it would not be unexpected that she would avoid psychological help-seeking, despite clearly needing assistance.

![Beatrice - State-Trait Anxiety Inventory (STAI) percentage scores](image)

**Figure 8.5**  Beatrice’s ratings on the State-Trait Anxiety Inventory (STAI) from Baseline, Session 3 and Session 5.
8.5. Discussion

Beatrice was seen via videoconferencing for a total of five sessions over eight weeks. She was administered all the psychometric assessments after each of the sessions; however, she did not complete the Agnew-Rating Scale at Session 5, although it was included in the questionnaire package. It is unclear why this questionnaire was not completed, but it may have been overlooked. By the time the questionnaires were received in the mail and processed, four weeks had elapsed between finishing the sessions and receiving the package. Although a follow-up package of questionnaires was sent to Beatrice six months after therapy finished, she did not complete and post the package back, nor did she respond to further messages or correspondence. She was also no longer seen by the psychiatrist. Ultimately, it was determined that she had moved from the area.

In a shared decision, Beatrice’s continued involvement in the telepsychology intervention was terminated after the fifth session. Although referred by the psychiatrist as an appropriate candidate for CBT delivered via telepsychology, her physical pain condition and her request for either continuous movement in session, or the opportunity to lie flat, made her a poor candidate for telepsychology. Additionally, her unwillingness to actively address the underlying abuse issues, which may have been the source of her pervasive avoidance coping framework, depersonalisation, cognitive dissociation, and alexithymia, made her a poor candidate for CBT, notwithstanding that CBT is indicated as an appropriate intervention for adult survivors of child abuse.
Although Beatrice’s scores of depression decreased slightly, though not clinically or statistically significantly (i.e. from 27-25), her anxiety scores had increased (from 88-100% on STAI-S) over the course of the intervention. On the Brief Symptom Inventory (BSI), her global score had decreased from a clinical to subclinical level, with most subscale scores decreasing except internal sensitivity (I-S) (no change). Hostility (H) and paranoid ideation (PAR) had increased, but remained at the sub-clinical level. Her scores had reduced from clinical to subclinical levels in obsessive-compulsive (O-C) and phobic anxiety (PHO) subscale scores. These results suggest that, despite her claims to the contrary, Beatrice did experience some very mild benefit from the intervention. Unfortunately, no follow-up data was available, so it is unclear if she maintained any benefit from these sessions.

With regard to the telepsychology, Beatrice demonstrated one of the main factors which might preclude a client from attending telepsychology – namely, the incapacity to sit for longer than 10 minutes during a session. The sessions with this client demonstrated that camera panning or widening of shots to accommodate movements, reduced the clarity with which physical symptoms, such as depersonalisation or “zoning out”, could be identified. Moreover, such avoidance behaviours were unable to be used as “significant clinical moments” on which to reorient the client to reality and practice coping with negative emotion states. Similarly, the capacity to reflect back to the client the observed physical responses as “hooks”, on which to identify internal emotion states for the alexithymic client, was also lost by the camera and client’s movement.
As demonstrated by her ratings on the satisfaction scale, and from spontaneous statements, Beatrice would have always chosen face-to-face intervention over telepsychology when given the choice. Her satisfaction ratings also included a preference for telepsychology over no service at all. However, this forced choice can hardly be considered indicative of being satisfied with telepsychology, and this is a question which often remains unanswered in other satisfaction studies (Harley et al., 2002; Mair & Whitten, 2000; Williams et al., 2001).

In her other ratings (Figure 8.3), Beatrice was more willing to positively rate the clarity of the sound, the lack of distraction by the technology, the ease of use of the technology, her perception of the usefulness of the session, and her overall sense of satisfaction with the telepsychology experience. Perhaps reflecting her lack of familiarity or her limited physical capacity, she rated a low sense of comfort and control with the technology.

Despite leaving the intervention, having had very few of her self-stated needs met, and perceiving no specific positive clinical change, had Beatrice’s satisfaction ratings been interpreted without the supporting narrative of the intervention process and session progress, the rating of “3” out of “4” on the Likert scale of the questionnaire could be perceived to be positive, and the client therefore “fairly satisfied”. In reality, Beatrice was not satisfied, and terminated the therapy because the procedure and the approach did not suit her. Further, I was not satisfied with the technology and its constraints, in this instance, despite being a competent and experienced user of the technology. The combination of qualitative, detailed description with quantitative data enhances the practice knowledge and tells the real story, in real time, of what
happens in therapy. It is this unique insight which enhances the conclusions of this thesis, and allows their translation into real-world clinical practice.

As described in the literature review, research suggests that there is no significant difference in clinical outcomes for participants in randomised controlled design interventions which compare telepsychology to face-to-face interventions. For this particular case, my conclusion was that, in contrast to the research literature, a face-to-face intervention may have been more successful than telepsychology. The loss of visual and auditory clarity significantly affected the ability to conduct an intervention. Additionally, over five sessions, this particular client scored more poorly on clinical assessment scales (BDI-II, BSI & STAI), as well as on the satisfaction and therapeutic alliance scales. Client features also moderated the effects of technology. For example, this client was unable to remain seated for the duration of sessions, she was non-compliant with adjunctive treatment, avoidant of psychotherapy engagement, was alexithymic, and appeared to dissociate to cope with negative emotion states. These client-related issues would have represented significant therapeutic challenges in a face-to-face environment, and may have made psychotherapy progress slow and limited. However, due to the intrusion of the telepsychology technology (i.e. blurred visual acuity, excessive camera movement resulting in loss of the client within the image frame, the loss of sound clarity from movement, an inability to observe the whole body of the client), the challenge of these client-related issues was magnified to such a level that therapy was terminated. While the literature has indicated that telepsychology appears to have produced better outcomes for some clients
Telepsychology in Rural WA

(i.e. McLaren et al., 1995; Mitchell, (J.E.), et al., 2003; Simpson, Bell, Knox & Mitchell, 2005), in this particular case study, this appears to have not been the case. Previous research (Appel et al., 2002) indicates that self-regulation training for chronic pain sufferers can be taught via telepsychology, as can hypnotherapy (Simpson, Morrow, et al., 2002). This approach was unsuitable in this case, however.

Negative clinical outcomes are not the reported norm for the published literature. However, on the basis of this case, it can be concluded that telepsychology does not always produce results that are equivalent to face-to-face interventions, and in this case telepsychology was not effective.

Telepsychology represents a multilayered, complex intervention which cannot be simply boiled down to a question of “Does it work or not?” The mixed approach of combining qualitative with quantitative data, and triangulating findings with previous literature and other user’s accounts, is essential to provide detailed and contextualised information about a complex human interaction. Part of the reason for the complexity was due to the interactionist nature of what the research was attempting to measure. Unlike traditional quantitative research (and to a lesser extent, even qualitative research) which measures the impact of an intervention on the client alone, this mixed method approach was assessing the impact of the intervention on the client, as well as the impact on the therapist delivering the intervention. Having both perspectives allows for an understanding of successes, but also helps to understand the failures of therapy, and to permit conclusions to be drawn from data that, in traditional studies, would tend to be lost, ignored or actively excluded from consideration.
In Beatrice’s case, the conclusion that I drew was that telepsychology did not work for her. This was partly due to her personal issues and therapeutic needs, and partly due to the conditions of telepsychology. Had we not collected the in-depth qualitative data, which was augmented by the quantitative outcome data, this particular case might have been dismissed as an outlier or relegated to the category of therapeutic failure. In reality, this case has provided further information about the kinds of clients who may be unsuitable for telepsychology (i.e. pain conditions which preclude sitting, clients with a frequent tendency to dissociate), and which camera strategies (i.e. wide shots, panning) are helpful or intrusive. The mixed methods approach has been particularly useful to assist in triangulating disparate data points into a pragmatic practice-based whole.

In Beatrice’s case, various iterations of therapeutic process were trialled to maximise therapeutic outcomes, particularly in terms of manipulating the technology, and the therapeutic strategy. Without monitoring the iterations, and recording their success or failure, useful data would have been lost. In a traditional study, which would be unlikely to deviate from the manualised approach, let alone monitor and report on the iterations that were made, this intervention may have terminated after the first session. Such a consequence would have reinforced Beatrice’s beliefs that psychotherapy was of no value, and perhaps, that there was something “too” wrong with her that precluded her from being provided with psycho-therapeutic assistance. By using a developmental approach, attempting to match the approach to the client’s needs (rather than force the client to match the intervention), and modifying the conditions of the intervention to incorporate changing conditions, the possible
outcome is that the client remains engaged long enough to obtain psychotherapeutic benefit, or at least will feel more positive when they next attempt to engage in therapy. It was my impression that the developmental, collaborative approach undertaken during the intervention with Beatrice contributed to her willingness to acknowledge the influence of her past and to consider the impact of unhelpful thinking and coping strategies on her current problems, and to plan to seek future psychotherapy assistance. With regard to the research question, the developmental approach allowed for a distillation of focus in the intervention, to quickly, but accountably, discriminate between helpful and unhelpful therapeutic strategies and environmental conditions to maximise the outcome for the client.

Neither the client nor the therapist was satisfied with the telepsychology technology on this occasion, based on their unsolicited comments during the sessions or from field notes. In contrast, the satisfaction ratings on the Likert scale satisfaction questionnaire never dipped below 2 out of 5 ratings (0=worst, 4 =best) over the multiple assessment opportunities.

Beatrice requested that she meet with me in person during the second session, because she expected that she would feel more comfortable outside of the telepsychology environment. As a therapist, I found dealing with the technology frustrating, and I had to sacrifice clarity of image (and sound) for inclusiveness of the image frame. I also found that the multitasking of managing the technology distracted me from concentrating on the content of what the client was saying, and maintaining my body language in such a way to encourage disclosure and elaboration. By Sessions 4 and 5, I had mostly stopped trying to “manage” the technology, and had settled on a long shot of
Beatrice. In general, I found the experience disappointing and frustrating, and could imagine how much easier a face-to-face arrangement with this particular client, on the basis of my therapeutic approach and counselling style, would have been.

As previously described, the specific client-related issues that Beatrice brought to therapy included an inability to sit for extended periods of time, alexithymia and a tendency to dissociate as a coping strategy for dealing with stress and negative mood states and thoughts. In a face-to-face therapy environment, the therapist’s view of the client would usually be unimpeded. The therapist could observe the client’s body language to infer emotional state, agreement with the process or degree of engagement. A full body view also permits the therapist to observe the congruence between what is said during a session, compared to what may be felt. Having a full picture of a client permits the use of icebreakers (i.e. “Are you limping? What have you done to yourself?” – i.e. inferring care about the client’s well being), pointing out contradictions (i.e. “You said it doesn’t worry you, but I noticed your leg has started to shake?”), identifying emotional changes, losses in concentration or avoidance strategies like dissociation (i.e. “I noticed that as I started to mention your father your eyes seemed to look past me?”, or “What were you thinking then when your eyes started to well up?”).

When the telepsychology camera is set up, it is typically arranged so that both parties to the videoconference sit behind a desk, and so that, like a newsreader, only the top half of the torso, face and top of the head are visible on screen. The result is that anything below the bottom edge of the camera frame is out of view. Movement, fidgeting, wringing hands, itching and
shuffling can be hidden below the field of view in a telepsychology interaction. In a face-to-face environment that physical/visual information is incorporated more unconsciously into the therapist's processes. In a telepsychology interaction the therapist may need to verbally check for confirmation about the client’s emotional state or thought processes which may be modifying their physical appearance. This need to check my own hypothesis about what the client was thinking or feeling is one example of the modification I made during the practice of therapy.

In a related example, the limited point of view of the camera means that the comfort or discomfort of the client cannot be assumed. In this case study, Beatrice had to request the opportunity to move around the room during our first session due to discomfort in her legs. The extent of her physical discomfort was not obvious to me, and her description of her past and current issues were delivered in a fairly monotone manner in the first interview. Additionally, she had informed me that she had driven the long drive to the appointment with no break necessary. I was unable to see her fidgeting under the table, nor was I aware of the extent of her avoidance and alexithymia at this stage. I interpreted her pain as tolerable on the basis of her presentation, but her non-visible body language may have suggested an alternative interpretation. It was not until I verbally enquired as to her current pain levels (20 minutes into the first session) that she requested the chance to move around, and claimed she would be unable to sit through the planned session duration.

Another example of this same phenomenon can be found in the transcript analysis of Chapter 5 (Client #0231; pp. 198-199) where the therapist
assumed that the client, whom she could see on her telepsychology screen from the waist up, was also sitting down. The therapist was sitting down at her site, and assumed that the client would also make himself comfortable in his own home. In fact, this client appears to have been standing for some of the session to accommodate technical problems. The therapist only discovered this after direct questioning.

To accommodate Beatrice’s need for movement, we trialled taking scheduled breaks. Such an approach might also be used in a face-to-face environment. Because her movement took her out of the camera view, it also meant that therapeutic exchange also “took a break”. The frequent interruption to the session delayed the re-establishment of alliance, and just as a positive interpersonal connection seemed re-made, another break was required. To avoid interrupting the alliance so significantly, we trialled camera tracking Beatrice’s movements while taking a break, but not stopping the therapeutic exchange. This meant that not only was I listening and speaking, and writing notes, and maintaining eye-contact, but I was also manipulating a remote camera with a remote control. Needless to say, it was difficult to write notes and maintain eye-contact. It was also disruptive to the feeling of alliance in the session.

When camera tracking proved too intrusive during the interaction, the camera at Beatrice’s end (far site) was kept in a wide shot, so that I (at the near site) could see her no matter where she moved around. This adjustment enhanced the “flow’ of the session, but my impression was that the lack of visual and auditory acuity meant that I missed important cues and clinically
relevant behaviours, which may have enhanced our relationship, and which may have been useful therapeutic targets to address.

The research literature is mixed about whether changes to therapeutic approach or counselling style are required in telepsychology. As described in the literature review of Chapter 2, several authors have reported that clinicians complain that telepsychology results in having a reduced ability to observe body language, a tendency to miss the subtleties of non-verbal communication, the potential for reduced rapport, a lack of sense of presence during therapy, and reduced spontaneity during communication (Bischoff, Hollist et al., 2004; Hill, 1997; Mannion et al, 1998; Omodei & McLennon, 2000). Feedback from the experts surveyed in Chapter 4, and as also described in the literature (i.e Jones et al., 2006; Miller et al., 2005), does suggest that camera technique and verbal styles (i.e. speak at a slower rate, avoid “uh-huh” type utterances, etc) need to be accommodated. Moreover, the experts surveyed also concur with the findings in this case that the loss of body language acuity is problematic (see Chapter 4).

Therefore, the research question that therapists do change their approaches, techniques and styles does seem to be borne out by my personal experience in this case. How physical agitation and movement can best be managed in telepsychology remains an issue for investigation, and one which, following this experience, might preclude some clients from being seen via telepsychology, and instead, might necessitate being seen face-to-face.

With regard to the question of whether the telepsychology experience alters a client’s behaviour, this case study does not permit a direct comparison between Beatrice’s current response to psychotherapy and her past or future
responses. However, Beatrice reported non-compliance to medication treatments and unwillingness to address the psychological issues which might be contributing, maintaining or exacerbating her pain, while expressing a desire to focus on pain coping strategies only. Beatrice gave me copies of all her medical reports, which she appears to do with every new “specialist” with whom she becomes involved. I perceived that she believed this legitimised her health story, and diverted attention from the psychological aspects which were exacerbating her current problems. My impression was that the special conditions of the telepsychology encounter permitted Beatrice to more fully engage in psychological avoidance behaviours, disguised as “pain management strategies”.

According to Beatrice, this was her first attempt to engage in psychotherapy, but it is unlikely that her psychiatrist (at least) had not employed psychological techniques with her previously. In that environment, it is probable that she would have been asked to reflect on her psychological state, while undergoing treatment. At the very least, she would have been asked to monitor her pain and its impact on her, to evaluate the effect of the treatments being administered to her. Given that her original injury occurred over seven years ago, and her medical help-seeking has been prolific, it is probable that Beatrice’s behaviour in session was consistent with her normal help-seeking interactions.

Beatrice stated that she found the experience of observing herself on the monitor embarrassing, and this may have increased her shyness, and thus my impression of her alexithymia (i.e. she may have felt a reluctance to
 disclose emotion, rather than inability to describe it). I do not consider this explanation sufficient, given her presentation and history.

8.6. Conclusion

Ultimately, I consider Beatrice’s case a failure for telepsychology intervention. However, hers was an extremely useful case study for the purposes of telepsychology research. The difficulties and challenges we faced in trying to engage in a therapeutic relationship together were extremely valuable in identifying what does not work, and what can be replicated from the literature when applied in the real-world. In a different research design, such valuable data might have been lost. The developmental, mixed methods, action research design of this study has permitted the extraction of positive useful data from what might, in other research designs, have been a disappointing clinical outcome, and possibly discounted from the data set.

To maintain brevity, the chapter to follow summarises the findings from the other research participants and their case-studies.
CHAPTER NINE

SUMMARY OF CASE-STUDY FINDINGS AND RESULTS

9.1 Introduction

According to Peterson (2004), systematically conducted case-studies are explanatory and scientifically rigorous when their data is participanted to inductive analysis to uncover natural clusters of detail, so that lawful trends might emerge. Peterson further argues that case studies which are presented as compilations or exemplars alone provide only limited contributions to the development of scientific knowledge. In balancing the size restrictions of this thesis, the reader is directed to Appendices H and I for two other full case studies, the following chapter will provide a summary of all of the findings from the cases in the intervention study as an inductive, nomothetic study when possible, with idiographic exploration when illuminative or exemplary.

The case study findings from the eight intervention clients, who participated in the research over a 12-month period, will be summarised below. As per the recommendation of Peterson (2004), the results from the qualitative and quantitative analyses will be combined and compared, to identify emerging trends and unanticipated outcomes.

This chapter’s integrative summary-across-cases is intended to illuminate issues relating to technical considerations, participant characteristics, therapeutic factors, practice adjustments and research challenges that emerged from the telepsychology delivered, CBT intervention for depression in community-based consumers. These categories represent the priority telepsychology research foci, as identified in the literature review (Chapter 2.5).
9.2. Quantitative results across cases

Results were collapsed across all eight intervention cases and scores on standardised questionnaire baseline measures were compared to their matched follow-up measures (except ARM scores which are taken at the client’s final session). As can be seen in Table 9.1, these results demonstrate that almost all participants improved overall. The exception was the total rating score for the therapist’s total score (rating alliance with the client) on the Agnew Therapist Rating Scale. Clinically significant changes (i.e. changes in scores >2 standard deviations\(^{10}\) and/or changes from a symptomatic (i.e. moderate or severe level) to a mild or asymptomatic level) were observed for the group in depression (as measured by the BDI-II) and anxiety (as measured by the STAI-state). However, these were not statistically significant (as measured by paired t-tests) between the first and final measurement occurrence. Only measures of trait anxiety (STAI-trait) \((r=.707, p=0.05)\), and alliance (total scores of ratings by the therapist) \((r=0.879, p=0.004)\), were significant on paired t-tests between Session 1 and the final measurement occurrence. No other measures were statistically significant.

On the Brief Symptom Inventory (BSI), only the somatisation subscale achieved caseness (scores of ≥63) at the first assessment occurrence across all participants. The relatively high score on the somatisation subscale, in all likelihood, reflected the fact that in this research sample, four out of eight clients were co-morbid chronic pain sufferers. Despite the challenges that the pain co-morbidity brought to the telepsychology environment and the CBT

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\(^{10}\) Criterion A of Jacobsen & Truax’s (1991) determination of clinical change was used in order to capture positive symptomatic change compared to a normal population. This approach was chosen as it reflected the nature of the sample population being studied (i.e. community mental health clients) and change was assessed in terms of 2 standard deviations from the mean of the dysfunctional population in the direction of the normal population (i.e. an asymptomatic population).
intervention, it is a surprising positive outcome that for all participants somatisation reduced by a clinically significant level from the first session to follow-up. The phobic avoidance subscale on the BSI also neared caseness at the first measurement occurrence ($\bar{x} = 62.5$), but did not reach a difference of 2 standard deviations. One participant scored lower at the final measurement than at the first. The obsessive-compulsive, depression and anxiety subscales did not achieve caseness in the first instance ($\bar{x} = 59.7, 56,$ and $55.7$ respectively), however, they demonstrated significant score change in excess of 2 standard deviations, from the first to the final assessment, across all participants. Individually, one participant did not improve on the obsessive-compulsive scale. One different participant did not improve on the depression subscale and the anxiety subscale. Collapsed across cases, a large reduction in scores for the first and final assessment on the psychoticism subscale was also observed, and was clinically significant. At an individual level, two participants did not reduce their scores from the first and final sessions. The Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM) evaluates participantive wellness (e.g. positive feelings about self and the future), general day-to-day functioning, self-reported problems (e.g. anxiety, depression, physical problems and trauma), and risk to self or others, as well as a total score. Across all participants, comparing the mean scores from the first session to the final session, all subscales indicated clinically significant change had occurred (determined by changes from above the cut-off score to
Table 9.1 Summary of mean scores (and ranges) from all standardised outcome measures at first and final measurement occasions

<table>
<thead>
<tr>
<th></th>
<th>n=8</th>
<th>Baseline score mean and (range)</th>
<th>Std dev</th>
<th>Final score</th>
<th>Std dev</th>
<th>Sig (t-test*/clinical 2SD’s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-II</td>
<td></td>
<td>32.1 (severe) (23-55)</td>
<td>10.8</td>
<td>17.8 (mild) (0-34)</td>
<td>13.8</td>
<td>ns/sig</td>
</tr>
<tr>
<td>STAI-state</td>
<td></td>
<td>84.1 (66%-95%)</td>
<td>9.6</td>
<td>63.0 (37%-95%)</td>
<td>21.3</td>
<td>ns/sig (t=2.7, p=0.031)</td>
</tr>
<tr>
<td>STAI-trait</td>
<td></td>
<td>83.8 (37%-100%)</td>
<td>15.7</td>
<td>64.0 (37%-99%)</td>
<td>23.4</td>
<td>sig* (t=3.38, p=0.012) /ns</td>
</tr>
<tr>
<td>Agnew – client - total</td>
<td></td>
<td>142.6 (115 -162)</td>
<td>17.3</td>
<td>154.8 (120-182)</td>
<td>22.6</td>
<td>sig* (t=-3.09, p=0.018) /ns</td>
</tr>
<tr>
<td>Agnew – therapist – total</td>
<td></td>
<td>142.7 (102-177)</td>
<td>26.7</td>
<td>143.7 (106-186)</td>
<td>30.4</td>
<td>ns/ns</td>
</tr>
<tr>
<td>BSI (total)</td>
<td></td>
<td>61.4 (43-76)</td>
<td>12.0</td>
<td>42.4 (36-60)</td>
<td>20.6</td>
<td>ns/sig</td>
</tr>
<tr>
<td>BSI-Somatisation</td>
<td></td>
<td>63.0 (61-73) (caseness)</td>
<td>7.6</td>
<td>47.1(46-64)</td>
<td>21.5</td>
<td>ns/sig</td>
</tr>
<tr>
<td>BSI-Obsessive-Compulsive</td>
<td></td>
<td>59.7 (46-69)</td>
<td>8.6</td>
<td>42.7 (42-58)</td>
<td>19.7</td>
<td>ns/sig</td>
</tr>
<tr>
<td>BSI-Interpersonal Sensitivity</td>
<td></td>
<td>59.0 (37-78)</td>
<td>12.0</td>
<td>41.8 (37-58)</td>
<td>20.8</td>
<td>ns/ns</td>
</tr>
<tr>
<td>BSI- Depression</td>
<td></td>
<td>56.0 (42-64)</td>
<td>7.3</td>
<td>38.7 (28-55)</td>
<td>20.2</td>
<td>ns/sig</td>
</tr>
<tr>
<td>BSI-Anxiety</td>
<td></td>
<td>55.7 (43-65)</td>
<td>8.17</td>
<td>39.5 (35-54)</td>
<td>18.8</td>
<td>ns/sig</td>
</tr>
<tr>
<td>BSI-Hostility</td>
<td></td>
<td>53.2 (44-64)</td>
<td>7.47</td>
<td>41.2 (32-59)</td>
<td>20.1</td>
<td>ns/ns</td>
</tr>
<tr>
<td>BSI-Phobic avoidance</td>
<td></td>
<td>62.5 (44-73)</td>
<td>11.8</td>
<td>45.5 (38-62)</td>
<td>21.7</td>
<td>ns/ns</td>
</tr>
<tr>
<td>BSI-Paranoia</td>
<td></td>
<td>59.1 (43-76)</td>
<td>11.8</td>
<td>46.5 (44-64)</td>
<td>21.6</td>
<td>ns/ns</td>
</tr>
<tr>
<td>BSI-Psychoticism</td>
<td></td>
<td>60.0 (46-78)</td>
<td>11.6</td>
<td>43.7 (40-62)</td>
<td>20.3</td>
<td>ns/sig</td>
</tr>
<tr>
<td>CORE-OM Wellness</td>
<td></td>
<td>2.01 (0.38-3.5)(mod. severe)</td>
<td>1.0</td>
<td>1.46 (0-4.0) (mild)</td>
<td>1.0</td>
<td>ns/sig</td>
</tr>
<tr>
<td>CORE-OM Functioning</td>
<td></td>
<td>1.94 (1.42-2.75) (mod.)</td>
<td>0.5</td>
<td>1.45 (0.42 – 2.9) (mild)</td>
<td>0.5</td>
<td>ns/sig</td>
</tr>
<tr>
<td>CORE-OM Problems</td>
<td></td>
<td>2.24 (1.19-3.41) (mod severe.)</td>
<td>0.78</td>
<td>1.35 (0 – 2.8) (mild)</td>
<td>0.78</td>
<td>ns/sig</td>
</tr>
<tr>
<td>CORE-OM Risk</td>
<td></td>
<td>0.33 (0 – 1.16) (healthy)</td>
<td>.39</td>
<td>0.23 (0 -1) (low)</td>
<td>.39</td>
<td>ns/sig</td>
</tr>
<tr>
<td>CORE-OM Total</td>
<td></td>
<td>1.8 (1.17 – 2.72) (mod.)</td>
<td>.54</td>
<td>1.2 (0.3 – 2.6) (mild)</td>
<td>.54</td>
<td>ns/sig</td>
</tr>
</tbody>
</table>

Key: ns = non significant; sig* = statistical significance < .05; sig = clinical significance:change exceeds 2 Standard Deviations and/or moves between level of caseness to asymptomatic
below the cut-off score for caseness). Individually, the same two individuals did not improve from first and final measurement on measures of wellness, functioning, risk and total scores over all. Three individuals indicated that their problems increased from the first to final measurement occurrence. The scores of risk were the only ones at a healthy level at the first assessment. This finding was expected, given that active suicidality was an exclusion criteria. As the case studies indicated, however, passive suicidal ideation, and in one case, active suicidal ideation, was present amongst the sample, over the course of the year during which therapy occurred. Problems, functioning and wellness were all at a moderate, or moderately severe, level at the first assessment. At follow-up, wellness, functioning and problems scores had reduced to mild levels.

9.3. Therapeutic alliance

As can be seen in Table 9.2, both the client and therapist ratings of therapeutic alliance indicated improvement in alliance. Mean client alliance rating scores improved to a level of clinical significance; however, therapist ratings did not, and changed only minimally over the measurement occurrences. Overall, the client ratings indicated an increase in positive feelings toward the therapist, the working relationship, and the intervention generally.

In contrast, only the therapist’s ratings of openness (i.e. feelings that the client was fully disclosing all thoughts, feelings and concerns to the therapist) increased from the first to the last session. This change may have captured a genuine increase in feelings of trust and disclosure, or may simply represent
the change in level of familiarity that comes with months of therapy sessions. I believe that it is a combination of both explanations. Very intimate and confronting disclosures were made by several therapy participants early in the therapy (including personally humiliating details about sexual rejection from one participant, and homicidal ideation toward a mother’s own children by another participant).

Table 9.2  **Alliance subscale ratings for clients and therapist comparing first and final session measurements.**

<table>
<thead>
<tr>
<th>Subscale</th>
<th>First assessment mean score</th>
<th>Final assessment mean score</th>
<th>Standard Deviation</th>
<th>Significance (t-test/clinical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond client rating</td>
<td>4.88</td>
<td>5.11</td>
<td>1.3</td>
<td>ns/ns</td>
</tr>
<tr>
<td>Partnership client rating</td>
<td>5.36</td>
<td>5.92</td>
<td>.55</td>
<td><em><em>Sig</em>/ns</em>*</td>
</tr>
<tr>
<td>Confidence client rating</td>
<td>5.21</td>
<td>5.71</td>
<td>1.15</td>
<td>ns/ns</td>
</tr>
<tr>
<td>Openness client rating</td>
<td>5.15</td>
<td>5.65</td>
<td>0.94</td>
<td>ns/ns</td>
</tr>
<tr>
<td>Initiative client rating</td>
<td>4.88</td>
<td>5.11</td>
<td>1.27</td>
<td>ns/ns</td>
</tr>
<tr>
<td>Bond therapist ratings</td>
<td>5.84</td>
<td>5.80</td>
<td>.96</td>
<td>ns/ns</td>
</tr>
<tr>
<td>Partnership therapist rating</td>
<td>5.80</td>
<td>5.60</td>
<td>.99</td>
<td>ns/ns</td>
</tr>
<tr>
<td>Confidence therapist rating</td>
<td>5.13</td>
<td>4.84</td>
<td>0.54</td>
<td>ns/ns</td>
</tr>
<tr>
<td>Openness therapist rating</td>
<td>4.52</td>
<td>5.0</td>
<td>1.6</td>
<td>ns/ns</td>
</tr>
<tr>
<td>Initiative therapist ratings</td>
<td>3.35</td>
<td>3.07</td>
<td>0.87</td>
<td>ns/ns</td>
</tr>
</tbody>
</table>

Contrastingly, other participants remained engaged with me for nearly a full-year, during which time my exposure to greater details about all aspects of their life increased. Subscale (i.e. bond, partnership, confidence, initiative and openness) comparisons from first to last session were averaged across clients. The largest difference between client and therapist ratings occurred for the
initiative subscale (first session, client rating $\bar{x}$ score = 4.88; first session, therapist rating $\bar{x}$ score = 3.35). This subscale measured the extent to which the client was directing the goals and agenda of therapy, and applying skills outside of sessions. Clients consistently rated their initiative higher at the first and final session than I rated it, although these were not statistically significant differences.

As indicated in the table above, the therapist’s ratings of bond remained generally stable from the first session to the last. It seems that I felt as positively about the clients at the beginning of therapy as I did at the end of therapy. In contrast, the client’s ratings of bond exceeded one standard deviation’s change in a positive direction. Review of individual items endorsed by participants from the beginning to the end of therapy indicated that friendliness and acceptance items were endorsed more frequently at the beginning of therapy. As therapy progressed, however, support and understanding items were also endorsed at higher ratings. This pattern of ratings suggests that clients were initially engaged by a friendly or warm interaction style; however, with ongoing sessions, the nature of the bond, arguably, became more clinically sophisticated, in that clients felt supported and understood as the relationship deepened. Overall, these ratings suggest that the medium of telepsychology can transmit warmth directly, and can also facilitate the development of deeper feelings.

Client’s ratings of initiative and bond exhibited the largest variability of all subscales, from first to final assessment. When reviewing the pattern of items endorsed on the bond subscale, particularly during sessions which appeared to be distressing or confronting for participants, lower ratings on all items were
observed, suggesting that specific session events may have influenced the ratings, rather than overall feelings of warmth toward the therapist. Within sessions, clients may have changed their ratings according to what was discussed or how the issues were dealt with.

Only the client ratings of partnership achieved statistical significance, when compared between the first and final session, suggesting that clients felt more in agreement with the therapist and the intervention goals over time. Fortunately, only one client endorsed the item “my therapist tries to influence me in ways that are not beneficial to me” as “moderately agree”. This client fired me and the entire community mental health team the following day (see Appendix G for further detail), after feeling too confronted in a joint-therapist telepsychology session. This kind of contemporaneous link between in-session events and the subsequent ratings on various outcome questionnaires highlights the importance of repeat and mixed measures. These findings also reiterate the richness and value of the idiothetic, case-studies’ data to explicate what might otherwise be conflicting or unclear data in a different study design.

9.4. Telepsychology and the perception of distance

A common criticism of telepsychology is that the transmitted image and sound of the videoconferencing technology appears so artificial that it impedes the sense of “presence”, asserted to be a necessary condition for therapeutic alliance to be developed and maintained (e.g. Lombard & Ditton, 2006). Furthermore, therapeutic alliance is perceived to be a key component that mediates the quality of clinical outcomes and satisfaction. A discussion of these issues can be found in Chapter 2, Section 2.5.6.1.
With regard to the case studies of this thesis, the outcome that telepsychology provided a positive environment for therapeutic alliance to develop and, in one case, probably protected the relationship from early termination, was the main finding overall. In one of the eight cases, however, it is likely that several disappointing and unhelpful outcomes could be attributed to a reduced sense of “proximity” (both emotionally and physically) between the client and myself.

In the case of Don, a 40-year old man with depression and social anxiety, “telepresence”, as defined by Kim and Bioca (1997) was, arguably, not achieved, whereas, “social presence”, as defined by Hilty, Nesbitt, et al. (2002), was (see Chapter 2, for definitions). In this case, Don was extremely anxious and avoidant around women, and depressed as a result. His fear of being negatively appraised by women manifested in physical panic symptoms, and his unique sexual history contributed to a heightened awareness of all things feminine, including scent, the draping of clothes, the accidental touch of hair, etc. Throughout the sessions, and in the satisfaction assessments, Don expressed his gratitude that he was not sharing a physical space with me (being female), that he could not smell my perfume or find any of my fallen hairs on his clothes, as these would be potentially panic-triggering stimuli at worst, or distracting at best. Don frequently noted that he was conscious of the physical distance between us during the telepsychology session, but this perceived physical distance did not impede the development of good therapeutic rapport, which, ultimately, resulted in good clinical outcomes. In fact, by the last four sessions of the intervention, Don was able to discuss graphic and intimate details of his sexualised thoughts about women. Although
he said he felt embarrassed, and still appeared embarrassed when doing so (flushed face, avoidant gaze, sweating, shifting in his chair), the telepsychology “distance” allowed him to share personal information with me, a woman, when normally, he would not have been able to share a room with me.

This positive impact of physical distance is further borne out by the ratings of alliance and satisfaction which Don made over the course of seven measurement occurrences. Over the course of the intervention, Don’s total ratings of alliance increased from the first session total score on the Agnew Relationship Measure (ARM) = 128 to a final score on the ARM = 135.

Another participant, Denise, gave me the impression that she used the distance of telepsychology to maintain emotional distance and avoid distressing therapeutic challenges. As detailed in Appendix I, this participant presented with co-morbid personality features and psychosocial issues that made consistent engagement difficult and therapeutic gains minimal. To some extent she seemed to cope better when she felt in control and distant from me, and the telepsychology environment seemed to provide this to her. The telepsychology environment never felt to me as if we had the sense of presence that we might have had in a face-to-face environment; I always felt like I was “missing something” and was unable to see or confront the more disruptive personality behaviours that may have interfered with our progress. During the sessions, Denise never seemed to experience diagesis (i.e. the suspension of disbelief). She gave me the impression that she was listening intently, as if to a television show, rather than engaging with me, at times.

Denise also seemed to use the participant’s treatment manual as an avoidance strategy. The manualised CBT process, when conducted at a
distance, allowed for Denise to literally “hide behind a book”. The room in which telepsychology was conducted consisted of a chair at a large desk facing the screen (not unlike a classroom); the participant manual appeared to almost represent a textbook, and the guided exercises were like mini school assignments. During sessions, Denise took many notes and flicked through the manual pages, despite the engagement being a collaborative, as opposed to didactic, one. To some extent, this setting may have also triggered a response pattern she had played out with perceived authority figures in her past, i.e. another “teacher” telling her what to think, do and feel. Sitting at a desk with a book to use as a “prop”, being able to avert her eyes from the screen, and having to manage the remote for the teleconference, gave Denise objects and behaviours that maintained emotional distance. My impression was that this was an effective strategy to avoid reflection and cognitive or behaviour change, whilst maintaining her avoidance of conflict and responsibility to change her own situation. Subsequently, I rated Denise’s initiative, confidence and partnership on the Agnew Relationship Measure at a low level (This is detailed in Appendix I).

In early sessions, Denise often indicated that the sound quality was poor and she had to concentrate to hear me well. Perhaps she was genuinely experiencing poor sound quality, but this was not often repeated in the sound quality ratings of the participants who preceded or followed her session. Her unusual body-language and behaviour may have been a response to the artificiality of the telepsychology interaction for her, or perhaps it was an avoidance strategy to maintain emotional distance. Because she gave the impression of listening, rather than engaging, I noted that I reiterated or
paraphrased myself many times, especially in the early psychoeducation-based sessions. This repetitive speech increased my awareness of the artificiality of the interaction between us and a loss of fluency in my usual therapeutic style.

Finally, this participant ultimately terminated the therapy relationship abruptly, because of what, I believe, was a challenge to her capacity to maintain distance in telepsychology. Due to Denise’s personality and psychosocial issues, it became apparent that too many “helpers” had become involved with Denise, and she was overwhelmed by the demands to attend appointments and make the changes that the many advisers were recommending. To facilitate the scaling down of these numerous third parties to her mental health, and increase her accountability and honest disclosure, a group telepsychology session was arranged.

At the 11th session, a child and adolescent mental health services (CAMHS) worker and case manager attended at the distant site (the psychiatrist was informed of the meeting but was unable to attend) along with Denise, and I was at the home site. Because three people were on screen at the distant site, and the camera was unable to be moved remotely from the home site, it was difficult for me at the home site to see facial expressions or fine motor movement easily. It was also difficult to interpret client discomfort physically. In addition, this particular client worked hard to avoid conflict and often minimised her negative emotions or thoughts, so her verbal communications were not necessarily honest reflections of her true feelings.

I was much more involved in leading the discussion, despite my request to not have the lead role, and was perceived to be instigating the change. The
discussion tended to feel one-sided from my perspective. However, with little leadership from the far site, I was able to elicit Denise’s concerns and, with direct questioning of the other staff present, all parties agreed to the observation that Denise would benefit from limiting her contact with some services she felt were peripheral to her needs, and that ground services would assist her to do so if she required it. Denise agreed that this plan seemed to better meet her needs and, at the end of the meeting, stated she was pleased with the outcome. The next day, the Community Team received a fax from the Overnight Emergency helpline explaining that Denise wanted no further contact from any member of community mental health. We were effectively “sacked”.

It is possible that, had I better been able to distinguish her reactions during the discussion, I might have assumed a less directive (less confrontational?) approach. However, I am not entirely convinced that this would have been the case. There was a sense of distance between the home site and the far site, because of the need for a wide angle that captured all the participants. The wide angle may have influenced my body language to be more exaggerated and my language to be more directive, to compensate for this perceived distance, even though the far site would not necessarily have experienced the same level of distance, as they would have seen only a single talking head. It may also have been that she perceived that she was being given an ultimatum. After 10 sessions where the same issues were raised by Denise, despite having multiple solutions and problem-solving around them, and opportunities to change identified but not accepting them, there seemed little benefit to continuing with therapy anyway.
The initial aim of the group meeting was to give Denise the support to cease contact temporarily, and hopefully reduce her feelings of being overwhelmed, with those services seen by all community mental health participants to be peripheral to meeting her psychosocial needs (i.e. like her reiki counsellor, psychic, volunteer 12-steps counselling/work). The irony was, in fact, that she did do exactly what we asked her to do – namely, cut out contact with over-servicing helpers. What was unexpected was that she chose to get rid of the one service that was united in meeting her needs.

While reflecting on the consequences of this final session, I wondered if the choice Denise made demonstrated the impact of her personality features – namely, being unable to reflect on self, being reactive to limit setting, perceiving that being controlled results in a devaluation of the other. Or did she simply choose to get rid of the service that was pressuring her the most on that day? Did she genuinely believe the mental health service had nothing to offer her? At follow-up four months later, Denise still felt that therapy had been unhelpful, however, she remained positive about videoconferencing. One can speculate that, while I, as therapist, remained a two-dimensional image, I was not threatening. Once a meeting included real people in her space, and I was perceived as the driving force behind the challenge, I became three-dimensional and, therefore, present and threatening.

In summary, though critics of telepsychology argue that it is the artificiality and participative distance of the therapeutic environment that reduce telepsychology’s effectiveness, in the two instances described above, artificiality and a sense of physical distance facilitated therapy. In the first instance, being in separate locations helped Don minimise the disruptive
sensory experiences that allowed him to build a relationship with a female therapist, and implement the therapy effectively. In the second instance, it could be argued that once the physical and therapeutic distance was reduced by the presence of “helpers” in a face-to-face environment, Denise terminated therapy. Telepsychology helped her to maintain sufficient distance that allowed her a sense of control.

9.5 Client and diagnostic characteristics

9.5.1 Demographics

The case study intervention research sample of eight participants represented a typical, rural, community mental health population. The research sample consisted of two men and six women, and all were referred for assistance to manage with depression by their psychiatrist or primary community mental health team (CMHT) case manager. Although many had co-morbid psychiatric conditions, the referrals were made based on the primacy of depression in their current problem formulation, and all were perceived to be able to cope with a telepsychology intervention. Moreover, these participants were all perceived to be suitable candidates for psychotherapeutic intervention, but had been unable to access it on a regular basis due to the unavailability of suitably qualified practitioners or economically viable options in their rural location. As therapy progressed, however, what transpired was that, at various times, other psychiatric and psychosocial features of their presentation took precedence over treating their depression. For example, one participant, Sally, terminated therapy after 4 sessions because she was too fearful that she would be recognised by other town
residents when she attended sessions in town. She was suffering from anxiety and depression, in part, due to having been a victim of domestic violence, along with her children, and having recently come under threat from the relatives of her soon-to-be-released-from-jail ex-husband. So, despite telepsychology being able to bridge the nearly 400 kilometre divide of service provision between a metropolitan and rural region, its location at a central point in a small town was still too inaccessible because it was too exposed for one participant.

These same types of early treatment terminators and dropouts are not described in other studies, like the RCT described in Chapter 5, where participants are supplied with plug-and-play videoconferencing transmitters. Being able to access telepsychology from home is a genuine advancement, and has the potential to revolutionise mental health care. Although this research project had television-quality transmission capability, it was still human resource heavy in order to achieve this, and thus, to some extent, represented a false economy of service. Future studies will benefit from cheap, secure and reliable, publicly available, webcam transmission networks and programs, such as Skype, to overcome this particular type of shortcoming, and thus, make therapy available to consumers in their homes.

There were slight differences observed in the use of telepsychology between both genders in this research sample. Both male participants confidently manipulated the camera via the remote, after instruction from the far-site administration staff and myself. In contrast, two of the five women had difficulty with the use of the remote. Interestingly, both men completed their therapeutic engagement in terms of achieving their goals sufficiently, and
terminated therapy after 13-15 sessions. Only one woman “completed” therapy and terminated after 14 sessions. Three of the other four women terminated therapy after 4-5 sessions due to the interference of psychosocial factors (i.e. one moved away; another was running a farm with four children under 6 years of age while her husband worked away; and a third, described above, was afraid for her safety in town). The fourth female participant terminated therapy after 11 sessions, following a co-facilitated session between myself at the near-site, and two of her local case managers with her, at the far-site. I have speculated that the reason for this abrupt termination was due to a participative invasion of her personal therapy space that may have been too confronting for her, after she had been maintaining an “electronic distance” from me during earlier sessions.

My impression is that the gender difference in successful telepsychology outcomes observed in this sample does not necessarily reflect true difference in how women cope with telepsychology. Rather, it reflects the complicated nature of their personal lives, and the many pressures they often must address in their day-to-day lives, particularly as they juggle the roles of mother, wife, and rural property owner/manager. Three of the five women ended therapy before completing the intended program or achieving their goals, because of concerns for their children, or complications relating to their childcare burdens. Moreover, an unlikely phenomenon for their metropolitan counterparts to experience, rural property management issues (i.e. livestock care, frozen water supplies, extended travel) interfered with attendance at sessions for all women who participated in this research. These issues did not seem to affect the men in this sample.
Sparsely populated rural towns have limited options for childcare and, in the main, it appears that childcare and babysitting is typically sought from extended family members. Sociologists and social psychologists point to the cultural construction of the rural woman’s role as mother and domestic labourer in a rural idyll, where engagement in the labour market external to the farm is seen as secondary to their primary mothering role and, thus, external childcare deemed unnecessary. Typically, women on rural properties also complete the bulk of domestic and parenting duties, in addition to providing farming labour (e.g. see Alston, 1995; Cocklin & Dibden, 2005).

Other telepsychology research with varying sample sizes (e.g. ranges of \(n=22\) to \(n=495\)) has monitored dropout rates (e.g. O’Reilley et al., 2007; Ruskin et al., 2004) and typically found no differences in dropout rates between face-to-face and telepsychology samples. One researcher has suggested that an 85% completion rate was typical of telepsychology intervention programs (e.g. Frueh et al., 2005). Thus far, however, the reason for any dropouts has failed to be explored in the published literature. How the issues of rurality, described above, have influenced telepsychology outcomes, and how they may complicate future applications of the technique, have not been addressed so far in other studies. From this small sample, only one third of participants completed the therapy intervention. This outcome falls below the 85% completion rate suggested by Frueh et al. (2005), but could be as much an artefact of small sample size as it is a genuine sample difference. What can be observed from attendance and dropout records is that both men in this sample completed the intervention and their attendance was regular (with any absences due to planned holidays). In comparison, all women missed
sessions, due to unanticipated complications, such as problems with their property or children. These observations lend credence to the proposition that rural life for women is uniquely socially challenging, and that, despite needing psychological intervention, their lives may still make it difficult to consistently access it. Making telepsychology available in the home with plug-and-play equipment or via public networks, and accommodating child care needs to access a town-based service, may be essential necessary conditions for a regular telepsychology service to be successful in rural Western Australia.

The participants in this intervention study ranged from 27 to 52 years of age. No age differences were observed with regard to the use of telepsychology or comfort with the technology. The oldest participant and the youngest participant used the remote camera equally well. The participant’s education level also did not appear to impact on their ratings of comfort with technology (as assessed in satisfaction surveys), or outcomes from therapy. Prior experience with webcam technology was limited to one participant, and she was also a successful user of the system. For the most part, teleconferencing calls to, and from, the near site were placed by the technician at the near site, and technical problems, such as the quality of the link, tended to be managed by him. Given that transmissions occurred over the closed Health Department teleconferencing network, there were no concerns regarding the security of the transmission.

9.5.2. Comorbidity – Anxiety and Depression

“Comorbidity” was defined by Feinstein (1970) as “any distinct clinical entity that has co-existed or that may occur during the clinical course of a
patient who has the index disease under study” (p. 456). The co-occurrence of anxiety and depression is one of the most common co-morbid conditions encountered in everyday clinical psychology practice. Four of seven participants in the research sample also presented with co-morbid anxiety and depression. Telepsychology adequately accommodated this co-morbid condition, and, as previously described, may have facilitated the success of the intervention, because of its particular technological features. Modification of the CBT treatment to incorporate psychoeducation, relaxation and exposure strategies, specific to evidence-based interventions, to address anxiety were also accommodated into the telepsychology medium. Some of these changes and their relative technologically-based accommodations were described in the portfolios of Chapter 7 and Chapter 8, and are summarised later in this Chapter (9.6).

9.5.3. Comorbidity – Depression and Chronic Pain

Another common primary mental health care clinical presentation is the frequent co-occurrence of pain and depression (Bair, Robinson, Katon & Kroenke, 2003). This research sample included four participants for whom chronic pain was a significant issue; only one of whom, however, had a pain condition that made telepsychology unsuccessful. For the others, the static seating and manipulable camera was helpful.

As described in Chapter 8, Beatrice appeared incapable of sitting for the duration of a therapy session, due to her chronic back and knee pain.

In contrast, the three other participants for whom chronic pain was an issue did not require the same degree of camera manipulation as Beatrice, and were able to stay seated for all of their session times. Although they did shift in
their chair, and on two occasions did ask to stand and stretch their back, this was not disruptive to the flow of the interaction, and discussion continued where it left off quickly and easily. These other three participants were also able to use the camera remote fluently to accommodate their own preferences for the size and form of the image of me that they could see on their monitor. Because they rarely moved outside of the camera frame, I was able to focus more fully on keeping my own notes and interacting therapeutically with these participants.

Thus, part of the challenge associated with the comorbidity of chronic pain is the need to accommodate the physical movement of participants who may need to ease their pain or discomfort after sitting for long times, and using the camera tracking facility fluently to achieve this. Some of Beatrice’s personality features and psychological defences, such as cognitive avoidance, dissociation and denial, contributed to the problems and lack of progress that was achieved with this particular case of telepsychology intervention. However, the technological shortcomings also played a large role in the decision to terminate intervention with this participant.

9.5.4. Comorbidity - Depression and Schizoaffective Disorder

As previously identified in the literature, people with delusions and hallucinations cope adequately with assessments and intervention delivered via telepsychiatry (McLaren, Blunden, Lipsedge & Summerfield, 1996; Zarate, et al., 1997). One of the research participants, Peter, had been diagnosed with Schizoaffective Disorder. Although his hallucinations were controlled and his mood predominantly stable, he did present with mild depression, ambivalence
about past delusions and some paranoia. He was an extremely concrete gentleman with Year 8 education. He expressed paranoia and ambivalence about his past delusions freely and comfortably, and did not incorporate any concerns about the telepsychology transmission process into any paranoid thoughts or beliefs. Despite a generally blunted affective range, Peter would happily explain or describe to me his emotions and thoughts, when I found them difficult to interpret via the television monitor. My impression of him was that he flourished in the telepsychology environment.

Surprisingly, (or perhaps not?), Peter experienced the most significant gains in therapy with traditionally Gestalt-type techniques and behavioural interventions, rather than pure cognitive techniques. These successful techniques will be described further in a later section (9.6.3). Peter manipulated the camera during the first few sessions, but, after four sessions, he seemed settled with the camera set-up, and made no further changes. He was one of the participants who adapted to the telepsychology condition and treated it as he would have treated a face-to-face encounter, despite initially commenting that he felt “weird talking to a TV”. After six sessions, it appeared that he “forgot” that the camera could limit the field of view, as during one session, he brought an impressionist self-portrait in to the session to show me how he had been inspired to paint about his emotions, related to some of the issues we had discussed. The canvas was about 1m x 2m in size, and ungainly for him to show me in full. Despite this, he attempted to show me the full image and eventually realised that he would need to widen the camera angle, or step back from the camera, if I was to see it as he wanted me to, in full length.
Peter’s diagnostic comorbidity appeared to have little impact on the success of the telepsychology intervention with him. Because of his struggles with the manualised CBT program of self-monitoring and thought reflection, alternative therapy techniques, like role-playing, empty chair techniques, voice dialogue etc., were adapted successfully to the telepsychology environment and proved useful for this particular client. Moreover, the long-held, though not currently florid, paranoid delusions that this client also had, were not involved or exacerbated in the telepsychology exchange. This case study provided evidence of the utility of telepsychology to cope with clients with severe mental illness using sophisticated, relationship-dependent techniques, that appear, from the literature, to have only been used in a face-to-face environment thus far.

9.5.5 Comorbidity - Depression and Personality Disorders

Several participants presented with features of personality disorder that influenced the telepsychology interventions. Perhaps unsurprisingly, these participants also had a significant history of childhood sexual and/or physical abuse. The case study which was most clearly impacted on by personality features, that of Denise (Appendix I), highlighted many of the challenges of working with this particular client group in a virtual environment and, ultimately, ended her therapy prematurely because of them. Many of the common, challenging, personality-based, interpersonal features, such as splitting, passive-aggressiveness, dissociation and avoidance, were all present during my exchanges with her.
With specific regard to the relationship of technology to the therapeutic exchange, it is unclear the extent to which a blurry picture may have contributed to the quality of distance and unreality that made emotional disconnection easier for her to maintain with me. Previous researchers have recognised the influence of larger bandwidth to improve picture quality (e.g. see Hilty, Marks, Urness et al., 2004) and, therefore, enhance the quality of therapeutic interactions. Videoconferencing may use different types of technology (e.g. personal computer units, dual 32” monitor units or low bandwidth portable videophones) with different levels of bandwidth (Hilty, Luo, et al., 2002).

On certain days, poor picture quality made observing and confronting some of Denise’s interpersonal and personality features (e.g. manipulation, splitting, deceit, alternation between extremes of devaluation and idealisation, strong dependency on others, emotional instability, frantic efforts to avoid real and imagined rejection/abandonment, chronic feelings of emptiness, inappropriate anger) challenging. These personality and interpersonal features were both observed and inferred from behaviours. On the screen, these features were indicated by physical changes to her expression, demeanour and body language. Some examples included: 1) an inability to experience feelings without defensive reactions, such as dissociation, acting out and projection; 2) fear and helplessness when confronted with feelings; 3) poor control over affective expression; and 4) facial expressions suggestive of a disconnection between affect and stimuli (Hawker, 2001).

My personal clinical experience is that it is much easier to observe and confront typical Cluster B behaviours in-person, than it is by
videoconferencing. Video therapy offers more opportunity for avoidance, which is difficult to deal with when your client is continually disrupting sessions and attending chaotically. In-person studies also show that an avoidant coping style can be a negative predictor of change (e.g. Davidson, 2000, in Simpson, Bell, Britton, et al., 2006). From a practice point of view, telepsychology may require therapists to be even more explicit about their boundaries and the limits of their service; a practice which will actually be of benefit when working with clients presenting with Cluster B personality features. However, drop-outs may be more frequent, as some clients with similar personality features do not respond well to boundaries, regardless of the setting.

It is possible that some clients who are very avoidant are more likely to engage in video therapy treatment than in-person therapy, because of the personal space and control they have in this setting. To that end, it may be that a combination of the two modes of treatment delivery could provide a balance. Further study is required with this particular patient group to elucidate the optimal management conditions. In this case, frequent missed appointments were a hallmark feature of Denise’s presentation, despite attempts to accommodate her often changing availability. The lack of notice was very disruptive and wasteful of my time. Because this study’s transmission occurred at a third-party site, and not my own office, the opportunity to continue with other work was limited when the client did not attend. Moreover, the physical distance between us and my lack of local knowledge made it difficult to work directly with the many other service providers involved in Denise’s care to co-ordinate the intervention goals. In this particular case, liaison with local providers might have circumvented
Denise’s tendency to engage in avoidance behaviours and splitting between services. As I began to coordinate the intervention, this change resulted in increased suicidal ideation and self harming threats by Denise, as pressure increased for her to be personally accountable for her mental health support. In this instance, telepsychology may have enhanced her ability to avoid. These kinds of passive-aggressive strategies feel “slipperier” to manage via telepsychology than they do in face-to-face settings.

In summary, when personality features were prominent, particularly avoidance, dissociation, and negative emotional intolerance and dysregulation, telepsychology was less successful. While the presence of personality features should not preclude a participant from telepsychology and, indeed, these may not become fully apparent until telepsychology has commenced, it may be under these circumstances that a combination approach that incorporates face-to-face sessions with telepsychology might prove helpful.

9.6. Satisfaction with Telepsychology – The Interface between Technology and Therapy

In Western Australia, state government health department sites can connect teleconferencing sites either via ISDN line or IP address. These sites use a minimum transmission speed of 128 kbps, but can go as high as 512 kbps on IP connections. As previously described, higher transmission speeds improve picture and sound quality, but as transmission speed increases the cost associated with the call also increases.

This project used 256 kbps transmission bandwidth on ISDN line, resulting in approximately 80% quality of television broadcast. Although ISDN
calls were made on a dedicated line, visible variations in the definition of the picture and the sound quality were apparent, and attributable to the service provider.

A number of issues related to sound quality were identified as influential to the outcome of this particular telepsychology intervention. Compared to the technical issues described in Study 3 (Chapter 5), not nearly as much time was lost from therapy interactions due to technical problems, because participants were provided with technical support at the far-site and calls were placed on their behalf, with minimal set-up or adjustment required from them. This was also the case at the near site, where calls were placed from a dedicated telepsychiatry suite that was staffed by technicians at all times. Had participants used a home-based videophone, similar to the one described in Chapter 5, one might assume that similar technical problems might have occurred, and time lost to technology-based disruptions might have been of a similar duration.

In the 11 month intervention study timeframe, 60 hours of videoconferencing transmission were conducted by me. During this time there were:

- no disconnections or picture losses;
- two videoconferences had minor problems of picture pixilation;
- six sessions had reduced picture clarity through slight intermittent blurring;
- two sessions had synchronisation problems, i.e. there was a slight picture delay compared with sound;
- sound disconnections occurred during two sessions for less than two minutes;
eight sessions were impacted by ambient sound problems (typically, logging trucks gearing down as they drove past the clinic). During one of these sessions, one of the research participants brought their baby to the session. Cries and squeals from the child, in addition to the noise from a loud ringing toy, cancelled out both the incoming and outgoing conversation between the participant and therapist. The participant was encouraged to find alternative childcare for future sessions;

Five sessions had echo problems. These were generally addressed by reducing the volume of the speakers at both sites. This also relied on adequate remote control use by the far-site participant;

Three sessions required changes to microphone placement to capture client voices, particularly during high ambient noise times and participant movement.

Participants cancelled out the therapist (and vice versa) by talking at the same time on 22 occasions.

According to the bulk of satisfaction survey results, participants found the sound issues described above to be minimally disruptive. Participants rated on a Likert scale from 0 = poor quality to 4 = good quality. The mean rating for sound quality across all participants was 3.1 out of 4, suggesting that, despite the problems described above, clients were minimally affected, and remained generally satisfied. Picture quality was rated comparatively lower than sound across all sessions and across all participants. Mean picture quality rating on the satisfaction survey was 2.9 out of 4. The blurriness and pixilation, described above, are responsible for these lower ratings.
Participants were administered a final satisfaction survey which included items specific to the image size, and the feelings which were engendered by the image. Participants who completed this final assessment indicated that they preferred close-up shots of the therapist, which framed me from the shoulders up. What they typically saw, and what was arranged in the first instance at the far-site, was a mid-shot. This shot framed the therapist from the desk-up. They also indicated that a close-up shot, instead of a mid- or long shot, enhanced their feelings of closeness with the therapist.

Clients were asked to circle the words, if any, from a list which described how they felt about each image size (close-, mid- or long-shot). For the close-up shot, they most frequently indicated pleasant, friendly, close, engaged, interested, like real-life, reassuring, and welcoming. For the mid-shot, the terms used included pleasant, warm, inviting, friendly, cheery, interested, like real-life but also distant. The long shot was most frequently described as distant and cold. These results suggest that a mid to close-up shot is best, with a forced choice preference for close-ups. Long camera shots give an impression of distance and coldness between the participant and therapist and, thus, are likely to be more unsuccessful than an alternative transmission image.

Due to the research administration issues described in the case study methodology (Chapter 6) and portfolios (Chapters 7 and 8), some participants were not administered their assessment packages as planned. Analysis across multiple time points for this satisfaction data was not possible, due to the small sample size, a lack of comparative session data, and a staggered
therapy start (i.e. one participant’s Session 3 did not occur on the same date as another participant’s Session 3).

All research participants were administered assessments after Session 5, and this could have been included in the figure below, to demonstrate the change in time for ratings of satisfaction. However, for some participants, Session 5 represented the middle of their therapy, and for others, the end. Trend based comparisons at this point would be complicated by therapy variables, such as the participant’s familiarity with equipment, their time in therapy and relationship with therapist, and proximity to accomplishing therapy goals, as well as variability in technology variables, such as the date and time of transmission. For clarity, therefore, only data from the participant’s first satisfaction ratings, and their last satisfaction ratings (regardless of the session number at which they occurred) have been included in Figure 9.1 below.

The lowest mean rating for any subscale element of satisfaction was 3 out of 4 (for sound clarity and usefulness of the session); the highest was 3.8 (for ease of use of the technology and overall satisfaction). The figure above shows that over the course of therapy, from the first session to the final measurement occurrence for each participant, ratings of sound quality improved from a mean rating of 3.1 to 3.3. Picture quality ratings also improved from first to last session (3.0 to 3.3). While this amount may not reflect a statistically significant improvement in sound quality, it does demonstrate that participants respond to even small changes in a technical aspect of the environment, and it is these small changes, which, when in combination with other issues (such as
ease of use or satisfaction with the therapist), can significantly alter overall ratings of satisfaction. Only one participant comment from the satisfaction survey specifically alluded to issues with picture and sound quality, i.e. “Thank you Lisa - it was great; the picture was a bit funny sometimes, and the sound, but all-in-all, as beneficial as a one-on-one session”. Despite the problems with sound and picture, this participant still appeared happy with the experience.

Several explanations for this finding of a downward trend in ratings of picture and sound quality can be speculated. Firstly, the lower final scores may represent a true qualitative technology difference over a 12-month period. However, given that the final rating scores are based on idiographic measures for each participant, each of whom started therapy in a staggered fashion, and
for whom total amount of time (number of sessions) in therapy was different, this is unlikely. Secondly, these results might reflect that participants were more optimistic about therapy in the beginning. Thus, their initial ratings of their satisfaction with sound and picture quality were influenced by this optimistic feeling. Moreover, their lower rating at the conclusion of therapy reflected their continued satisfaction with the therapy, *despite* poor sound or picture (now less influenced by optimism), and this lower final score reflects their acclimatisation to the sound and picture quality, and their acceptance that “that’s just how it is” and they are satisfied anyway.

Over the course of therapy, participants were asked informally about their sense of how room/environmental factors were altering their session experience. In particular, a question about the contrast between the background and me (in terms of the colours of clothing I was wearing) was frequently asked. I sat in front of a pale blue background and trialled a black shirt, white shirt and patterned shirt. On average, the research participants stated that they preferred the black shirt most, the white shirt least and the patterned shirt (brown black and white) in the middle. The black shirt had the greatest contrast with the background, maintained focus on my facial expressions and was the least distracting colour. Participants stated that sometimes the white shirt seemed to “flare” on their screen and so was distracting. This comment implied that the brightness settings at the far-site may have been too high. Given that participants wore all varieties of prints and plain colours to the session, my own observation was that darker, plain colours made them easier to focus on, whereas lighter colours tended to blend into their cream wall background. The paler colours also seemed to “wash them
out”. Although I didn’t keep track, I did note one incident in my field notes when I mistakenly believed the client to be physically ill, and enquired if the observation was correct. When she denied she felt (or had been) sick, I speculated in my notes that she may have looked unwell because of the lighting, or what she was wearing (i.e., a pale yellow blouse).

Related to sound and picture quality was the third item on the satisfaction survey, which asked participants to what extent they were distracted by the telepsychology technology. Figure 9.1 above shows that this item was consistently rated highly (mean score 3.4). Only one participant comment specifically alluded to issues related to the technology being distracting, i.e. “I’m not sure why [I prefer telepsychology], it’s a bit surreal”.

Very few comments were made by participants that were specific to their satisfaction with picture and sound quality. When given several forced-choice questions, many chose videotherapy over telephone counselling, while there was a 50% split preference for face-to-face versus telepsychology. Comments included:

“I prefer [videotherapy] to telephone counselling because you can relate better to someone you can see”;

“telephone is definitely too impersonal, video is a good in-between, face-to-face I find too confronting”;

“seeing the person and their expression makes all the difference. I don’t like the anonymity of the telephone”.

“I like to see the expressions, see what therapist is doing eg writing answers”

“I would rather do videotherapy than face-to-face because of the
space - the barrier thing and I suppose cause up close and personal
is hard for me at the moment”
“[face-to-face] is more personal”

Taken together, these findings highlight how multi-factorial the assessment of satisfaction is. Despite the frequent reports in the literature about how consistently telepsychology is rated satisfactory by clinicians and clients, in reality, numerous factors are being assessed by satisfaction surveys, and not all elucidate the source of that satisfaction. This study’s satisfaction survey asked participants to rate their satisfaction with separate technical aspects of the telepsychology experience (i.e., picture quality, sound quality, distraction from the technology, comfort with use) and the therapeutic experience (i.e. ease of talking with the therapist over telepsychology, usefulness of the session, and control over the session), in addition to an overall rating of satisfaction with the telepsychology experience. Results suggested that, as time went on, satisfaction improved with all aspects of the telepsychology experience. Of note is the acknowledgement by participants that the technology was not perfect, but that regardless they found value and positive outcomes with the telepsychology experience. This outcome was also apparent in Study 3 (Chapter 5), where participants were faced with numerous technical glitches, disconnections, sound and picture problems, yet persisted with the telepsychology intervention. It would appear that the criticism levelled at telepsychology, i.e., that the technology impacts negatively on therapy, may be further undermined by this thesis’ findings. Namely, that despite technical problems participants in telepsychology are optimistic about the outcomes, tolerate the technical problems, and possibly become accustomed to the
accommodations that they have made during telepsychology, to such an extent that the impact on their overall satisfaction or clinical outcomes is negligible.

9.7. Therapy technique issues

9.7.1. CBT techniques that worked.

CBT was chosen as the therapeutic technique for this intervention because it has sufficient support in the intervention literature as an efficacious treatment for depression. Moreover, it also has sufficient support in the telepsychology literature as a therapy which can be employed in the telepsychology environment. The initial plan with all research participants was to follow Nathan et al.’s (2001) CBT manual for mood management. While, ultimately, the manual was never followed in its entirety for any of the research participants, several techniques, elements and strategies from the manual, and CBT, more broadly, were successfully used. These successful techniques included psychoeducation, self-monitoring (for thought challenging), relaxation techniques, and homework.

CBT typically consists of a large psycho-education component. The description of the biopsychosocial model, the assumptions of the CBT model, exploration of the participant’s symptoms and how they fit into these models, is often a powerful early stage component of CBT interventions. Having a participant’s manual was a useful adjunct to this aspect of therapy with all participants, as they could be referred to reading and exercises, either in the session or between the sessions, for homework and consolidation of information. In my usual, face-to-face practice, I often draw diagrams and
flowcharts on paper or a whiteboard to explain the biopsychosocial and CBT models (Figure 9.2. below).

![Diagram](image)

**Figure 9.2. Example of visual aid included in the manual, to explain the biopsychosocial models underpinning a CBT approach**

My usual approach of drawing as I spoke had to be modified because of the telepsychology environment (I didn’t have access to a document camera), but having extra pages in the manual which included copies of my usual drawings was helpful. During the psychoeducation sessions, I simply directed their attention to pages in the manual to help with my verbal explanations.

Self monitoring through the use of thought diaries is another hallmark component of CBT. Participants who completed their thought diaries then faxed them to me at the near site. Often, this briefly disrupted the session, because participants had to leave the telepsychology office to pass their forms to the administration staff at the far-site, who would then fax these completed diaries to me. Received faxes then had to be collected by me and returned to the telepsychology suite. These small accommodations to physical distance were minor inconveniences. However, the responsive, as opposed to fixed, manualised approach to client needs, meant that these forms were rarely sent
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in advance of the participant’s session, so the interruptions were necessary. These accommodations are clearly not required in face-to-face sessions. Once diaries were exchanged, the notes in the manual were used to conduct thought challenging that is a common component of CBT.

Relaxation is another typical CBT technique that was used during this telepsychology intervention. In this particular study, relaxation was difficult to conduct for two of the six participants to whom it was presented. Four participants easily observed and then practised the controlled breathing techniques, progressive muscle relaxation or guided visual imagery. Unlike typical face-to-face demonstrations of controlled breathing, more verbal description was provided and close-ups of how fingertips should move apart when breathing deeply was given. Close-ups and modelling was also a similar accommodation for demonstrating PMR, but less necessary for visualisations. For those for whom relaxation was demonstrated adequately, so too did they achieve some benefit from it as a component of their treatment.

As described in the case study in Chapter 7, one of the six participants who was taught relaxation was somatically over-sensitive and was unable to engage in relaxation. In this instance, telepsychology interfered, because it was difficult to monitor her physical responses through the distance of the transmission image, and thus intervene when she struggled with the technique. She was also fearful of attempting PMR after a negative face-to-face experience, and the physical distance between us meant she did not feel safe (nor could I encourage/reassure her to a sufficient extent) for her to attempt it. Finally, her need for frequent movement meant that relaxation could not be
achieved through a passive guided visualisation, because every break re-oriented her to her pain, and thus negated any relaxation that was achieved.

For another participant (described in Appendix I), the lack of sharpness in picture quality of the telepsychology transmission made relaxation difficult. My impression was that this participant either dissociated during visualisations, or was hyper-alert and unable to relax during controlled breathing and PMR, based on her posture, body language and delayed manner of responding. She complained that she found relaxation too difficult over the videoconference transmission, yet also reported to engage in meditation and deep breathing outside our sessions. It would seem from her response that she was finding telepsychology to be the barrier, rather than being able to perform the relaxation techniques.

Thus, for some clients, relaxation strategies may not be easily conducted via telepsychology. It is speculative whether this may be as likely to be a function of challenging personality and other presenting characteristics, as it is about telepsychology. For others, relaxation techniques can be demonstrated and rehearsed adequately via the telepsychology medium, regardless of picture quality, and clients can benefit greatly from them.

Homework is an essential component of CBT interventions. However, as with traditional face-to-face therapy, the consistent completion of homework can be a difficult goal to achieve with participants, and its use must be balanced between its ultimate benefit and the burden on the client. Homework tasks such as between-session reading, recording “event-feelings diaries”, completing “blame pie’s” (i.e visually allocating the blame/guilt for an event between the people involved as pieces of a pie), keeping a journal,
timetabling/scheduling and self-letter writing, were assigned as homework tasks to various participants, over the course of the intervention. At times, these assignments were taken directly from the manual, and at other times, they were developed during or prior to sessions, and faxed as exercise worksheets to the participant at the far site. This process interrupted the session, as typically the developed worksheets were faxed during the session, so that I could explain how to complete them. More often than not, participants also forgot to fax completed homework to me prior to their session. Again, the telepsychology session would be interrupted by the need for faxing. While this was a small disruption, it did take some on-task time away from the session; an issue that would not have occurred in a face-to-face environment. In the future, the internet or website could be used as an adjunctive tool where homework tasks could be completed online, and printed out at both ends, or emailed between participants and the therapist. Such an approach may be less disruptive to the session, but would require a certain level of computer literacy to engage with online or electronic materials and email. It may also enhance the novelty aspect of the homework, and thus enhance compliance or increase completion rates.

**9.7.2. Manualised treatment approaches and telepsychology**

Based on the experiences of this study, the problems and promises of manualised treatments are replicated in the telepsychology environment. The manualised treatment used in this study offered a useful framework around which treatment techniques, strategies and potential goals were outlined. However, as is often found, this treatment manual was based on a diagnostic
formulation rather than a problem based formulation, and thus, to some extent, assumed that all individuals with depression were uniform and shared the same symptoms for the same reasons. As previously described, co-morbidity was the norm in this sample, and deviation from the manual a necessity to address the many other issues brought to therapy by this typical community-based sample. To that extent, telepsychology was no more or less different from face-to-face therapy. Moreover, the same pitfalls and benefits of a manualised approach in a telepsychology environment were the same as would be found in a face-to-face environment.

As I have previously written (Richardson & Reid, 2005), the demands of research in the applied setting can, at times, conflict with the clinical demands to ‘do no harm’, especially if the research methodology requires strict adherence to a pre-set or manualised intervention (Slonim-Nevo, 1997). This study’s research design deliberately incorporated an action research methodology which could accommodate ongoing changes to intervention content, technique and outcome, in addition to a mixed-methods approach to capture intentional and unintentional elements into the data set (Power, Dale & Jones, 1991; Tyson, 1992). Thus, this mixed methods, action research approach increased the clinical accountability of the research through responsive modification of session content and process in a structured, evidence-based way, rather than merely presenting ad hoc observations of client-program fit as "limitations" to the study after the fact (Richardson & Reid, 2005).

As important as specific techniques, non-specific factors which may be related to the development of good therapeutic relationships appeared
influential in determining positive outcomes. In keeping with the
developmental and iterative action research model, CBT was not the only
intervention approach that was ultimately used to meet the needs of clients in
the pilot trial. The eclectic but responsive inclusion of other techniques and
approaches further supports the observation that non-specific factors, and not
specific techniques, impact on positive outcomes in telepsychology. Further
discussion of these methodological design issues was provided in Chapter 3
and is elaborated in the Case Studies (Chapters 7, 8 and 9). CBT interventions
were not “dose-specific”, because what was found as an emerging formative
outcome was that I needed to deviate from the manualised therapy on the
basis of emerging evidence and the participant’s changing problem
presentations. Although the manualised treatments guided the interventions,
the clients’ needs and response to the intervention ultimately determined the
duration (dose) of intervention. Interventions were completed or re-
commenced on the basis of clinically significant change, as indicated by the
outcome measures. It is this ethically responsive, developmental feedback
quality that makes the action research model appealing to treatment outcome
research.

9.7.3 The use of exposure as a component of CBT

Exposure techniques are not typically proposed as a first-line treatment
for depression. However, the high levels of comorbidity of depression and
anxiety in community mental health clients results in the need for community
clinicians to be willing to employ therapeutic techniques which cross syndrome-
based boundaries.
For example, despite Don’s (Appendix H) referral to telepsychology being to assist with depression, it was clear that his depression was a secondary consequence of his paralysing social anxiety and crippling self-esteem. He continued to disclose more and more of his childhood history, which suggested he had been variously neglected, ignored, bullied or beaten by adults in his life. He was afraid of women and had an almost adolescent understanding of his and other’s sexuality.

Because of the difficulty Don had with connecting his emotions to his thoughts and behaviour, Sessions 3 and 4 concentrated on explaining and practicing the ABC model, as described in the manual. Where we deviated from the manual was in tailoring anxiety based examples, rather than low mood examples.

An excellent behavioural experiment occurred at Session 4, when Don’s wife insisted that Don go to the Emergency Department of the local hospital when he began complaining of chest pains and difficulty breathing. He was given an EEG but was cleared, and in all likelihood had experienced another panic attack. While in ED, he was assigned several young nurses to monitor his blood pressure and temperature. Don’s response to being spoken to or touched (i.e., BP or temperature being taken) by these nurses was to commence sweating, breathing heavily, struggling to find words, feeling achy and tingling. His embarrassment and shame, associated with these extreme physical reactions, made it appear as if he was symptomatic. He was eventually discharged and sent home with his wife. He never explained his emotional symptoms to any of his nurses, nor did he tell any of them that he was feeling uncomfortable and anxious because of their presence. Despite it
seeming the appropriate thing to do, Don never offered any explanation when the nurses commented about his increased temperature or heart rate, etc. In Session 5, this experience gave us ongoing examples of the relationship between thinking, behaviour and emotion, including catastrophic thinking and rationalisations related to the physiology of panic.

At another session, Don reported that he had been on holiday in a neighbouring town. He reported to have practiced his exposure exercises while he was anonymous there, and he approached several attractive female shop assistants for information and to make purchases. During these experiments he managed his anxiety with cognitive and relaxation techniques learned in therapy sessions. His wife was also with him and reinforced his achievements. It is possible that these factors together had improved his demeanour sufficiently that his results on these assessments reflected this positive mood change. In his satisfaction survey, he rated that week’s session the highest of all previous and following sessions, and also rated the therapy overall the highest satisfaction rating of all subsequent and previous sessions.

Another technique that was successfully used in the telepsychology environment included the empty chair technique of Gestalt Therapy. Participant “Brian” (not included in appendices), was able to have a long and engaging “discussion” with his “father”, and was able to cathartically express his grief and anger toward him for making him feel weak as a child with a disability. The only change to the usual face-to-face approach of this technique was to widen the camera angle, so that Brian’s full body language could be observed as he interacted with the symbolic representation of his father. One could also speculate that, unlike face-to-face use of this technique, Brian was
able to fully immerse himself in the imagining of both roles, because I was physically absent, and only a “disembodied” voice gave him suggestions.

Extending on from this experience, Brian was asked to write a “letter he’d never send” to his mother, exploring similar themes as described above, as a homework exercise. The plan was for him to bring the letter to the following session, as an alternative exploration tool to the “empty-chair” exercise. Brian was so impressed with his experience in therapy, and his letter writing, that he gave the letter to his parents. Fortunately, this was an extremely positive event which facilitated honest communication between them all, and helped him to heal some long-held emotional pain and erroneous beliefs about himself and his parents. The “empty chair” rehearsal had prepared him well for this outcome, and he had many of his questions answered.

9.8 Research issues

Effectiveness and efficacy studies are now joined by randomised, controlled trials of telepsychology in the literature. In the studies which compare face-to-face therapy with telepsychology, an obvious drawback is that participants and therapists are unable to be blinded to the condition in which they are placed. However, effectiveness studies have demonstrated that, in the main, there is support for telepsychology.

In this study, the realities of field research limited the quality of data collection. Perhaps where it was additionally challenging was the fact that I was only able to make two trips to the rural location to deliver and set up the assessment administration protocols. For the rest of the time, office
administration staff were required to administer and collect testing materials, while still continuing on with their busy regular duties. As has been previously described (see Chapters 6, 7 and 8), test administration was not always attended to as planned, with some participants not receiving their assessment packages, others receiving the wrong ones, and others not completing them fully. The consequence was that some of the participant’s results were unable to be compared with others, and approximations or extrapolations had to be made. Perhaps this situation is no different for any field researcher who has to rely on others to collect their data. However, the nature of telepsychology research tends to be that the researcher is almost always physically distant from their research participants and, thus, data collection integrity remains a challenge in this field.

One way to overcome loss of data issues is to incorporate the therapist into the research design. Perhaps it is fields such as telepsychology, with real-time capture of clinically relevant events and their relationship to technology, that allow for action research or mixed methods research to shine. Although there is no doubt that there is room for traditional RCT designs in telepsychology, it is the dissemination of those moment-to-moment events and practice inconsistencies due to the technology, which will ultimately prepare the future telepsychologist for dealing with the clinical application of this new way of working. To that end, the telepsychology field still has room for all research methodologies, and an overemphasis on RCT’s at the expense of other approaches will do practitioners no good at all.

When this research project began six years ago, the telepsychology field was extremely young and relatively small. In the intervening years the field has
grown exponentially, and the technology has also gone from expensive and specialist to cheap and publicly available. Thus, one of the challenges of telepsychology research is to maintain its contemporaneous validity. More and more people have been exposed to programs like Skype and online webcams. In fact, new mobile phone technology makes videocalls commonplace. Similarly, the use of the internet to provide health information and self-help psychotherapy has also grown exponentially (e.g. see Barak et al., 2008). Future telepsychologists may need to incorporate group therapy, via online forums, that dovetails with one-on-one telepsychology sessions, the use of regular blogging by participants to continuously record their thoughts and feelings in web-based diaries, or even the creation of therapist avatars that can respond to the individual’s needs in a virtual, transmitted environment, thereby overcoming the issues of fuzzy pictures, poor sound quality or inconsistent or alienating demographic features (i.e., gender, age, etc). As research is completed, the new telepsychology technology is advancing in a way that immediately expands the potential of the findings, but consequently, dates the findings to some extent also. The obligatory section in all research papers which details “future research” now has a science fiction quality to it, but augers an exciting collection of possibilities. The final chapter which follows will summarise the findings of this study in relation to the achievement of answers to research questions, and describe some of those same exciting, future research possibilities.
CHAPTER TEN

THESIS DISCUSSION AND FINAL CONCLUSIONS

Given the detailed discussions at the end of each study, and for the sake of brevity, I will not reiterate all of the findings from each study. Rather, in adding a final layer of analysis to this thesis, I will draw out the salient implications and key findings of this series of studies, in an effort to point to new prospects for the field of telepsychology, and, for practitioner research in clinical psychology more broadly. The key intellectual and practice contributions of this thesis are summarised below.

What has become apparent during the process of investigating telepsychology practice is that, locally, nationally and internationally, telepsychology remains a treatment of choice as a psychotherapeutic medium for very few, if any, practitioners, despite clients consistently reporting satisfaction with the medium. While practitioners do use telepsychology, it is generally in preference to no service at all, and with a range of caveats around the importance of face-to-face contact to maximise outcomes. For example, the experts surveyed in Study 2 (Chapter 4) suggested that successful telepsychology required prior face-to-face contact between the clinician and the client. My experience, however, leads me to speculate that some of the successes of the case-study therapy encounters were due, in part, to having never met the clients face-to-face, and therefore, never having to overcome expectations for engagement which might have been established during that emotional, and impression-laden first meeting. In other words, my impression is that if telepsychology is not treated apologetically, or like a “poor cousin”, it can
achieve therapeutic results, albeit via a different route, as robust as those achieved in face-to-face encounters.

It has also become apparent from the current studies that the same issues surrounding the development and maintenance of client-therapist relationship exist in telepsychology as they do in traditional forms of therapy. The therapeutic relationship can be challenged by the technological constraints of telepsychology, but the process of ‘reaching out’ through the telepsychology medium, of ‘going the extra mile’, to provide a service for isolated clients, can also be a very bonding experience for practitioner and client. In addition, the distancing provided by the telepsychology medium can offer a sense of safety and sanctuary for clients who are dealing with shame-based issues. The case studies presented herein have provided examples not only of the effectiveness of telepsychology, but have highlighted it as a potential treatment of choice, even when face-to-face options are available, for some issues and some clients. It has shown itself to be a flexible medium that allowed responsiveness to the needs of clients in terms of therapeutic approach as well as communicative style. These studies have also, however, highlighted that telepsychology has limitations for some clients and, rather than leaving it at that, these case studies have explicated some of the client characteristics and referral characteristics that may suggest a need for alternate forms of therapy. It is this level of analysis which is now needed to move the practice of telepsychology into mainstream use. That these case studies could be conducted and compared within the same study using idiothetic methodology, and using the same treatment protocols and outcome measures, affords stronger evidentiary power than a series of independently conducted and
reported case studies. Taken together, they also highlight process and practice issues that warrant further exploration, such as the recording and replication of process changes and procedural adjustments. These adjustments have been largely minimised and underreported in the research literature, contributing to an inaccurate impression of telepsychology’s procedural simplicity. A few reviews have documented long lists of environmental and technical considerations, ranging from image size, sound quality, and room layout, to time management, resource use, language speed and style, and body language. With such an overwhelming collection of pre-service considerations, practitioners would naturally assume that such conscious practice and externalised focus must impact on the natural flow of therapy that practitioners consider essential for successful clinical outcomes to be achieved. As outlined in Chapter 9, many of these considerations were explicitly investigated during the intervention study, and were demonstrated to be rapidly and easily incorporated within the therapeutic relationship.

As the clinician using the technology during the intervention, I was always conscious that I was separated from my client (i.e., not in a shared physical space). However, I also found the emotional engagement between us to feel the same as in previous face-to-face therapy experiences. To that end, telepsychology felt different to a typical face-to-face therapy session, but did not necessarily feel better or worse. During the telepsychology sessions, the practice adjustments I made were in terms of: 1) pacing my responses to not talk over the participant, including not making as many quick, throw away comments (e.g., usually humorous asides were dropped from my typically conversational repertoire during telepsychology); 2) accommodating the needs
for faxing written materials, and taking between 1-5 minutes on average to “re-
engage” (i.e., return to the pre-interruption conversation or emotional “flow”)
after session interruptions; 3) reducing my use of verbal encouragers (e.g.,
fewer “uh-huh’s”, with a slight increase in head nods), but increasing my smiles
in the early sessions (less so in the later sessions as participants became
familiar with me); 4) preparing materials ahead of time (including re-reading the
manual, copying worksheets, creating new worksheets, information sheets or
diagrams to assist with in-session discussions, reviewing cases with far-site
case managers and reminding administration staff about the administration of
assessment materials and scheduling of room availability); 5) altering my field
of view and visual quality by manipulating the camera; and 6) attending the
sessions early to ensure that the transmissions were working and calls could
be connected, testing the remotes and camera capabilities at the near and the
far sites, and confirming room quality at the far site (i.e., that staff had vacated
the room, that doors could be closed, that interruptions would be minimised).

Some of these alterations were also identified by the experts surveyed in Study
2 as helpful strategic adjustments. These acculturations did not seem to
impede the clinical or process outcomes (as detailed in earlier chapters),
however, they are clearly not changes that would be made in a typical face-to-
face session. For example, in a typical practice environment, the client and
therapist share the same physical space, so environmental disturbances are
felt equally by the therapist and the client, and can usually be dealt with in the
moment (e.g. doors are closed, both parties speak louder, rooms can be
changed). This is not the case with telepsychology, and this differential
between the contemporaneous experiences absorbs some of the “on-task”
therapy time, when trying to equalise the experience between the participant and therapist.

My overall observations from the intervention study were that, when the telepsychology technology was not a good match with the client’s problem (i.e., as detailed in Chapter 7), the technology was intrusive and problematic. My field of view felt narrow, verbal interactions felt disjointed, convoluted and frustrating, sound quality was poor, and the camera manipulation was difficult to do well. The clients for whom it was not a good match were unable to remain seated, had prominent personality features suggestive of disorder (i.e., features of avoidant and borderline personality disorder) and were (I suspect) occasionally dissociative.

Although this study is too small to make any reasonable claim, it is an interesting observation that both “unsuccessful” cases in the intervention study were female, adult survivors of childhood sexual and physical abuse. While past abuse history might have been an historical factor which contributed to the development of these clients’ problem presentations and personalities, more generally, such a history may make telepsychology an unsuitable medium for initial therapy with this group. Given the unstable attachment, abandonment issues, emotional dysregulation, and approach-avoidance interpersonal style that is often present within this diagnostic sub-group, combined with the relative success of intensive approaches, such as Dialectical Behaviour Therapy, the use of telepsychology as adjunctive support to a face-to-face approach may be a better match for clients with prominent Axis II features who benefit from stability and intensity of relationship (Fonagy, Target, Gergely, Allen & Bateman, 2003; Linehan, 1995). Thus far, only asynchronous (i.e.
store-and-forward) telepsychology has been used with people with personality disorders, and only for the purposes of diagnosis (see Yellowlees, Odor, Parish, Iosef, Haught & Hilty, 2010). Although a large group of psychiatrists who work exclusively via videoconferencing are available in California, USA, they do not provide long- or short term psychotherapy, only medication management and store-and forward consultation services (see California Telepsychiatry at http://caltelepsych.com). Further investigation of the feasibility of telepsychology with personality disorders is required.

In contrast to when it was unsuccessful, when the telepsychology technology was a good match with the client’s problems, the sessions did feel as if they were very similar to face-to-face sessions, in that, the sense that I had a limited field of view seemed to recede out of my awareness. In the intervention study, those clients for whom telepsychology was a good match were of mixed ages and genders; had a degree of comfort with technology (such as using the remote), but were not “tech-heads” and could be quite concrete thinkers. These clients could also have high-expressed emotion at times; were not actively suicidal; had chronic pain conditions, but could cope with sitting for an hour; and could be significantly anxious and depressed. Unlike the two “unsuccessful” female cases described above, one of the male participants had a significant physical abuse history in childhood; however, he found telepsychology to be facilitative. Again, the relationship between past abuse history, personality features in adulthood and the relative appropriateness of telepsychology requires further investigation. In general, a fairly typical community mental health population with multiple diagnoses was a good match for telepsychology.
Ultimately, the attitude of the experts, and one that I adopted myself during the intervention study, was that all new psychotherapy techniques need practice and familiarisation, and that they remain a dynamic part of a therapist's intervention repertoire. The assumption that new techniques can function the same as currently existing approaches, or that they should not require dynamic reworking of their implementation as their use becomes mainstream, is naive, and potentially, ethically irresponsible. Thus, the research question that telepsychology requires changes to usual practice is borne out; however, this has neither a negative or positive connotation.

In terms of the process of evaluating clinical practice, an important insight from this study that has implications for outcomes research more generally, is that ratings of ‘satisfaction’ with service can mean very different things to different people. For any service, but of particular relevance to telepsychology, ratings of ‘satisfaction’ may not translate to the inferred meaning for the clinician that the client feels that the service has met their needs or that they would choose this service if other options were available. Similarly, data from these studies support the suggestion that satisfaction does not necessarily translate to improved clinical outcomes. This emphasises the importance of taking a more comprehensive approach to evaluating clinical interventions.

In the satisfaction literature, practitioners indicated they were satisfied with telepsychology’s capacity to: 1) allow for the expression of empathy; 2) permit the genuine development of therapeutic alliance; 3) enhance a client’s sense of control in therapy; 4) facilitate the sense of presence during therapy; 5) permit practical issues, such as the tendency for fewer interruptions, and 6)
potentially enhance clinical outcomes, due to the necessity for increased therapist preparation for sessions. However, in the survey responses, two respondents indicated that they felt that psychotherapy was not a beneficial use of telepsychology, stating instead “it’s not so much the model, it’s the technologies that fail at times”, and, “…face-to face is best - video is more impersonal therefore less effective”. These comments suggested that there was ambivalence about how effective psychotherapy was when used in a telepsychology medium. My own feelings during the intervention studies were that, for most client’s sessions, I found telepsychology to be a satisfactory way of interacting, although it occasionally felt different to a face-to-face intervention. For one participant, I felt uncomfortable in that environment, and struggled to make adequate accommodations to the technological limitations of the medium from the first meeting to the last. For each of the other intervention study participants, there were various sessions during which I was acutely aware of the limitations of the telepsychology medium, and speculated about whether that particular session might have worked better in a face-to-face environment. This feeling tended to occur when there was high expressed emotion by the participant, when the participant became visibly distressed during the last quarter hour of the session, when I was surprised by an unexpected disclosure and when transfer of hard copy information between sites, such as worksheets, diaries etc, was needed.

From the survey, clinicians seemed satisfied with telepsychology, in as much as they are satisfied with any single approach to dealing with psychological issues. I have interpreted this to mean that clinicians are not satisfied with telepsychology all the time, and this becomes a significant issue
only when they are unable to change their approach, either because a research protocol dictates that they not deviate, or no other alternative is available. However, in regular clinical practice, no clinician would adhere strictly to one approach alone with every client, regardless of problem or demographics, and doing so would cause them frustration. And this mirrored my own experiences. A more accurate understanding of the situation might be that the clinicians who persevere with the technology long enough to feel confident with it, are satisfied with it. They make accommodations to it, and capitalise on its strengths. When there is a mismatch between the intervention approach, the client and the technology, they become dissatisfied. Future evaluations of satisfaction will need to capture this multifaceted domain through open-ended, multi-levelled and contemporaneous collection strategies, and clearer operationalisations of the specific aspects of satisfaction they are trying to measure. In the extreme experimental future, one can speculate that technologies like the television “worm” typically used during political debates, may be used to map the changing levels of positive affect experienced by the therapist and clients in real time.

Findings from these studies also highlight the different conclusions that can be drawn from qualitative and quantitative measures of outcomes, and from statistical and clinical measures of significant change. What the complexity of the research strategy has demonstrated, and where this thesis has a unique contribution to make, is that the data from these multiple perspectives is integrated. Moreover, the findings from each study (i.e. Studies 1-4) are used to explain, contextualise and uncover emerging lines of questioning, to clarify how, why and for whom, telepsychology works. This
approach overcomes issues of bias, and minimises the impact of small sample sizes and low power. It is strengthened by having a broad research scope, such that those factors identified in the literature, and hitherto untested, could be explored, compared and contrasted. A mixed methods approach in the current study was part of a strategic research design that facilitated clarification of a range of issues that have been underreported in the telepsychology literature to date. The case-analysis permitted the evaluation of processes and outcomes, qualitative and quantitative data, in addition to formative and summative outcomes in a complementary and developmentally responsive manner. It permitted a link between literature based conclusions with real practice outcomes. In this sense, the pragmatic advantages of combining these paradigms have clearly outweighed any paradigmatic contradictions. The development of a practitioner-driven and practice-informed framework for therapeutic evaluation also offers potential for practitioners to become more active participants in the generation of research data by adopting a consistent and comprehensive evaluative framework for use with each of their clients.

The success of the research as a user-friendly, exploratory study of how telepsychology is practised, and the outcomes it may produce, was dependent on several factors: (a) the inclusion of personalised, narrative accounts of how telepsychology is practiced by experienced practitioners helped explain and “flesh out” literature gaps; (b) expert accounts, combined with an experienced clinician’s researcher-practitioner account, permitted telepsychology variables to be identified, manipulated and assessed as part of the active “mini-hypothesis” testing inherent in typical clinical practice; (c) the utilisation of an action research methodology accommodated formative evaluation processes
and allowed the researcher/clinician to make modifications to the intervention and the assessment protocol as the research progressed; and (d) the combination of qualitative with quantitative data, and idiographic detail with nomothetic summaries, allowed for the unpicking of the interrelationships between clinically significant events, technological factors and intervention features.

Failure to modify and adapt treatment to the client’s changing presentations would have been irresponsible and unethical. Additionally, adhering to a standardised intervention or assessment protocol would have resulted in failure to capture those who did not complete intervention, and I would be unable to explain the results which were obtained. This is an obvious distinction compared to the transcript analysis of Study 3, and is a commonly observed model of research investigation. The intervention study’s results would have been inaccurately unrealistic, particularly for those people who improved significantly, if I had not designed the research with this reflexivity in mind. The mixed methods design and triangulation of the findings of this thesis’ multiple studies add a dimension to this study, both in terms of the quantity of data (despite the small sample size) and the quality of claims made about telepsychology’s impact on the practice of telepsychology and clinical outcomes for participants. Mixed methods, reflective action research and triangulation as methodological elements can be missing in typical psychological research, but they enhance the research in applied contexts. Such methods permit the component analysis of an intervention, thereby reducing unnecessary redundancies, and streamline interventions, while also fulfilling ethical obligations to clients. Importantly, the type of approach that has
been undertaken in this thesis ensures that the dissemination of cumulative expertise gained from clinicians’ daily work is not thwarted by the realities of small numbers (Richardson & Reid, 2006).

The end-of-intervention satisfaction survey asked participants if they had any problems at all with the telepsychology technology. All who responded stated that they did not. In general, regardless of problems with sound or picture quality, most participants remained satisfied. It is not entirely apparent how participants changed their usual way of responding. This has been assumed from self-reports about their past experiences, and inferred from the research literature and the transcript analysis. In this series of studies, client feedback has been mixed, however it is a reasonable assumption that, if therapists alter their interaction style, participants probably also do, and both begin the process clumsily.

Overall, this thesis uniquely contributes to the literature base through its breadth and design features. Previous authors have recommended that exploration of alternative assessment and evaluation paradigms of telepsychology/telepsychiatry are necessary additions to future studies, and this thesis has responded to this recommendation (Simpson, 2003). In order to explore the discrepancy between the positive conclusions typically found in telepsychology literature and the lack of real-world implementation of telepsychology, a complex research design, which viewed the possible causes underpinning this discrepancy from multiple perspectives, was warranted. Moreover, the desire to explore both outcome and process issues, associated with implementing telepsychology interventions in a multi-faceted health
research environment, necessitated a research design that did not rely on a single indicator of success.

A number of limitations with this, as with any naturalistic study, can be noted. The first of these relates to the incapacity to assign participants to different conditions, due to the unavailability of a local practitioner to provide a face-to-face service and the prohibitive travelling distance between me and the research participants. A comparison of face-to-face intervention with telepsychology would have been useful. However, my impression is that, even if another practitioner had been available locally, and controlled assignment to either condition had been possible, or mixed-doses (i.e., alternating face-to-face with telepsychology sessions for the same participant, conducted by a single therapist), the results would be no less complicated by other confounding variables. Given that one of the aims of the intervention study was to investigate how telepsychology could be successfully implemented with a typical community mental health population, the variability (which came from diagnostic category, unknown prior exposure to telepsychology, differing treatment duration and variable problem severity) was anticipated and accepted as a consequence of naturalistic study. Studies which incorporate these naturalistic elements, in addition to investigating the outcomes from mixed-dose telepsychology (i.e., face-to-face sessions alternating with telepsychology sessions), and its particular benefit to specific diagnostic groups or demographic sub-classes of participants, would be a valuable contribution to future telepsychology research and practice.

Issues of statistical power were also of concern within this intervention study, given the small sample size. However, the triangulation of results and
integration of qualitative with quantitative data have ameliorated the impact of low power and these strategies enhance the robustness of the conclusions that have been drawn. Future studies may overcome small sample sizes, when only small local populations of therapists or potential participants are available, by using multi-site trials of telepsychology. In this way, the continuous collection of data is possible, even from practitioners who might consider their few cases to be not worthy of further research or publication.

Increasing the level of detail regarding the specifics of the intervention type, completing fidelity ratings of treatment protocols, and describing the practice changes or deviations from protocols have been recommended in the literature for future studies. This thesis has addressed some of these recommendations by describing, in the case-studies, those aspects of the manual which were modified or re-arranged. Although the intervention received by each client differed from the original manualised CBT intervention, the changes to the intervention content and the process of delivery, outlined above, were necessary to overcome the barriers and ethical obligations of real-world clinical research and practice. The therapy manual proved to not be a mismatch for the telepsychology environment, but rather, a mismatch with my personal psychotherapeutic approach generally, and the multidimensional problems of the community mental health sample who participated in the research. The use of evidence-based treatments for specific diagnostic or client groups is sufficient best-practice for most clinical psychologists in practice. The next stage of research will benefit from the use of best-practice, but flexible and responsive interventions administered by experienced practitioners, as much as it will benefit from manualised or standardised
interventions. Innovative research protocols should consider both options as providing valuable contributions to the literature corpus.

Future research would benefit from continuing to tease out the reasons for client and provider satisfaction with telepsychology. The participants’ satisfaction ratings in this study indicate that despite technical problems or weaknesses, clients are still satisfied with telepsychology. In the next research stage, investigators could continue to explore why there are such positive ratings of satisfaction, particularly in the continuing face of questions about the strength of relationship obtained in a virtual space, and the therapists’ apparent reluctance to use the technology. In a similar fashion, the continued exploration of the relationship between the participant’s ratings of alliance compared to the therapist’s ratings, and how the technology or other clinically significant events moderates these ratings, will be illuminating.

Videoconferencing technology is now endemic to health services in Australia and other westernised countries, and its use as a tool for mental health treatment and support has a comparatively long history. In the past, the goal of telepsychology research was to establish if it was effective or, at least, as effective as face-to-face interactions. Previously, researchers reported that a telepsychology service was better than no service at all. The research into telepsychology has now demonstrated a solid foundation of effectiveness, with the next step being to clarify for whom it is best suited, and in what format it maximises outcomes. Telepsychology has now proven its worth beyond being an alternative to nothing; however, its potential remains unrealised as yet.
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