Predicting Family Satisfaction from Communication Styles.

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I Wanted to Change the World

“When I was a young man, I wanted to change the world. I found it was difficult to change the world, so I tried to change my nation. When I found I couldn't change the nation, I began to focus on my town. I couldn't change the town and as an older man, I tried to change my family. Now, as an old man, I realize the only thing I can change is myself, and suddenly I realize that if long ago I had changed myself, I could have made an impact on my family. My family and I could have made an impact on our town. Their impact could have changed the nation and I could indeed have changed the world.”

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Abstract

Family communication has been associated with significant and far reaching physiological, psychosocial, behavioural and cognitive outcomes. Despite family communication’s significance, research has been largely atheoretical and failed to adequately identify family communication’s role in family social/emotional climate. To address this disparity, a theoretically driven family communication approach was proposed. Two new scales were developed to facilitate research: the Personal Communication Scale ($\alpha = 0.80$), which comprised two subscales, constructive communication ($\alpha = 0.87$) and traditional communication ($\alpha = 0.86$); and the Effective Family Communication Questionnaire ($\alpha = 0.98$). An online survey was employed ($N = 206$) to examine the contribution of family communication to family climate; the predictive ability of the proposed family communication model; and the impact of different forms of communication. Results demonstrated that family communication was significantly associated with family climate $r = 0.54$, large effect, and that the proposed family communication model, predicted up to 65% of the variance in family climate/satisfaction. Constructive communication was shown to be associated with more emotion regulation, more effective family communication and more family satisfaction than traditional communication. Implications for family communication theory are discussed.
Communication in Families

Family communication has consistently and repeatedly been associated with emotional wellbeing, communication competence, emotional intelligence, mental wellbeing, and children’s interpersonal outcomes (Keaten & Kelly, 2008, Koesten & Anderson, 2004; Koesten, Schrodt & Ford, 2009; Young & Schrodt, 2016). Additionally, it has been connected with a range of psychosocial (e.g., self-esteem), behavioural (e.g., support seeking) and cognitive (e.g., cognitive complexity) consequences (e.g., Jones, Bodie & Koerner, 2016; Schrodt, Witt & Messersmith, 2008). Families possessing positive communication skills demonstrate healthy functioning and the ability to meet life’s demands (Koutra, Triliva, Roumeliotaki, Lionis & Vgontzas, 2013; Olson, 2000; Thomas & Olson, 1993). Surprisingly, family communication research remains largely atheoretical and homogenous in its approach, with only one coherent theory of family communication.

Historically, the study of family communication has been subsumed into broader family theories, such as dialectic perspectives, family systems, social learning and attachment theories (Segrin & Flora, 2004). A review of these theories reveals that communication is the “glue” that makes them operate, e.g., attachment theory is based on communication early in life (Segrin & Flora, 2004). More typically, communication has been incorporated into models of family climate/functioning, such as the McMasters Model and the Olsen Circumplex Family Model (Turner & West, 2006). Family climate models assess the general prevailing conditions within a family from a particular perspective, for example, their amount of structure and cohesion. However, investigation into these models, reveals communication is the only common denominator across most models. Communication is seen to set the tone for the family and facilitate family functioning (e.g., Thomas & Olsen, 1993). Communication’s ubiquitousness across models suggests it may be one of the most significant factors determining family climate.
Most of these models of family climate/functioning conceptualise families as a system. However, seeking to understand the family-system, without having first understood the properties of communication, is somewhat like trying to define the water cycle without knowing about the properties of water. To date, family communication/climate research seems stuck at the level of surface topography, describing its rivers and oceans, instead of seeking to understand communication forms/styles.

Tantalisingly, if the link and significance of communication to family climate can be demonstrated, there is the potential to affect numerous physical and psychological health outcomes linked to family climate including: emotional regulation (Fosco & Grych, 2013), metabolic control (Hansson, Rydén & Johnsson, 1994), romantic relationship functioning (Fosco, Van Ryzin, Xia & Feinberg, 2016; Koerner & Fitzpatrick, 2002a, 2002b), adolescent functioning (Bell & Bell, 1982), hostile-aggressive behaviour (Fosco et al, 2016), distress tolerance (Daughters, Gorka, Rutherford & Mayes, 2014), depression (Woods & Denton, 2014) and emotional intelligence (Keaten & Kelly, 2008).

**Family**

Family and societal changes, suggest a revision in the way we define families is long overdue. Many family models are now decades old (Hamilton & Carr, 2016) and many of their assumptions are based on myths and concepts that no longer reflect societal values and may be culturally insensitive, e.g., individuals from collectivist cultures may have been “diagnosed” as being enmeshed, as cohesion was assumed to be enmeshment (Tiesel & Gorral, 2005). To accommodate social change, families need to be conceptualised with maximal flexibility (Koerner & Fitzpatrick, 2002a). Structural definitions, e.g., two heterosexual adults and their children, are giving way to transactional definitions, which enable the tremendous fluidity and flexibility in how families define themselves to be reflected (Demo, Aquilino & Fine, 2005; Segrin & Flora, 2004). Transactional definitions are
more responsive to the dynamic and changing nature of families, capturing changes that occur as a result of lifecycle (e.g., young adults leaving home), life circumstances (e.g., redundancy/remote working/illness), partner-relationships (death/divorce/new relationships), multiple-household living (e.g., children living in single-parent and blended/step households concurrently) and an increasingly inclusive and culturally sensitive approach (e.g., families headed by same-sex partners or families with extended-family-living). Conceiving of families from a transactional perspective facilitates inclusivity, fosters respect, and enables as broad a conception of family as possible, whilst still making the unit meaningful. This study defined family as, the people with whom participants presently live (Lunkenheimer, Shields & Cortina, 2007) and whom they identify as family.

**Communication**

Four key tenets provide the basis for understanding communication: communication is always occurring; everything said/not said communicates something; once communicated, a communication cannot be revoked; ignoring or rejecting an individual’s perspective, communicates that person is not a significant or important member in the family system (Conoley, Plumb, Hawley, Spaventa-Vancil & Hernandez, 2015). Communication within families occurs both at the individual level in the form of personal communication and at the family level through interactional focus and style.

**Communication Style.** A number of studies have demonstrated the link between communication style and outcomes. For example, Gottman (1994) found that the ratio of positive to negative speech acts was 4.9:1 in mutually satisfying marriages with longevity, versus 0.8:1 in marriages heading towards dissolution. Moreover, physiological investigations of heart-rate, blood pressure, blood immune functioning and stress hormone levels during contentious conversations demonstrated negative speech style was associated with negative changes in immune functioning (Kiecolt-Glaser et al., 1993) and increased
stress hormones (Malarkey, Kiecolt-Glasser, Pearl & Glasser, 1994). Likewise, Wickrama, Lorenz, Conger and Elder, (1997) found that when other stressors were controlled for, style of marital communication was implicated in a range of diseases. These findings all point towards the importance of communication style. Surprisingly, very little research has been done on family communication styles.

**Personal communication style.** Rosenberg (2003) identified two forms/styles of communication, which he labelled nonviolent and violent communication. To avoid the misunderstandings and resistance which often accompany these terms, they will be relabelled constructive and traditional communication, to align with their underlying conceptual meaning. Personal communication style refers to whether constructive or traditional communication is used when we use “talk to” ourselves or others. This style can be used in interpersonal exchanges, phone conversations, SMS, posts on social-media-platforms or in the form of self-talk. That is, the communication style is independent of the medium used to convey the message. This study was interested in the style of communication used.

**Constructive communication.** As adapted from Rosenberg’s (2003) framework, constructive communication has two elements, empathy and honesty, both are ways of responding to our own or other people’s messages. Empathy involves seeking to understand, accept and provide an opportunity for accurate and profound insights, particularly in relation to feelings and needs. Honesty is the expression of observations, feelings, needs and requests, free from judgements. “It is honesty of a different kind, as rather than telling people what is wrong with them”, we disclose what is happening within us (Rosenberg, 2012, p. 152). Constructive communication, therefore, is a combination of empathic listening and the expression of observations, feelings, needs and requests (Young, 2011).

**Traditional Communication.** As adapted from Rosenberg’s (2003) framework, traditional communication involves the use of evaluation, judgement and demands and often
involves the attribution of wrongness and the assignment of blame. It is thought to include avoidance, blame of self and blame of another person. Communication takes the form of seeing a behaviour, interpreting its meaning for us, from our point of view, and then labelling either the action (e.g., inconsiderate) or the person (e.g., lazy).

**Family Communication.** The immaturity of the family communication field can be seen not only in the dearth of models, but also in its failure to adequately define family communication (Turner & West, 2006; Vangelisti, 2004). Consequently for the purpose of this study, family communication was operationalised to mean the sending and receiving of information and affective content in a way which is reciprocal and reinforcing.

**Effective Family Communication.** Effective family communication is the family’s ability to engage in processes which broaden-and-build positive psychological resources through demonstrating the capacity to listen to and show consideration for another person’s point of view, whilst also, positively or neutrally expressing one’s own point of view, wants, needs etc., in a clear and reasonable manner (Williamson, Bradbury, Trail & Karney, 2011). Processes which broaden-and-build psychological resources include, the use of approach-based goals, capitalisation, dialectical thinking, empathy and strength finding. (Conoley et al., 2015; Fredrickson, 2004; Garland et al., 2010; Preston et al., 2016)

**Emotion Regulation**

Both constructive personal communication and effective family communication rely on the ability to identify, regulate, disclose and be responsive to emotional content, suggesting that emotion regulation may have important associations with communication style. Emotion regulation involves regulating the occurrence, duration and intensity of emotions in contextually appropriate ways (Cole, Michel, & Teti, 1994; Criss, Morris, Ponce-Garcia, Cui, & Silk, 2016; Denham et al., 2003; Eisenberg, Spinrad & Morris, 2002; Gresham & Gullone, 2012; Morris, Silk, Steinberg, Myers & Robinson, 2007). Emotion regulation is considered
fundamentally important to mental health, with emotion dysregulation being significantly implicated in many mental disorders. (Eisenberg et al., 2001; Frick & Morris, 2004; Gresham, & Gullone, 2012; Gross & Levenson, 1993). Learning emotion regulation is important to successful development, consequently, socialisation of emotions through family communication is considered an important parenting practice (Cole et al., 1994; Eisenberg, Cumberland & Spinrad, 1998; Katz, Maliken & Stettler, 2012).

**Existing Theories**

Despite the importance of family communication, there appears to be only one coherent theory of family communication in use, Koerner and Fitzpatrick’s (2002a) theory of Family Communication Schemata (FCS). FCS was an extension of the Family Communication Patterns construct, originally designed to assess the influence of family communication on media usage, consumer-behaviour and consumer-socialisation (McLeod & Chaffee, 1973; Ritchie & Fitzpatrick, 1990). According to the schemata orientation of FCS, communication is largely the result of cognitive processes. Two core beliefs, conversation and conformity orientation, are believed to not only guide behaviour, but also to interact with one another to affect family communication (Koerner & Fitzpatrick, 2002b).

FCS has provided a much needed model against which to assess family communication and spurred research into communication outcomes in families; however, it has a number of limitations. FCS is based on the idea of interpersonal scripts, including memories of interactions that took place in several relationships. This idea means that it becomes essentially impossible to distinguish between schemas for different relationships and, as such, it is difficult to test hypotheses, to interpret results (Koerner & Fitzpatrick, 2002a) and, more practically, to define interventions.

In an attempt to resolve these issue, FCS focused on schema specifically related to conversation and conformity beliefs (Koerner & Fitzpatrick, 2002a). The use of beliefs in this
way has a few potential issues. Firstly, beliefs are purely cognitive and fail to account for the role of emotion in family communication. Secondly, beliefs run the risk of becoming irrelevant, for example, high conformity orientation is strongly associated with traditional family structure (Koerner & Fitzpatrick, 2002b). As individuals increasingly experience a number of family structures across their lives, or concurrently reside in multiple families, and as society becomes more accepting of individual differences, a belief in conformity becomes less relevant. Thirdly, the theory relies on the idea that it is not sufficient to know one belief, one must also know the other (Koerner & Fitzpatrick, 2002a). Therefore, if conformity orientation breaks down, this potentially undermines the basis of the theory.

Both conformity and conversation orientations have been shown to have limited ability to explain emotion regulation strategies, suggesting that the way people learn to express difficult emotions is significant (Jones et al., 2016). When examining children’s coping and resilience, mixed results have been found for conformity orientation (Koerner & Fitzpatrick, 2002a; 2002c; Schrodt & Ledbetter, 2007). Koerner & Fitzpatrick (2002b) propose these inconsistent results depend on whether the primary authority figure is positive or negative. Schrodt and Ledbetter (2007) also encouraged examination of the subtle nuances and behavioural manifestations of conformity, suggesting the model does not go far enough in explaining the impact of type of communication.

Conversation orientation is problematic because of its quantitative view of family communication, again failing to differentiate between types of communication. Distinguishing between quantity and quality is important, as more quantity does not necessarily equate to quality. For example, a disclosure by a parent/spouse of their desire to leave the family could have devastating and irreversible effects on the spouse/child, as the desire to abandon cannot be uncommunicated, even when the ultimate conclusion is to stay (Conoley et al., 2015). Additionally, evidence of the reported effect of quantity of
communication is suspect, as studies of long-distance romantic relations (Guldner & Swensen, 1995) and couples separated by military careers reveal (Pavalko & Elder, 1990). Scholars have overgeneralised the effects of time spent together (Crawford, Houts, Huston & George, 2002) and when the quantity assumption is tested, it is the interaction and subjective feelings generated that are shown to produce satisfaction (Segrin & Flora, 2004). Indeed, in a family interaction task, when total emotion talk was controlled for, it was interaction style that accounted for the reported differences in children’s psychological outcomes. (Lunkenheimer et al., 2007).

Finally, FCS potentially confuses cause and effect. For example, conversation orientation may be the effect of families who possess effective family communication skills, thereby making it less risky to have conversations, facilitating practice and enabling further skill development. Clearly, an alternative theory is required that explains both the acquisition of communication styles influential in positive psychosocial, behavioural and cognitive outcomes and communications impact on family climate/satisfaction.

Towards an Alternative Theory of Family Communication

**Acquisition mechanisms for personal/family communication.** Mechanisms important to communication style acquisition include observational learning/modelling, social referencing and socialisation (Ackerman et al., 2013; Bandura, 1977; Morris, Silk, Steinberg, Myers & Robinson, 2007). Constructive and effective family communication acquisition requires exposure to emotions, emotion identification, and strategies for responding to and regulating emotion. Parents facilitate observational learning/modelling when they freely display a wide range of emotions and communicate effectively about these emotions (Denham, Mitchell-Copeland, Strandberg, Auerbach & Blair, 1997), thereby helping children learn both the contextual appropriateness of different emotions and a variety of responses (Denham et al., 1997). When children face stressful situations, parents act as social
references, enabling children to learn to regulate emotion and behaviour (Emde, Biringen, Clyman & Oppenheim 1991).

Family communication is also a primary source of socialisation for children (Jones et al., 2016; Young & Schrodt, 2016), this socialisation continues into adolescence and emerging adulthood, with parental communication competence influencing communication competence of young adults (Schrodt et al., 2009). The communication style adopted reflects family beliefs about norms of social interaction, including expression and regulation of emotion and the presence of supportive communication (Koerner & Fitzpatrick, 2002b; Schrodt et al., 2008; Young & Schrodt, 2016), and has been shown to have stability into adulthood (Keaten & Kelly, 2008; Koesten, Schrodt & Ford, 2009; Young & Schrodt, 2016) and to predict the outcomes for others (e.g., spouses) (Ackerman et al., 2013; Jones et al., 2016; Young & Schrodt, 2016).

**Parental meta-emotion philosophy.** One mechanism explaining communication socialisation is *parental meta-emotion philosophy* (Gottman, Katz & Hooven, 1996) encompassing emotion coaching or emotion dismissing parental styles (Gottman et al., 1996; Johnson, Hawes, Eisenberg, Kohlhoff & Dudeney, 2017; Katz et al., 2012). Children’s internalisation of these style is evident when they use “private speech” to guide and self-regulate behaviour (Agres, 2012; Winsler, Diaz & Montero, 1997).

Parental coaching involves parental awareness of children’s emotions; helping the child verbally label emotions; providing empathy and validation of emotions; and supporting with problem solving (Gottman et al., 1996; Morris et al., 2007). Emotion coaching has been found to contribute significantly to emotion regulation (Bowie, et al., 2013; Dunsmore, Booker, Ollendick, & Greene, 2016; Ellis, Alisic, Reiss, Dishion, & Fisher, 2014; Karkhanis & Winsler, 2016; Stocker, Richmond & Rhoades, 2007), regardless of racial/ethnic group, parental sex or contextual factors (Cole, et al., 1994; Criss et al., 2016; Daga, Raval & Raj,
Parental coaching has been highlighted as protective in children with oppositional
defiant disorder (Dunsmore, Booker & Ollendick, 2013) and a lack of coaching has been
implicated in anxiety disorders (Hurrel, Houwing & Hudson, 2017).

Influence of positive and negative communication. Both parental dismissing and
derogatory behaviours have been shown to be associated with poorer outcomes (Criss et al.,
2016; Lunkenheimer et al., 2007). Importantly, as parental coaching increases, dismissing
behaviour decreases (Lunkenheimer et al., 2007) and derogatory behaviours are inhibited
(Gottman et al., 1996). When parental dismissing does occur, coaching appears to be
protective against its negative effects (Lunkenheimer et al., 2007), suggesting that positive
behaviours, not only reduce the presence of negative behaviours, they also conferring
protection if negative behaviour occurs. Constructive communication, has many of the
semantic hallmarks of emotion coaching (with its focus on empathy and the honest disclosure
of feelings and needs), whilst traditional communication is more consistent with emotion
dismissing (with its avoidant and blame orientated approach). It therefore appears crucial to
understand how these forms of communication operate within families.

Coaching in adolescence and emerging adulthood. Whilst emotion coaching continues
to be important into adolescence (Shortt, Stoolmiller, Smith-Shine, Eddy & Sheeber, 2010),
increasing cognitive and emotional development leads adolescents to assume greater emotion
regulation independence (Criss et al., 2016; Morris et al., 2007), accompanied by an
expectation of less support from their parents (Zeman & Shipman, 1997). Parental “over-
coaching” of emotional reactions in adolescence, appears to be associated with worse
outcomes (Hersh & Hussong, 2009).

Broaden-and-build theory. Typically, research has focused on the negative aspects of
family functioning; however, increasing focus is being given to beneficial family factors
related to healthy adjustment (Preston et al., 2016). Research is starting to produce evidence of factors contributing to more favourable self-esteem/self-concept (e.g., Harris et al, 2015), adaptive psychological development (e.g., Valiente, Fabes, Eisenberg & Spinrad, 2004), academic achievement (Melby, Conger, Fang, Wickrama & Conger, 2008), and successful interpersonal relationships, quality of life and mental health (Ackerman et al., 2013). Supportive family communication, in particular, has been shown to contribute significantly to physical and mental wellbeing (Feeney & Collins, 2015; Jones et al., 2016). Understanding these beneficial factors is vital if interventions targeted at developing skills crucial to the attainment of positive outcomes are to be possible and effective.

Broaden-and-build theory helps explain the creation and reinforcement of different family climates, suggesting positive emotions broaden people’s thought-action repertoires, facilitate higher order thinking, increase behavioural flexibility and action likelihood (Fredrickson, 2004; Fredrickson & Branigan, 2005; Garland et al., 2010), whilst also building enduring personal resources over time (Cohn, Fredrickson, Brown, Mikels & Conway, 2009; Fredrickson, 2004), one of the most important being family climate/satisfaction. Spirals have been used to explain this process and to illustrate the self-perpetuating cycles that occur when either positive or negative emotions are triggered (Garland et al., 2010).

Downward spirals, for example, are stimulated by negative experiences (such as criticism), which trigger psychophysiological reactivity (endocrine, muscular, cardiovascular and neural changes), along with dysfunctional social interactions (Fredrickson et al., 2003; Garland et al., 2010; Morris et al., 2007). Depressed people in marriages, for example, have been shown to become increasingly negative (Segrin & Flora, 2004), send more negative messages (McCabe & Gotlib, 1993), engage in more negative self-evaluations and statements of negative wellbeing, have increased verbal aggressiveness and have poorer communication
during problem solving interactions (Hautzinger, Linden & Hofiman, 2002), contributing to worse marital outcomes (Gottman, 1994; Segrin & Flora, 2004).

Upward spirals, conversely, are engendered by positive experiences (such as effective family communication) that accumulate over time to foster resilience (Cohn et al., 2009; Fredrickson & Losada, 2005; Fredrickson et al., 2003), increase environmental interaction (Bryan & Bryan, 1991) and create positive feedback loops. Multiple studies have found that parental expression of positive emotions contributes to children’s social competence, emotion understanding, prosocial behaviour, positive emotionality and quality relationships (Cumberland-Li, Eisenberg, Champion, Gersoff & Fabes, 2003; Eisenberg et al., 2003; Rubin Hastings, Chen, Stewart & McNichol, 1998). Adolescent positive engagement in family interactions statistically predicted their marital outcomes in adulthood, approximately 20 years later (Ackerman et al., 2013), and family dynamics engendering supportive interpersonal style in childhood, was associated with similar behaviour from spouses in adulthood (Ackerman et al., 2013).

Family Communication Approach

Proposed family communication model. The current study has integrated theories of learning and socialisation, parental meta-emotion philosophy and positive psychology to describe a strengths-based perspective of communication’s contribution to family climate. A strengths-based approach has been adopted because of the many clinical advantages identified with this approach (Conoley et al., 2015). Figure 1 illustrates the proposed Family Communication Model and the expected developmental directions of influence. It is proposed that children learn from the family communication environment via the mechanisms
of observational learning/modelling/social referencing/socialisation. This experience facilitates emotion regulation and acquisition of their personal communication style.

During adolescence and emerging adulthood, with increased autonomy, competence, and responsibility, personal communication and emotion regulation drive the co-creation of the family environment, whilst the family communication environment continues to socialise and influence communication competence.

Adulthood and parenthood see the adoption of a benefactor, rather than recipient role, with family climate being shaped by parental personal communication style, emotional wellbeing, and family communication co-created via interpersonal interactions.

This study seeks to understand the functioning of the adult elements of the model. The first hypothesis of this study, is that there will be a relationship between effective family communication and family climate/satisfaction (H1). As positive behaviours appear to inhibit negative behaviours, understanding the presence and effect of positive behaviours is of paramount importance. Consequently, it is hypothesised that constructive communication, emotion regulation/dysregulation and effective family communication will influence family climate/satisfaction (H2). As the adult-child represents the nexus between child and adult stages, with their continuing socialisation by the family, it is hypothesized that for adult-children, effective family communication will represent a greater influence on family climate/satisfaction than for parents (H3).
Positive and negative spirals. The family communication approach, as conceptualised for the current thesis, further proposes that personal communication style will contribute to whether families communicate in ways that broaden-and-build psychological resources, producing upward spirals of wellbeing, conferring psychological benefit and protection (Figure 2), or downward spirals of dysfunction that predispose individuals to psychological problems (Figure 3).

Additionally, it was hypothesized that the use of constructive personal communication would be negatively correlated with emotion dysregulation, positively correlated with effective family communication and positively correlated with family satisfaction (H4). By extension, it was further hypothesized that use of traditional communication would be positively correlated with emotional dysregulation, negatively correlated with effective family communication and negatively correlated with family satisfaction (H5).

Measuring the components of the family communication model

There are inherent difficulties in measuring family communication, primarily because there is no “objective” truth about communication within the family. Systematic disagreement is pervasive between husbands and wives, parents and children, with each family member experiencing their “own family”, dependent on their personal skill levels and
the capacity and willingness of family members to respond sensitively to the feelings, needs and values of its members (Gottman, 1994; Ritchie & Fitzpatrick, 1990). Given that much of the power of communication resides in the perceptions of and emotional reactions to communication (Turner & West, 2006), anonymous self-reports were the obvious choice for the current study. Self-reports also enable collection of “insider” information, not available to external observers (Turner & West, 2006),

Demographics. Traditionally, families have been statically conceptualised and labelled as a particular “type”, posing the risk of stereotype threat, especially as many cultural assumptions about single-parent or blended families endorse a deficit perspective of functioning (e.g., Malia, 2005). Increasingly research highlights it may be skill deficit, rather than structural composition that determines outcomes, for example, blended families had high satisfaction levels when open communication was present (Portrie & Hill, 2005). To reduce stereotype threat, facilitate capturing atypical family structures and enable comparison of parents versus adult-children, family position(s) held (e.g., adult-child), rather than family type (e.g., single-parent) were captured along with gender and age. This approach enabled comparison of any demographically relevant differences.

Personal Communication Scale (PCS). Young (2011) reports the greatest impediment to both research and clinical intervention is the lack of empirically supported tools. Previous measurement attempts have failed to produce a scale with enough sensitivity to distinguish between constructive and traditional forms of communication (Young 2011). The current study attempted to fill this measurement gap by developing a new measure, the Personal Communication Scale (PCS).

Scale Development. Young’s (2011) Elements of Nonviolence in Communication Inventory provided the spring-board for the PCS. Sensitivity issues were addressed and a revised approach, similar to that adopted by Jones et al. (2016), was used. Input was sought
from a nonviolent communication expert group, resulting in the development of nine scenarios with five semantically different responses.

**Emotion dysregulation.** Emotional wellbeing is largely determined by a person’s ability to adaptively self-regulate his/her responses to arousing and distressing stimuli in the environment (Bowie et al., 2011). The MACS-18 was developed at Murdoch University to measure emotion regulation (Geddes & Dziurawiec, 2016). The MACS-18 measures fear of emotion, specifically fear of: anger; anxiety; depression; and loss of control. Previous versions of the measure have demonstrated concurrent validity and stability for use with different non-clinical samples (Low, 2015).

**Effective Family Communication Questionnaire (EFCQ).** There is a dearth of family communication scales. Family communication is most frequently measured as part of family climate scales. Hamilton and Carr (2016) identified numerous issues with existing family climate scales: many were created decades ago; with minimal research in the last decade; large number of items (36-60); and the scales were designed for use within a theoretical model of family functioning and, consequently, may no longer reflect current clinical practices and therapeutic modalities. One of the most widely used measures, Family Environment Scale, has psychometric and theoretical shortcomings (Boyd, Gullone, Needleman, & Burt, 1997) and the Family Assessment Measure III (Skinner, Steinhauer & Sitarenios, 2000), despite thirteen validation studies has no evidence to support it as a reliable and valid family instrument (Hamilton & Carr, 2016).

The most robust tool currently available is the Olson Family Communication Scale. Its content balances cognitive, behavioural and affective items and examines the expression of feelings, needs and requests. However, it does not examine communication processes believed to produce positive psychological outcomes (e.g., capitalisation). This scale was used to establish the construct validity of the EFCQ.
Scale Development. The EFCQ was theoretically drawn from nonviolent communication theory (Rosenberg, 2003), and broaden-and-build theory (Fredrickson, 2004). An initial pool of 137 items was identified, with content being analysed against the content and processes identified as being important to effective family communication. This approach resulted in a 25-item scale, designed to be short enough to prevent response fatigue or acquiescence effects (Rathod & LaBruna, 2005), whilst accommodating multiple measures of underlying facets. Questions all began with the wording “my family”, thereby focusing attention on personal experience, rather than some imagined consensus or idealistic version of family. The scale was trialled with people from varying age groups and family positions, with particular attention being paid to response spread and social desirability responding. Trial results revealed highly variable patterns of responding and an extremely wide range of responses, suggesting a lack of social desirability response effects (Dunlop, Telford & Morrison, 2012).

Family climate. A number of measures of family climate exist, including, the McMasters Model (Epstein, Bishop, Ryan, Miller & Keitner, 1993); Family Environment Scale (Boyd et al., 1997); Family Assessment Measure III (Skinner et al., 2000); and the Olsen Circumplex Family Model (FACES IV) (Olson, 2011). However, to minimise issues identified with psychometric robustness and ensure assessment of overall climate, rather than duplicating measurement of communication, an alternative measure was required.

Satisfaction with Family Life Scale. (SWFL; Zabriskie & Ward, 2013) SWFL was used to assess family climate. This scale measures an individual’s global judgement of family satisfaction. One key benefit is that, unlike other measures which tend to impose values, this measure accords individuals respect, allowing them to weigh different domains of their family life relative to their personal and cultural value structure (Poff, Zabrieske & Townsend, 2010). A second benefit is its flexibility in measuring different family structures; it is not
limited to the “traditional family” structure of mum, dad and kids (Poff et al., 2010). SWFL consistently distinguishes differences in family satisfaction amongst families theoretically predicted to have different levels of family satisfaction and has been directly related to family wellness variables and overall family function (Poff et al., 2010). SWFL has been used cross culturally and with a variety of family structures.

**Study Purpose**

This study sought to contribute to the understudied and largely atheoretical area of family communication. First, it explored the contribution of family communication to family climate. Second, it used a strengths-based approach to test the Family Communication model’s ability to predict family climate. Third, it aimed to understand the contribution of communication style to emotional wellbeing, effective family communication and family climate.

**Methods**

**Participants**

Two hundred and six participants, aged 18 to 72 years old, completed the online survey. Participants included university psychology students (39.5%) and members of the public (60.5%), all living with at least one other family member. Family relationships included: living with partner only (20%); parents living with children (41%: single-parents, 19%; partnered-parents, 22%); and living as an adult-child with parents (36%). The majority of participants identified themselves as female (83%), Australian (77%) and with English as their first language (83%).

**Design**

An individual on-line self-report questionnaire, accessible via mobile phone, tablet or computer was used (Appendix A). The questionnaire comprised a number of scales: demographic information; SWFL; EFCQ; PCS; MACS-18; and Olson Communication Scale.
Average completion time was approximately 15-20 minutes, suggesting fatigue and satisficing effects would be minimised (Rathod & LaBruna, 2005).

Measures

**Demographic information sub-questionnaire.** This sub-questionnaire collected data concerning participants’ demographic information, including their age, gender, nationality, first language and positions they occupied in the family (e.g., adult-child, sibling, partner, parent with partner, etc.) and positions others occupied in the family (see Appendix A). This approach to family structure was taken to be as inclusive, flexible and as respectful as possible of an individual’s family experience.

**Satisfaction with Family Life Scale (SWFL).** The SWFL scale (Zabriskie & Ward, 2013) is a five-item self-report assessment of an individual’s global judgement of family satisfaction. Responses for each item are scored on a seven-point Likert scale, ranging from 1 (“Strongly disagree”) to 7 (“Strongly Agree”). The SWFL has been found to display high levels of internal reliability ($\alpha = .79$ to .94) and high construct validity (Zabriskie & Ward, 2013).

**Effective Family Communication Questionnaire (EFCQ).** A 25-item questionnaire assessed family communication processes, using a seven-point Likert response scale, ranging from 1 (“Strongly disagree”) to 7 (“Strongly Agree”).

**Personal Communication Scale (PCS).** A scenario-based questionnaire assessed an individual’s likelihood of using constructive or traditional communication. Nine scenarios were presented, along with a range of either constructive or traditional possible responses. Individuals are asked to indicate the likelihood that they will respond in one of these ways, using a seven-point Likert response scale, ranging from 1 (“very likely”) to 7 (“very unlikely”).
Modified Affective Control Scale-18 (MACS-18). MACS-18 (Geddes & Dziurawiec, 2016) is an 18-item scale used to measure emotional regulation. Responses for each item are scored on a seven-point Likert scale ranging from 1 (“Strongly disagree”) to 7 (“Strongly Agree”). The MACS-18 displays high levels of internal reliability for both the total scale ($\alpha = .93$) and subscales ($\alpha = .81$ to .92) (Geddes & Dziurawiec, 2016).

Olson Family Communication Scale. A 10-item questionnaire that is the most robust current measure of family communication was used. The Olson scale, has an internal reliability of .90, based on a US national sample of 2,465 individuals, and a test re-test reliability of .86 (Olson & Barnes, 2010).

Ethics

Ethics approval for the current study was obtained from the Murdoch University Human Research Ethics Committee (Approval 2017/044). (Appendix C)

Power

Power was high, as indicated by a-priori calculations with G*Power. At a significance level of .05 and statistical power of 0.80, 84 participants were required for the correlational part of the study (Faul, Erdfelder, Lang & Buchner, 2007). A sample size of 200 was deemed adequate to test both the EFCQ and PCS, using the general rule of thumb discussed by Tabachnick and Fidell (1989).

Procedures

Recruitment. Participants were recruited via a) an online advertisement posted on the School of Psychology and Exercise Science, Murdoch University Participant Portal. The Participant Portal enables psychology undergraduates at Murdoch University to accrue credit points required for their studies, and b) online advertisements using the Facebook social media platform. Participants were informed that the study involved an online questionnaire and were provided with a link to the study.
General procedures for participants. Participants accessed the information page via a web-link. Participants were asked to indicate their eligibility and informed consent, before they were given access to the survey (Appendix A). Following submission of the survey, participants were given the option to follow a link to a separate form (see Appendix B), where they could give their name, email address, student number (if appropriate), preferred incentive for completion of the study and preferred method of accessing study results. Participants who completed the survey could choose to be entered into a prize draw for a $50 pre-paid Gift Card or, if a Murdoch psychology student, to receive 30 minutes of subject-pool credit.

Data Handling

Data was downloaded and initially manipulated in a password-protected excel workbook. Numerical codes were assigned to each of the response categories; MACS-18’s reverse-worded items were reverse-coded (See Appendix D); totals for scales and sub-totals for subscales were calculated; and individuals were assigned to groups on the basis of demographic information.

Statistical Analyses

All statistical analyses were conducted with the Statistical Package for Social Sciences (SPSS, v25), using $p = .05$ significance level. The analyses of data included descriptive statistics, scale reliabilities, principal axis analysis, correlation analyses, MANOVA, t-tests, and hierarchical multiple linear regression.

Results

Factor analysis was conducted on the two new scales, PCS and EFCQ, to ensure both were valid and reliable bases from which to draw conclusions. The EFCQ was compared to the Olson Family Communication Scale to establish concurrent validity. MANOVA and t-tests were used to establish if there were significant demographic differences amongst participants which needed to be accounted for when interpreting findings (e.g., differences between
single-parents and partnered-parents). Correlations were carried out to establish the relationships between variables. Finally hierarchical multiple regression analysis (HMRA) was carried out to establish the predictive validity of the model.

**Data Screening and Replacement of Missing Values Prior to Analyses**

Data was screened for problematic patterns that might confound analyses. There were no obvious indicators of acquiescence response bias in the data. Three missing values on relevant items in the Constructive Communication subscale were identified, scores were calculated for these participants by summing scale-items and dividing by the number of items answered.

An initial exploration of the data revealed non-normality, consequently, the data was subjected to a range of transformations, including natural log, reciprocal transformation and bootstrapping however the results for all transformations were marginal. Tabachnick and Fidell (1989) suggest that “if all variables are skewed to about the same moderate extent results will be marginal” (p84). Field (2013) states central limit theorem tells us that in large samples, such as this one (N = 206) “estimates will have come from a normal distribution regardless of what the sample or population data look like” (p171.). An application of Field’s recommended strategy of visual inspection of P-P plots and Q-Q plots suggested that the data was approximately normal (Appendix E). Linearity of age was initially checked, Mahalanobis distance was inspected, one case exceeded the critical $\chi^2$ for df = 5, (at $\alpha = .001$) of 20.515, this outlier was removed, thereby addressing the effects of multivariate outliers (Allen et al., 2014).
Factor Analysis and Reliability of Personal Communication Scale

Principle Axis factoring was conducted on the 45-item PCS. A Kaiser-Meyer-Olkin value of 0.813 suggested the data was suitable for factor analysis (Allen et al., 2014). Bartlett’s Test of Sphericity reached statistical significance (p = .001), supporting the factorability of the correlation matrix (Allen et al., 2014). Loadings of items under .3 were suppressed to simplify output interpretation as suggested by Allen et al. (2014). An inspection of the scree-plot revealed a steep drop after two factors, with the elbow occurring between Factors four and five, which could justify the retention of between two and five factors. The five factor model, suggested by the Monte Carlo Parallel Analysis, did not appear appropriate, as factors three through five were likely to be weak and unstable (Costello & Osborne, 2005), consisting of only a few items in each. On the basis of the scree-plot, coupled with item loading, reliability and theoretical explanatory power, it was decided to retain two factors for further investigation.

The two-factor solution explained 31.78% of the variance, with Factor 1 contributing 18.75% and Factor 2 contributing 13.03%. Table 2 shows the factor loadings of all items after rotation. The two factor model represented the expected pattern of loadings, specifically constructive communication items load onto Factor 1 and traditional communication items load onto Factor 2. There was a weak negative correlation between the two factors ($r = -0.21$).

Items which failed to load onto either factor above the suppression value (.30) were removed. Three items which loaded onto both factors were also removed. Deletion of these items increased the total variance explained by the two factors to 36.38%, with Factor 1 contributing 22.37% and Factor 2 contributing 14.01%. There was a weak negative correlation between the two factors ($r = -0.27$).
Table 1

Summary Descriptive Statistics (Mean and SD) and Factor Loadings of the 45 Item Personal Communication Scale.

<table>
<thead>
<tr>
<th>Title</th>
<th>Item</th>
<th>Mean</th>
<th>Standard</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC 8 E</td>
<td>&quot;That took a lot of courage to go and have that conversation...&quot;</td>
<td>5.26</td>
<td>1.67</td>
<td>0.76</td>
<td>-0.03</td>
</tr>
<tr>
<td>CC 9 E</td>
<td>&quot;Sounds like you are feeling...&quot;</td>
<td>4.10</td>
<td>1.91</td>
<td>0.69</td>
<td>0.02</td>
</tr>
<tr>
<td>CC 6 H</td>
<td>&quot;Wow that's awesome! Of course you are _______!!!&quot;</td>
<td>5.89</td>
<td>1.38</td>
<td>0.67</td>
<td>-0.21</td>
</tr>
<tr>
<td>CC 6 E</td>
<td>&quot;Wow, that's great...&quot;</td>
<td>5.73</td>
<td>1.43</td>
<td>0.66</td>
<td>-0.08</td>
</tr>
<tr>
<td>CC 3 E</td>
<td>&quot;I can see you're really upset by this...&quot;</td>
<td>4.60</td>
<td>1.85</td>
<td>0.65</td>
<td>-0.03</td>
</tr>
<tr>
<td>CC 8 H</td>
<td>&quot;I feel sad you didn't manage to sort it out, but I respect you for...&quot;</td>
<td>5.19</td>
<td>1.54</td>
<td>0.65</td>
<td>-0.04</td>
</tr>
<tr>
<td>CC 7 H</td>
<td>&quot;I really appreciated your support in cooking me a meal.&quot;</td>
<td>6.10</td>
<td>1.18</td>
<td>0.64</td>
<td>-0.14</td>
</tr>
<tr>
<td>CC 5 H</td>
<td>&quot;I'm feeling upset and I really need to talk about it...&quot;</td>
<td>4.69</td>
<td>1.94</td>
<td>0.61</td>
<td>-0.02</td>
</tr>
<tr>
<td>CC 7 E</td>
<td>&quot;I know you were really busy, It was so considerate and kind...&quot;</td>
<td>5.82</td>
<td>1.31</td>
<td>0.60</td>
<td>-0.09</td>
</tr>
<tr>
<td>CC 9 H</td>
<td>&quot;I am feeling really uncomfortable with the tension...&quot;</td>
<td>4.27</td>
<td>1.99</td>
<td>0.59</td>
<td>0.07</td>
</tr>
<tr>
<td>CC 3 H</td>
<td>&quot;I'm sad you have had that experience.&quot;</td>
<td>4.86</td>
<td>1.74</td>
<td>0.58</td>
<td>0.01</td>
</tr>
<tr>
<td>CC 4 E</td>
<td>&quot;Are you feeling upset and worried about breaking my phone?&quot;</td>
<td>3.37</td>
<td>1.92</td>
<td>0.51</td>
<td>0.20</td>
</tr>
<tr>
<td>CC 2 H</td>
<td>&quot;I left the house tidy, because I have friends arriving in 10 minutes...&quot;</td>
<td>5.62</td>
<td>1.42</td>
<td>0.47</td>
<td>-0.02</td>
</tr>
<tr>
<td>CC 5 E</td>
<td>&quot;I notice you haven't asked me about my day, so I'm just...&quot;</td>
<td>3.21</td>
<td>1.78</td>
<td>0.46</td>
<td>0.21</td>
</tr>
<tr>
<td>CC 4 H</td>
<td>&quot;I feel pretty upset right now, I need my things to...&quot;</td>
<td>5.00</td>
<td>1.92</td>
<td>0.43</td>
<td>0.01</td>
</tr>
<tr>
<td>CC 2 E</td>
<td>&quot;Looks like you've been busy and hungry, can you come you tidy...&quot;</td>
<td>4.52</td>
<td>1.91</td>
<td>0.43</td>
<td>0.22</td>
</tr>
<tr>
<td>TS 1 BS</td>
<td>&quot;I'm sorry, I should have reminded you we said 6.30pm&quot;</td>
<td>3.36</td>
<td>1.89</td>
<td>0.39</td>
<td>0.36</td>
</tr>
<tr>
<td>CC 1 H</td>
<td>&quot;I'd like to be able to count on people showing up when agreed...&quot;</td>
<td>3.91</td>
<td>1.91</td>
<td>0.30</td>
<td>0.03</td>
</tr>
<tr>
<td>TS 5 A</td>
<td>Not say anything.</td>
<td>4.66</td>
<td>1.83</td>
<td>-0.24</td>
<td>0.14</td>
</tr>
<tr>
<td>CC 1 E</td>
<td>&quot;Looks like you have all been busy. We agreed 6.30, it's now...&quot;</td>
<td>4.24</td>
<td>2.07</td>
<td>0.16</td>
<td>-0.02</td>
</tr>
<tr>
<td>TS 6 BS</td>
<td>&quot;No one ever gives me compliments, I'm just not good at...&quot;</td>
<td>1.59</td>
<td>1.05</td>
<td>-0.02</td>
<td>0.66</td>
</tr>
<tr>
<td>TS 3 BS</td>
<td>&quot;I should have warned you they were bad news.&quot;</td>
<td>2.45</td>
<td>1.48</td>
<td>0.05</td>
<td>0.64</td>
</tr>
<tr>
<td>TS 9 BS</td>
<td>&quot;I should just...&quot;</td>
<td>2.49</td>
<td>1.52</td>
<td>0.15</td>
<td>0.63</td>
</tr>
<tr>
<td>TS 3 BO</td>
<td>&quot;What do you expect, if you act that way...&quot;</td>
<td>2.14</td>
<td>1.37</td>
<td>-0.07</td>
<td>0.63</td>
</tr>
<tr>
<td>TS 7 BO</td>
<td>&quot;It's about time&quot; or &quot;You're always trying to guilt me.&quot;</td>
<td>1.56</td>
<td>1.07</td>
<td>-0.01</td>
<td>0.62</td>
</tr>
<tr>
<td>TS 8 BO</td>
<td>&quot;You probably didn't approach it the right way.&quot;</td>
<td>2.43</td>
<td>1.46</td>
<td>-0.12</td>
<td>0.61</td>
</tr>
<tr>
<td>TS 6 BO</td>
<td>&quot;They're just saying that, they don't really mean it.&quot;</td>
<td>1.63</td>
<td>1.26</td>
<td>-0.07</td>
<td>0.58</td>
</tr>
<tr>
<td>TS 8 BS</td>
<td>&quot;I should have said something, I didn't think it was a good...&quot;</td>
<td>2.41</td>
<td>1.51</td>
<td>0.01</td>
<td>0.57</td>
</tr>
<tr>
<td>TS 4 A</td>
<td>Say nothing.</td>
<td>1.37</td>
<td>0.87</td>
<td>0.15</td>
<td>0.57</td>
</tr>
<tr>
<td>TS 3 A</td>
<td>Say nothing.</td>
<td>2.06</td>
<td>1.46</td>
<td>-0.13</td>
<td>0.56</td>
</tr>
<tr>
<td>TS 5 BS</td>
<td>&quot;I'm too much of a burden.&quot;</td>
<td>2.40</td>
<td>1.65</td>
<td>0.01</td>
<td>0.54</td>
</tr>
<tr>
<td>TS 2 BS</td>
<td>&quot;It's my own fault, I suppose I should have...&quot;</td>
<td>2.47</td>
<td>1.60</td>
<td>0.37</td>
<td>0.49</td>
</tr>
<tr>
<td>TS 6 A</td>
<td>Say nothing.</td>
<td>1.98</td>
<td>1.31</td>
<td>-0.33</td>
<td>0.49</td>
</tr>
<tr>
<td>TS 4 BS</td>
<td>&quot;I should never have left it here.&quot;</td>
<td>2.75</td>
<td>1.84</td>
<td>0.28</td>
<td>0.47</td>
</tr>
<tr>
<td>TS 8 A</td>
<td>Say nothing.</td>
<td>1.96</td>
<td>1.36</td>
<td>-0.28</td>
<td>0.44</td>
</tr>
<tr>
<td>TS 7 A</td>
<td>Say nothing.</td>
<td>1.44</td>
<td>1.02</td>
<td>-0.14</td>
<td>0.42</td>
</tr>
<tr>
<td>TS 5 BO</td>
<td>&quot;You don't care about me or my feelings.&quot;</td>
<td>2.86</td>
<td>1.67</td>
<td>0.05</td>
<td>0.42</td>
</tr>
<tr>
<td>TS 7 BS</td>
<td>&quot;I feel so guilty for not being able to do more.&quot;</td>
<td>2.78</td>
<td>1.85</td>
<td>0.34</td>
<td>0.39</td>
</tr>
<tr>
<td>TS 4 BO</td>
<td>You selfish person, look at my phone!!@**!!</td>
<td>3.04</td>
<td>2.18</td>
<td>-0.17</td>
<td>0.37</td>
</tr>
<tr>
<td>TS 9 A</td>
<td>Say nothing.</td>
<td>2.85</td>
<td>1.91</td>
<td>-0.17</td>
<td>0.32</td>
</tr>
<tr>
<td>TS 2 A</td>
<td>Clean up without Comment</td>
<td>2.75</td>
<td>1.76</td>
<td>0.15</td>
<td>0.28</td>
</tr>
<tr>
<td>TS 9 BO</td>
<td>&quot;You should both sort yourselves out and get over it.&quot;</td>
<td>3.79</td>
<td>2.01</td>
<td>-0.12</td>
<td>0.27</td>
</tr>
<tr>
<td>TS 1 A</td>
<td>&quot;You are so inconsiderate...&quot;</td>
<td>2.91</td>
<td>1.9</td>
<td>-0.04</td>
<td>0.24</td>
</tr>
<tr>
<td>TS 1 BO</td>
<td>&quot;What did your last slave die of? Get in here right now and tidy up.&quot;</td>
<td>3.52</td>
<td>2.00</td>
<td>0.01</td>
<td>0.22</td>
</tr>
<tr>
<td>TS 2 BO</td>
<td>Not say anything.</td>
<td>4.25</td>
<td>2.08</td>
<td>0.09</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Eigenvalues: 7.83 4.90
Cumulative % Variance: 22.37% 14.01%
Cronbach's Alpha: 0.87 0.86

N = 206 Note: Factor loadings over .30 used for the scale appear in bold
Internal reliability of the resulting total scale was very good at Cronbach’s alpha value of 0.80. Individual subscale internal reliabilities were also very good at 0.87 for “constructive communication” and 0.86 for traditional communication. These results indicate the scale and subscales are suitable for research purposes (Bland & Altman, 1997; Connelly, 2011).

**Factor Analysis and Reliability of Effective Family Communication Questionnaire**

Principle Axis Factor analysis was conducted on the 25-item EFCQ. The Kaiser-Meyer-Olkin value of 0.968 verified the sampling adequacy for analysis and all KMO values for individual items were greater than 0.61, which is well above the acceptable limit of 0.5 (Field, 2013). An initial analysis was run to obtain eigenvalues. Only one factor had eigenvalues over Kaiser’s criterion of 1; this factor explained 68.18% of the variance. An inspection of the scree plot revealed a very clear model, with all factors loading onto the one factor, as illustrated in Table 1. This was further supported by the Monte Carlo Parallel analysis result, which showed only one component.

The EFCQ demonstrated excellent internal consistency with a Cronbach’s alpha value of 0.98. Concurrent validity of the EFCQ was assessed via comparison with the Olson Family Communication Scale. The Olson scale also achieved a very good Cronbach’s alpha of .90. A significant correlation between the EFCQ and the Olson Family Communication Scale, $r = 0.73, p < .001$, indicated good criterion validity. Due to the internal reliability and concurrent validity of the EFCQ, its suitability for the current research was supported.
Multivariate Analysis of Variance (MANOVA)

**Gender.** MANOVA was used to examine the effects of gender (Table 3). The Shapiro-Wilk test of univariate normality for females was statistically significant across all variables. This is not considered problematic, as MANOVA is considered robust with respect to univariate non-normality when group sizes exceed 30. Box’s $M$ was non-significant at $\alpha = .06$, indicating homogeneity of variance-covariance matrices could be assumed. Mahalanobis distance was inspected, $\chi^2 = 19.05$, under the critical $\chi^2$ for $df = 5$, (at $\alpha = .001$) of 20.515. The remaining assumptions of no multicollinearity, and homogeneity of variance-

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**Table 2**

*Summary Descriptive Statistics (Mean and SD) and Factor Loadings of the 25 Item Effective Family Communication Questionnaire.*

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>My family believe it is important to communicate.</td>
<td>5.76</td>
<td>1.36</td>
<td>0.78</td>
</tr>
<tr>
<td>My family tries to understand each other's points of view.</td>
<td>5.33</td>
<td>1.55</td>
<td>0.88</td>
</tr>
<tr>
<td>My family communicates honestly and openly with each other.</td>
<td>5.39</td>
<td>1.54</td>
<td>0.86</td>
</tr>
<tr>
<td>My family is a safe place to share my thoughts and feelings.</td>
<td>5.57</td>
<td>1.52</td>
<td>0.83</td>
</tr>
<tr>
<td>My family has a lot of discussions.</td>
<td>5.46</td>
<td>1.54</td>
<td>0.79</td>
</tr>
<tr>
<td>My family communicates effectively.</td>
<td>5.04</td>
<td>1.60</td>
<td>0.88</td>
</tr>
<tr>
<td>My family are good listeners.</td>
<td>5.03</td>
<td>1.48</td>
<td>0.86</td>
</tr>
<tr>
<td>My family acknowledge each other's strengths.</td>
<td>5.45</td>
<td>1.45</td>
<td>0.85</td>
</tr>
<tr>
<td>My family can help me see what is positive in a situation.</td>
<td>5.49</td>
<td>1.35</td>
<td>0.83</td>
</tr>
<tr>
<td>My family offer constructive suggestions, advice and support.</td>
<td>5.56</td>
<td>1.41</td>
<td>0.85</td>
</tr>
<tr>
<td>My family express their true feelings to each other.</td>
<td>5.31</td>
<td>1.49</td>
<td>0.82</td>
</tr>
<tr>
<td>My family expresses affection and warmth when talking to each other.</td>
<td>5.56</td>
<td>1.40</td>
<td>0.83</td>
</tr>
<tr>
<td>My family share and celebrate each other’s success.</td>
<td>6.08</td>
<td>1.20</td>
<td>0.79</td>
</tr>
<tr>
<td>My family communicate their gratitude.</td>
<td>5.49</td>
<td>1.38</td>
<td>0.78</td>
</tr>
<tr>
<td>My family understand each other's feelings.</td>
<td>5.10</td>
<td>1.41</td>
<td>0.88</td>
</tr>
<tr>
<td>My family consults each other on important decisions.</td>
<td>5.78</td>
<td>1.28</td>
<td>0.79</td>
</tr>
<tr>
<td>My family are able to ask each other for what they want or need.</td>
<td>5.61</td>
<td>1.18</td>
<td>0.74</td>
</tr>
<tr>
<td>My family can calmly discuss problems with each other.</td>
<td>4.82</td>
<td>1.62</td>
<td>0.79</td>
</tr>
<tr>
<td>My family focuses on the goal they want to achieve rather than problems.</td>
<td>4.93</td>
<td>1.45</td>
<td>0.72</td>
</tr>
<tr>
<td>My family says positive, supportive things about each other.</td>
<td>5.50</td>
<td>1.37</td>
<td>0.86</td>
</tr>
<tr>
<td>My family talk to each other with respect and consideration.</td>
<td>5.43</td>
<td>1.44</td>
<td>0.79</td>
</tr>
<tr>
<td>My family accepts me regardless of what I say.</td>
<td>5.83</td>
<td>1.32</td>
<td>0.69</td>
</tr>
<tr>
<td>My family values each other’s opinions.</td>
<td>5.47</td>
<td>1.38</td>
<td>0.88</td>
</tr>
<tr>
<td>My family discuss their ideas and beliefs with each other.</td>
<td>5.64</td>
<td>1.36</td>
<td>0.83</td>
</tr>
<tr>
<td>My family show an interest in each other’s lives.</td>
<td>6.00</td>
<td>1.15</td>
<td>0.82</td>
</tr>
</tbody>
</table>

$N = 206$
covariance matrices were satisfied. The MANOVA was statistically non-significant, 

\[ F(10,398) = 1.08, \ p = .376, \ \text{partial } \eta^2 = .03. \]

Table 3

*Descriptive Statistics for Females (N = 170) and Males (N = 33) on Each Dependent Variables*

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Gender</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Communication</td>
<td>Female</td>
<td>2.20</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>2.30</td>
<td>0.94</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.21</td>
<td>0.82</td>
</tr>
<tr>
<td>Constructive Communication</td>
<td>Female</td>
<td>4.92</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>4.40</td>
<td>1.18</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4.83</td>
<td>1.02</td>
</tr>
<tr>
<td>MACS-18</td>
<td>Female</td>
<td>3.17</td>
<td>1.17</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>2.99</td>
<td>1.09</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.15</td>
<td>1.15</td>
</tr>
<tr>
<td>Effective Family Communication</td>
<td>Female</td>
<td>5.51</td>
<td>1.16</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>5.31</td>
<td>0.94</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>5.48</td>
<td>1.13</td>
</tr>
<tr>
<td>Family Satisfaction</td>
<td>Female</td>
<td>5.33</td>
<td>1.38</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>5.18</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>5.30</td>
<td>1.34</td>
</tr>
</tbody>
</table>

**Parent-status.** A one-way between groups MANOVA was performed to investigate the effect of parent status (single-parent versus partnered-parent) on constructive communication, traditional communication, MACS-18, EFCQ and family satisfaction. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices and multicollinearity. Assumptions of linearity for parent-status were met. Levene’s tests were non-significant on all but one measure. Box’s \( M \) was non-significant at \( \alpha = .382 \), indicating homogeneity of variance-covariance matrices could be assumed. As the underlying assumptions were supported, a MANOVA was conducted. Findings using Pillai’s trace, showed there were no significant effects for parent-status, \( F(5,79) = .59, \ p = .706, \ \text{partial } \eta^2 = 0.04. \)
**Family Position.** A one-way between groups MANOVA was performed to investigate the effect of family position on constructive communication, traditional communication, MACS-18, EFCQ and family satisfaction. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices and multicollinearity. Levene’s tests were non-significant on most measures. Linearity of family position was checked and assumptions of linearity were met. Box’s $M$ was non-significant at $\alpha = .036$, indicating homogeneity of variance-covariance matrices could be assumed. As the underlying assumptions were supported, a MANOVA was conducted. Findings using Pillai’s trace, showed there were significant effects based on the family position held, $F (10,382) = 6.64, p < .001$, partial $\eta^2 = .15$. As illustrated in Figure 4, Adult-children reported significantly higher levels of traditional communication and significantly lower levels of both constructive and effective family communication than adults (parents & partners).

![Figure 4: Mean Responses to Dependent Variables for Partner (N = 35), Parent (N = 80) and Adult-Child (N = 82).](image-url)
Correlations

The size and direction of the relationships between variables was examined using Kendall’s tau correlations (Table 4). Shapiro Wilkes statistics indicated variables were not normally distributed. Given the non-normality, either Spearman’s Rho or Kendall’s tau could be used. Kendall’s tau was selected due to its ability to better estimate correlations in the population, thereby enabling more accurate generalisations (Field, 2013). Effect sizes for Kendall’s Tau are not comparable to r, as they employ different metrics (Field, 2013), consequently effect size were calculated by referring to Gilpin’s (1993) Kendall’s Tau transformation table.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>Traditional Communication</th>
<th>Constructive Communication</th>
<th>MAC Score</th>
<th>Effective Family Communication</th>
<th>Family Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Communication</td>
<td>1.000</td>
<td>-0.21***</td>
<td>0.26***</td>
<td>-0.23***</td>
<td>-0.21***</td>
</tr>
<tr>
<td>Constructive Communication</td>
<td>1.000</td>
<td>-0.17**</td>
<td>0.35***</td>
<td>-0.25***</td>
<td></td>
</tr>
<tr>
<td>MACS-18</td>
<td>1.000</td>
<td>-0.26***</td>
<td>-0.33***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Family Communication</td>
<td>1.000</td>
<td>-0.54***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FS Totals</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Kendall’s Tau N = 205 ** p < .01, *** p < .001 (2-tailed)

Hypothesis 1 – Effective family communication. Correlations supported the hypothesis that effective family communication would be correlated with family climate/satisfaction, \( r_t = 0.54 \), large effect size (H1).

Hypothesis 4 – Upward Spirals. Correlations supported the hypothesis that constructive communication would be associated with significantly lower emotional dysregulation \( r_t = -0.17 \) (small effect), more effective family communication, \( r_t = 0.35 \) (large effect) and better family satisfaction \( r_t = 0.25 \) (moderate effect) (H4).

Hypothesis 5 – Downward Spirals. Correlations supported the hypothesis that traditional communication would be associated with significantly more emotional dysregulation, \( r_t = 0.21 \), lower effective family communication, \( r_t = -0.23 \) and less family satisfaction \( r_t = -0.21 \) (moderate effect for each) (H5).
Additional analyses. Table 5 shows comparisons between parent and adult children correlations. Traditional Communication is strongly and positively associated with emotion dysregulation (moderate effect) and is more pronounced in parents, \( r_t = .30 \) (moderate effect) than adult-children (\( r_t = .20 \)). Constructive communication is significantly correlated with effective family communication in adult children, \( r_t = .40 \) (large effect), as opposed to the moderate effect (\( r_t = .25 \)) seen in parents.

Table 5

<table>
<thead>
<tr>
<th></th>
<th>Traditional Communication</th>
<th>Constructive Communication</th>
<th>MAC Score</th>
<th>Effective Family Communication</th>
<th>Family Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Comm</td>
<td>1.000</td>
<td>-.16*</td>
<td>.30**</td>
<td>-0.20*</td>
<td>-.19</td>
</tr>
<tr>
<td>Constructive Comm</td>
<td>0.01</td>
<td>1.000</td>
<td>-.14</td>
<td>.25**</td>
<td>.20*</td>
</tr>
<tr>
<td>MACS-18</td>
<td>0.20*</td>
<td>-.03</td>
<td>1.000</td>
<td>-.28***</td>
<td>-.38***</td>
</tr>
<tr>
<td>Effective Family</td>
<td>-.16*</td>
<td>.40***</td>
<td>-.25**</td>
<td>1.000</td>
<td>.50***</td>
</tr>
<tr>
<td>FS Totals</td>
<td>-0.16*</td>
<td>.26**</td>
<td>-.20***</td>
<td>.61***</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Kendall's Tau Parents, \( N = 80 \) (in bold), Adult-Child \( N = 82 \), \( * p < .05 \), \( ** p < .01 \).

Hierarchical Multiple Regression Analysis (HMRA)

To test the hypothesis that constructive communication, emotional wellbeing (lower dysregulation) and effective family communication account for a significant proportion of the variance in family satisfaction, HMRA was employed.

Before running the HMRA, a number of assumptions were tested and checks performed. First, an inspection of the normal probability plot of standardised residuals, as well as the scatterplot of standardised residuals against standardised predicted values, indicated that the assumptions of normality, linearity and homoscedasticity of residuals were met. Secondly, Mahalanobis distance was inspected, \( \chi^2 = 14.94 \), under the critical \( \chi^2 \) for \( df = 3 \), (at \( \alpha = .001 \)) of 16.27. Finally, relatively high tolerances for all three predictors in the final regression model indicated that multicollinearity would not interfere with the ability to interpret the outcome of the MRA (Appendix E).
Hypothesis 2 – Constructive communication, emotion regulation and effective family communication predict variance in family satisfaction. The results (Table 5) supported this hypothesis, on step 1, constructive communication, accounted for a significant 18% of the variance in family satisfaction, \( F(1,204) = 42.95, p < .001 \). On step 2, emotional regulation (MACS-18) was added to the regression equation, and accounted for an additional significant 12% of the variance in family satisfaction, \( F(2,202) = 41.41, p < .001 \). On step 3, effective family communication was added, accounting for an additional significant 29% of the variance, \( F(3,201) = 93.33, p < .001 \). In combination, the three predictor variables explained 58% of the variance in family satisfaction, thereby supporting the hypothesis that constructive communication, emotional regulation and effective family communication account for family satisfaction, the combined effect of this magnitude can be considered “large”, according to Cohen’s (1988) convention.

Table 5

<table>
<thead>
<tr>
<th>Variable</th>
<th>( \beta )</th>
<th>( t )</th>
<th>( s^2_r )</th>
<th>( R )</th>
<th>( R^2 )</th>
<th>( \Delta R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constructive Communication</td>
<td>0.42</td>
<td>6.55***</td>
<td>0.17</td>
<td>0.42</td>
<td>0.18</td>
<td>0.18</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MACS-18</td>
<td>-0.35</td>
<td>-5.75***</td>
<td>0.12</td>
<td>0.54</td>
<td>0.29</td>
<td>0.12</td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective Family Communication</td>
<td>0.69</td>
<td>11.84***</td>
<td>0.29</td>
<td>0.76</td>
<td>0.58</td>
<td>0.29</td>
</tr>
</tbody>
</table>

\( N=205, *** p < .001 \)

Hypothesis 3 – Effective family communication will represent a greater influence on family satisfaction in adult-children than parents. Table 6 summarises the differences that were found between adult-children and parents. Effective family communication made up 35% of the variance in adult-children, compared to 25% in parents, pointing towards the continuing effect of family communication in socialising children (H3).
Discussion

This study sought to explore the relationship between communication and family climate/satisfaction. Crucially, a strong relationship between effective family communication and family climate was found (H1). The theoretical proposition that constructive personal communication, coupled with better emotion regulation (i.e., lower dysregulation) and effective family communication would predict better family climate was supported (H2). Effective family communication was found to be more influential for adult-children than for parents, as hypothesised (H3).

To produce a more complete picture of communication’s role in the family, the effects of different types of personal communication were investigated. As predicted, constructive personal communication was related to lower dysregulation, higher effective family communication and better family climate/satisfaction outcomes (H4). Conversely, as expected, traditional communication was related to higher dysregulation, less effective family communication and lower overall family climate/satisfaction ratings (H5).

Assessing The Family Communication Model

The strong relationship between effective family communication and family climate points towards the significant and pivotal role of communication in family climate and the need for more robust and effective theories. Results indicated the presence of constructive

<table>
<thead>
<tr>
<th>Variable</th>
<th>Adult Child</th>
<th>Parent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>$R^2$</td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constructive Communication</td>
<td>0.42</td>
<td>0.17***</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td>0.30</td>
</tr>
<tr>
<td>MACS-18</td>
<td>-0.35</td>
<td>-0.42</td>
</tr>
<tr>
<td>Step 3</td>
<td>0.65</td>
<td>0.35***</td>
</tr>
</tbody>
</table>

*Adult Child N = 82, Parent N = 80, *** p < .001*
communication, emotion regulation and effective family communication were predictive of family climate outcomes, supporting the model’s usefulness in exploring family communication behaviours. Even though the cross-sectional nature of this study rules out direct causal interpretations, the results do support findings obtained in marital longitudinal studies, which have demonstrated negative communication is predictive of divorce (Gottman, 1994; Kiecolt-Glasser, Bane, Glaser & Malarkey 2003) and long-term health problems (Wickrama et al., 1997). Moreover, the fact that the model’s predictive capability was more pronounced for adult-children than for parents lends support to the findings that family socialisation continues beyond childhood and adolescence into emerging adulthood (Morris et al., 2016; Schrodt et al., 2009).

Personal Communication

In adult-children, use of constructive communication was associated with the concurrent presence of effective family communication, hinting at the relevance of the proposed model in explaining communication style acquisition and warranting further examination. Theoretically, it was proposed that childhood internalisation of family emotion communication lays the groundwork for adult communication style, with constructive communication being associated with emotion regulation (i.e., less dysregulation) and traditional communication with more dysregulation. Again, whilst causation cannot be established, this pattern of findings would suggest that parental communication approaches whilst growing up may partially contribute to emotion regulation in adulthood and to the stability of emotional expression into adulthood (Keaten & Kelly, 2008; Koesten, Schrodt & Ford, 2009; Young & Schrodt, 2016).

Existing research has contended that strengths-based communication minimises both the presence of negative communication and the harm from negative communication (Gottman et al., 1998; Lunkenheimer et al., 2007). The results supported this assumption, with the
presence of constructive communication in parents being associated with lower levels of traditional communication, providing further evidence of positive behaviours inhibiting negative behaviour (Gottman et al., 1998; Lunkenheimer et al., 2007).

**Effective Family Communication And Emotion Regulation**

Effective family communication was strongly associated with positive family climate/satisfaction ratings, as hypothesised. The effect of family level communication on ratings of family climate/satisfaction is noteworthy. Whilst individuals appeared to personally benefit from a constructive communication style, this alone was not sufficient to ensure family satisfaction; rather, overall family communication set the tone for family climate/satisfaction, as suggested by Thomas and Olson (1993). In addition, the presence of effective family communication appeared to inhibit a personal traditional communication style, again providing further support for positive behaviours inhibiting negative behaviours (Gottman et al., 1998; Lunkenheimer et al., 2007).

As anticipated, constructive and effective family communication were both associated with better emotion regulation (less dysregulation). Parents using a traditional communication style reported increased levels of emotion dysregulation problems. This finding may be important as parental cortisol levels during family interactions are predictive of adult-children’s cortisol secretion and anxiety patterns (Johnson & Gans, 2016).

**Positive and Negative Communication Spirals**

Conclusions about causality are not possible due to the nature of the study, however, results supported the proposition that positive interactions (i.e., constructive and effective family communication) would produce positive emotions (i.e., family satisfaction), thought to broaden-and-build personal resources, and produce upward spirals of wellbeing (Fredrickson, 2004). These findings give further weight to the consistent correlation found between positive affect and relationship satisfaction (Driver & Gottman, 2004). Conversely, the
proposition that negative experiences (i.e., traditional communication) would produce
downward spirals associated with more dysfunctional social interactions (Fredrickson et al.,
2003; Garland et al., 2010; Morris et al., 2007) was also supported. These results point to the
potentially damaging effects of traditional communication, both personally, in terms of
emotion regulation outcomes and in terms of overall levels of family satisfaction. They also
suggest that an individual’s personal communication style has the potential to affect not only
their own emotional wellbeing, but also the lives of others, through their contribution to the
family environment.

No significant difference in communication style between genders was found,
consistent with the lack of gender differences in parental coaching (Gottman et al., 1997;
Stocker et al., 2007), suggesting important benefits may be accrued by both genders in
adopting constructive and effective family communication approaches. There were also no
significant differences between single-parent versus partnered-parent family structures,
supporting the generalisability of these findings, as differences are attributable to
communication style/skill, not family structure.

**Strengths and Limitations**

The development of new measurement tools is one of the key strengths of this study.
EFCQ was shown to have good concurrent validity and excellent internal reliability. Unlike
previous measures designed for use within their theoretical model of family functioning
(Hamilton & Carr, 2016), the EFCQ can be used independent of family theory models or
therapeutic modalities and proves to be a promising development in assessing family
communication. In addition, the PCS provided the first measure which effectively
discriminated between constructive and traditional communication, whilst also demonstrating
good internal reliability.
Another notable strength was the development of a theoretically-driven model to explain the mechanisms by which family communication is acquired and the effects of different communication styles on family climate. As a preliminary attempt to address weaknesses identified in current family communication theory, this study provides a platform for future research.

Despite these notable strengths, the cross-sectional design does not directly substantiate causal interpretations and statements of causality based on statistical techniques, such as HMRA, must be treated with caution given the correlational nature of the data. In addition, while self-reports are often considered a limitation, as there is no evidence they are predictive of interaction behaviour (Ritchie & Fitzpatrick, 1990), they have proved essential and important in assessing how effectively a family operates (Bandura, Caprara, Barbaranelli, Regalia & Scabini, 2011; Cox & Paley, 1997, Duckworth, Steen & Seligman, 2005).

Several data issues were identified. First, data was not normally distributed, however, this was expected given the nature of the scales and populations tested. Families with negative interactions are typically less frequent, as relationships characterised by excessive conflict are unlikely to be sustained (Major, Zubek, Cooper, Cozzarelli & Richards, 1997). Second, the use of only individual data is a potential weakness, however, there is evidence that each person experiences their “own” family (Ritchie & Fitzpatrick, 1990), which supports the use of individual data. Research could be further strengthened by collecting data from other family members allowing for understanding of agreement levels with respect to the presence of effective family communication. Third, SES was not controlled for, this may be an important factor, as children from higher SES have been shown to receive more parental emotion coaching (e.g., Lunkenheimer et al., 2007). However, this study took a strengths-approach and SES effects have proven to be inconsistent or to have little impact in studies taking a positive perspective (Preston et al., 2016; Scholte & Van der Ploeg, 2015). Fourth,
individuals were unable to submit data on multiple households. However, by allowing participants to choose which household to report on, the study benefitted by the most influential/important household being reported.

One criticism which could be levelled against the PCS is that the scenario-response paradigm is not analogous with real-life responses to emotional experiences, nor is the evaluation of possible responses commensurate with what people might actually say in real life. This shortcoming is acknowledged, whilst recognising the scenario methodology can generate important information (Jones et al., 2016; Parkinson & Manstead, 2015).

Future Research and Practical Applications

As this study is the first to examine the combined influence of personal communication style, emotion regulation and effective family communication on family climate/satisfaction, it is important to replicate these findings. Theoretical testing of the model’s applicability to children might establish if it can be utilised to investigate the impact of family communication on overall psychological adjustment at earlier developmental stages. Eisenberg et al. (1998) suggested that people who live in positive affirming environments may feel more secure to freely express their emotions, as they are confident their emotional needs will be met. Exploration of needs expression and fulfilment could be significant in explaining additional variance in family climate and is an interesting theoretical avenue worthy of investigation by future researchers interested in the effect of personal and family communication styles.

Research also suggests that maternal and paternal coaching may produce different outcomes (Hunter et al., 2011; Wilson et al., 2014). Schrodt et al., (2009) identified young adult sons, unlike daughters, placed particular emphasis on their father’s communication skills. Additionally, older siblings appear to play a role in the socialisation of younger siblings (Shortt et al., 2010). Consequently, future researchers may wish to explore the
differences in communication that exists between family members, and the impact of dyadic relationships on outcomes, e.g., father/son communication.

Negative physiologic changes have been demonstrated with traditional communication (Heffner, Kiecolt-Glaser, Loving., Glaser, & Malarkey (2004); Kiecolt-Glaser et al., 1993; Malarkey et al., 1994), additionally a range of neurobiological changes are seen to cascade from positive emotional states (e.g., Davidson, 2004; Fredrickson & Levenson, 1998; Robles, Shaffer, Malarkey, & Kiecolt-Glaser, 2006). Assessment and measurement of biological reactions to different forms of communication could help further identify how communication contributes to the physiological and/or psychological outcomes associated with family climate. For example, low effective family communication scores and high traditional communication scores may lead to increased hypothalamic-pituitary-adrenal (HPA) axis reactivity, which may lead to problems with the prefrontal cortex that plays a role in emotion regulation (Goodman, McEwen, Dolan, Schafer-Kalkhoff & Adler, 2005).

Further validation and development of the EFCQ and the PCS are recommended (particularly for use with children and adolescents) and would support their future use in community, educational and clinical settings. Educationalists, counsellors, social workers and clinical psychologists could use these tools: to offer support to individuals/families during life cycle transitions, for example on entry into school or high school; assist in assessing strengths in existing communication; and to support the identification of areas requiring scaffolding and further skill development. The positive approach of the EFCQ, makes it suitable for family interventions which are non-pathologizing and strengths based. In particular, EFCQ has potential application across a range of contexts, but future research to determine its suitability for that purpose is required. Regarding the PCS, further work is required to make it a more robust tool, building on the work of Jones et al.’s (2016) pre-validated scenarios might further strengthen. During development of the PCS, it also emerged that with minor changes, the
scale could be converted into an educational tool to help people identify differences between constructive and traditional communication.

Finally, development of both individual and family interventions which seek to increase the presence of constructive and/or effective family communication skills could be beneficial. Interventions directed at parents could yield great benefit with their potential to effect parental emotional wellbeing (Havighurst et al., 2010; Havighurst et al., 2013), by proxy child wellbeing, and their capacity to contribute to overall family satisfaction. Experimental comparison of these intervention approaches would enable the assessment of their ability to produce behavioural change and differences in family climate. Furthermore a longitudinal study would permit more robust investigation of the presence of upward and downward communication spirals and also enable the tracking of developmental changes over time and the effect of these changes at each stage of development, thereby enabling a more dynamic assessment of the interactions within families, whilst also enabling identification of risk and protective factors.

Conclusion

The results of this study extend our understanding of the impact of communication, signifying its vital and influential role in family climate. In particular, the central role of constructive personal and effective family communication in fostering positive family climate was highlighted. The family communication approach developed for this study is noteworthy in its ability to predict variance in family climate and explain mechanisms that may contribute to emotional wellbeing and overall family climate. Ultimately, this theoretically driven approach and supporting measures will enable valuable future research into the effects of communication. Moreover, it proffers tools and intervention possibilities to effectively support individuals and families in developing the skills and capabilities necessary to support the creation and/or enhancement of positive family climates.
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Doi:10.1155/2013/6083556.


Appendix A

Information Letter and Questionnaire

*** Please note: the letter and questionnaire below is not how the form appears to participants. This is a download of content only. Participants see the form as demonstrated in the screen shots. The form as seen by participants includes Murdoch University logos at the start of the survey. Each of the items have a Likert scale below as shown in the screen shots.

Communication, Families & Emotions

* Required

Information Letter

Nature and Purpose of the Study

The purpose of this study is to explore the relationship between family satisfaction, communication and emotions.

Much has been written about the importance of communication, however, few studies have sought to directly understand its impact on family satisfaction and emotional wellbeing.

Eligibility

If you are over 18 and normally live with at least one other family member (this can include a long term partner) you are eligible to take part in this study.
What the study will involve
If you decide to participate in the study you will be asked to complete an online questionnaire comprising of 112 questions, taking approximately 30 minutes. This can be completed on computer, tablet or mobile phone.

Incentives
To be eligible you must follow the link at the end of the questionnaire and complete the required information.

If you are a Murdoch Psychology Student you will receive 0.5 credit hours. If you do not wish to receive credit, you are eligible for entry into the prize draw with a chance to win a $50 pre-loaded Visa card. The prize draw will occur at the end of October 2017 and must be collected by 1 December 2017.

Important Information
To receive course credit or be entered into the prize draw for the $50 pre-loaded Visa – you MUST follow the link at the end of the questionnaire to a separate database requesting your contact email and if relevant student ID. This ensures all your information is kept private and unidentifiable.

Privacy
Your confidentiality and privacy are very important. All the information provided by you provide is strictly confidential. To ensure your privacy, no identifying information is collected in the questionnaire. As no identifying details are collected on the questionnaire, your information will not be identifiable in publications or follow up research. It is therefore, EXTREMELY IMPORTANT if you would like to receive course credit or be entered into the prize draw, you FOLLOW THE LINK AT THE END of the questionnaire. This will take you to a contact form. You must register your information here. Should you fail to do this, you will be ineligible for course credit or prize draw entry. This ensures your privacy to the upmost and ensures there is no way to link the information you have provided in this questionnaire with your personal details.

During the study all data, will be password protected and only accessible to the investigator. Following the study, the anonymous data will be stored in the supervisor’s office and will be disposed of after 5 years. The 5-year period has been put in place to comply with university policy. The anonymous data may also be made available to other researchers to be utilised for data re-analysis, future research and publication. Contact data will be destroyed once: confirmation that course credit has been given; prize draw prize has been collected; and study results have been sent.

Voluntary Participation
Your participation in this study is completely voluntary, you may withdraw at any time prior to submission without penalty or discrimination.

Benefits
Through this study you may gain increased self-awareness, particularly about your opinions, behaviours and communication style. By helping us to understand the links between communication, family and emotions, your contribution is very valuable. There is a lack of
knowledge in the area of communication, family and emotions and the finding from this study may point to directions for future research and ways to support families.

Possible Risks
Whilst unlikely, there is a possibility you may experience some level of discomfort while completing the questionnaire as a result of some of the questions. If this is the case you are free to withdraw at any time during the survey. If these feelings persist after completing the survey you may wish to seek support by contacting the Murdoch University Counselling Service at (08) 9360 6000 (General Enquiries) or Lifeline at 13 13 14.

Contact Details
Should you have any questions regarding this study please contact Liz Dickson, on 0400 467 000 or liz@yabberyakka.com in the first instance or the study supervisor, Dr Suzanne Dziurawiec on 93602388, email s.dziurwiec@murdoch.edu.au.

1. Check all that apply.

I understand the link provided after I submit this form ensures my privacy and the anonymity of the data collected.

I understand I MUST CLICK ON THE LINK provided after I submit the questionnaire and complete the information to be eligible course credit or entry into the prize draw.
I am over 18, live with another family member and consent to taking part in this study. *  
Mark only one oval.

Yes

If you do not wish to proceed, please close down the form using the X in the top right hand corner.

Other:

Thank you for taking part in this study.
We really appreciate your time, honesty and openness in taking part in this questionnaire as this really helps us to understand more about families, communication and emotions.

We'd like to understand more about you...
Please help us understand a little bit more about you and your background so our research is relevant to people like you...

3. How old are you?

4. Gender Identity

Mark only one oval.

[ ] Male
[ ] Female
[ ] Prefer not to say
[ ] Other: ____________________________

5. Nationality

6. Is English your first language? Mark only one oval.

   Yes

   No
7. Thinking of the family you currently live with - how many people are in your family (including yourself)? Mark only one oval.

☐ 2
☐ 3
☐ 4-5
☐ 6-8
☐ 8+

8. Thinking of the family you live with, which position(s) do you hold within the family? (Please indicate as many as applies to you.) Check all that apply.

☐ Adult Child
☐ Sibling (Sister/Brother)
☐ Partner
☐ Parent
☐ Step Parent
☐ Other Relative (for example, aunt, uncle, grandparent, niece, nephew etc)

9. Thinking of the family you live with, which of the following family members do you have living with you? (Please indicate as many as applies to you.) * Check all that apply.

☐ Parent(s)
☐ Sibling(s)
☐ Partner
☐ Child(ren) your own
☐ Child(ren) not your own
☐ Other Family Members (for example Aunts, Uncles, Grandparents, Nieces, Nephews etc.)
Below are five statements with which you may agree or disagree. Thinking about the family you currently live with. Use the scale to indicate your agreement with each item by clicking the appropriate item.

10. In most ways my family life is close to ideal. *
11. The conditions in my family life are excellent. *
12. I am satisfied with my family life. *
13. So far I have gotten the important things I want in my family. *
14. If I could live my family life over, I would change almost nothing. *

**Sample Screen Shot**
Below are 25 statements with which you may agree or disagree. Thinking of the family that you currently live with, use the scale, to indicate your agreement with each item by clicking on the appropriate item.

15. My family believe it is important to communicate. *
16. My family tries to understand each other's points of view. *
17. My family communicates honestly and openly with each other. *
18. My family is a safe place to share my thoughts and feelings. *
19. My family has a lot of discussions. *
20. My family communicates effectively. *
21. My family are good listeners. *
22. My family acknowledge each other's strengths. *
23. My family can help me see what is positive in a situation. *
24. My family offer constructive suggestions, advice and support. *
25. My family express their true feelings to each other. *
26. My family expresses affection and warmth when talking to each other. *
27. My family share and celebrate each other's success. *
28. My family communicates their gratitude. *
29. My family understand each other's feelings. *
30. My family consults each other on important decisions. *
31. My family are able to ask each other for what they want or need. *
32. My family can calmly discuss problems with each other. *
33. My family focuses on the goal they want to achieve rather than problems. *
34. My family says positive, supportive things about each other. *
35. My family talk to each other with respect and consideration. *
36. My family accepts me regardless of what I say. *
37. My family values each other's opinions. *
38. My family discuss their ideas and beliefs with each other. *
39. My family show an interest in each other's lives. *
In this section, there are 12 scenarios. Thinking about the family you are currently living with we ask you to imagine how you might respond to the situations described. Use the scale, to indicate how likely you would be to respond in a way similar to the examples given.

If you have any questions please call 0400 467 000 8am - 8pm or email liz@yabberyakka.com.

Scenario 1

You have changed your plans so you can have dinner with your family. It was agreed that you would all have dinner at 6.30 pm. It is now 7pm. You are feeling annoyed because you could have kept your plans if you had known it would be later. This is the third time this has happened. How likely are you to react/respond in each of the following ways?

40. Say nothing.
41. "I'm sorry, I should have reminded you we said 6.30pm"
42. "You are so inconsiderate..."
43. "I'd like to be able to count on people showing up with agreed. What can we do to make sure dinner happens when planned next time?" *
44. "Looks like you have all been busy. We agreed 6.30, it's now 7. Where have you all been?"
Scenario 2

You are planning to have some friends over. You know you won't have much time, so you leave the house clean and tidy. When you get home there is washing and dishes everywhere and food all over the counter. How likely are you to respond in each of the following ways?

45. Clean up without Comment *
46. "It's my own fault, I suppose I should have made it clearer that I needed it clean for when I got back." *
47. "What did your last slave die of? Get in here right now and tidy up." *
48. "I left the house tidy, because I have friends arriving in 10 minutes. Can you please tidy up while I get ready?" *
49. "Looks like you've been busy and hungry, can you come you tidy up, my friends arrive in 10 minutes." *

Scenario 3

A family member is upset about something a friend has said about them. How likely are you to respond in each of the following ways?

50. Say nothing. *
51. "I should have warned you they were bad news." *
52. "What do you expect, if you act that way they were bound to say something." *
53. "I'm sad you have had that experience." *
54. "I can see you're really upset by this... you really want to feel safe and accepted by your friends?" *

Scenario 4

A family member borrowed your phone while you were at the toilet and you come back to find the screen smashed. How likely are you to react/respond in each of the following ways?

55. Say nothing. *
56. "I should never have left it here." *
57. You selfish person, look at my phone!!@**!! *
58. I feel pretty upset right now, I need my things to be treated with care. Can you please ask me before you borrow my things in future? *
59. Are you feeling upset and worried about breaking my phone? *
Scenario 5

You've had a bad day and are feeling upset. You think you are making it obvious that something is wrong, but no one seems to notice. How likely are you to respond in each of the following ways?

60. Not say anything. *
61. "I'm too much of a burden." *
62. "You don't care about me or my feelings." *
63. "I'm feeling upset and I really need to talk about it, I'd appreciate your support." *
64. "I notice you haven't asked me about my day, so I'm just wondering what is going on for you?" *

Scenario 6

A family member shares a compliment they have just been given. How likely are you to respond in each of the following ways?

65. Say nothing. *
66. "No one ever gives me compliments, I'm just not good at anything." *
67. "They're just saying that, they don't really mean it." *
68. "Wow that's awesome! Of course you are __________!!" *
69. "Wow, that's great. Sounds like it feels pretty good to have your hard work pay off." *

Scenario 7

You are really busy and are having to work really hard. Someone in your family cooks you a meal. How likely are you to respond in each of the following ways?

70. Say nothing. *
71. "I feel so guilty for not being able to do more." *
72. "It's about time" or "You're always trying to guilt me." *
73. "I really appreciated your support in cooking me a meal." *
74. "I know you were really busy. It was so considerate and kind of you to make sure I got fed." *
Scenario 8

A family member decides to muster their courage and go and speak to a friend about a problem they are having with them. The conversation doesn't go as they would have liked. How likely are you to respond in each of the following ways?

75. Say nothing. *
76. "I should have said something, I didn't think it was a good idea to talk to them about it."
77. "You probably didn't approach it the right way." *
78. "I feel sad you didn't manage to sort it out, but I respect you for trying." *
79. "That took a lot of courage to go and have that conversation. Looks like you really value having honest open communication with your friend." *

Scenario 9

Two family members are having an argument, this has been going on for some time. How likely are you to respond in each of the following ways?

80. Say nothing. *
81. "I should just ..." *
82. "You should both sort yourselves out and get over it." *
83. "I am feeling really uncomfortable with the tension. I really want a pleasant atmosphere - what do you both need so we can resolve this issue?" *
84. "Sounds like you are feeling __________ and need __________ from them...." "What do you think they are needing?" *
Below are 18 statements with which you may agree or disagree. Use the scale to indicate your agreement with each item by clicking on the appropriate item.

85. I get so upset when I am nervous that I cannot think clearly. *
86. I am afraid I will hurt someone, if I get really angry. *
87. I feel comfortable that I can control how anxious I am feeling. *
88. I am afraid I could go into a depression that would wipe me out. *
89. When I get nervous I think I am going to go crazy. *
90. I am able to stop myself from becoming overly anxious. *
91. I am afraid I might try to hurt myself if I get too depressed. *
92. If people were to find out how angry I sometimes feel, the consequences might be pretty bad.
93. There is nothing I can do to stop feeling nervous once it has started. *
94. Being nervous isn't much fun, but I can handle it. *
95. It scares me when I am nervous. *
96. When I start feeling "down", I think I might let the sadness go too far. *
97. I am afraid that letting myself feel really angry about something could cause me to totally lose it.
98. I don't really mind feeling nervous; I know it will go away. *
99. Depression scares me - I am afraid I could get depressed and never recover. *
100. When I get nervous, I feel as if I am going to scream. *
101. When I get really unhappy, I worry I will stay that way. *
102. Once I get nervous, I think that my feelings might get out of hand. *
Below are 10 statements with which you may agree or disagree. Thinking of the family that you currently live with, use the scale, to indicate your agreement with each item by clicking on the appropriate item.

103. Family members are happy with how they communicate with each other.
104. Family members are very good listeners.
105. Family members enjoy talking to each other.
106. Family members are able to ask each other for what they want.
107. Family members can calmly discuss problems with each other.
108. Family members discuss their ideas and beliefs with each other.
109. When family members ask questions of each other, they get honest answers.
110. Family members try to understand each other's feelings.
111. When angry, family members seldom say negative things about each other.
112. Family members express their true feelings to each other.
Appendix B

Contact Form

Content of Contact Form

Contact information

1. Please indicate which option you would like...
   - Mark only one oval:
     - 1 Psychology Credit Point
     - Entry into prize draw

2. Would you like to know the results of this study?
   - Mark only one oval:
     - Please send me a summary of your findings.
     - No thanks, I'm not interested in receiving the findings.
     - No thanks, I'll seek the findings out myself; I am still interested later in the year.

3. Name (Optional)

4. Student Number (this is essential if you would like course credit.)

5. Email *

6. Phone number *

7. Comments (If you would like to give feedback, we are interested in your views.)
Appendix C

Friday, 28 July 2017

Dr Suzanne Dziurawiec
School of Psychology and Exercise Science
Murdoch University

Dear Suzanne,

Project No. 2017/044
Project Title Communication within families

Thank you for addressing the conditions placed on the above application to the Psychology Expedited Sub-Committee of the Murdoch University Human Research Ethics Committee. On behalf of the Committee, I am pleased to advise the application now has:

OUTRIGHT APPROVAL

Approval is granted on the understanding that research will be conducted according the standards of the National Statement on Ethical Conduct in Human Research (2007), the Australian Code for the Responsible Conduct of Research (2007) and Murdoch University policies at all times. You must also abide by the Human Research Ethics Committee’s standard conditions of approval (see attached). All reporting forms are available on the Research Ethics and Integrity web-site.

I wish you every success for your research.

Please quote your ethics project number in all correspondence.

Kind Regards,

[Signature]

Dr. Erich von Dietze
Manager
Research Ethics and Integrity

cc: Elizabeth Dickson
School of Psychology & Exercise Sciences – Dr Anne Pedersen
Appendix D

Reverse Worded Items – MACS-18

I feel comfortable that I can control how anxious I am feeling.

I am able to stop myself from becoming overly anxious.

Being nervous isn’t much fun but I can handle it.

I don’t really mind feeling nervous; I know it will go away.
## Appendix E

### Tests of Normality

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* This is a lower bound of the true significance.

a. Little fors Significance Correction
PREDICTING FAMILY SATISFACTION FROM COMMUNICATION STYLES

Constructive Communication 18-25 years old

Constructive Communication 36-45 years old

Traditional Communication 18-25 years old

Traditional Communication 55+ years old
### Coefficients

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\[ a \text{. Dependent Variable: FS Totals} \]
Appendix F - Project Summary

**Ethics Project Number:** (Approval 2017/044).

**Supervisor:** Dr Suzanne Dziurawiec

**Researcher:** Liz Dickson

**Research Completed:** October 2017

**Context and Research Aims:**

Communication is thought to have an important role in family climate/satisfaction, i.e., whether individuals assess their family positively or negatively and has consistently and repeatedly been associated with physical, mental and emotional wellbeing. To date, there has been a lack of theories accounting for the role of communication in families. The Family Communication Model was proposed to fill this gap, the model is a strengths based model of family functioning. The model sought to explain the role of communication in producing family satisfaction, suggesting constructive communication, coupled with emotion regulation and effective family communication would contribute to positive family climate.

Personal communication style was believed to contribute to levels of family satisfaction and either produce positive or negative spirals (see figures below).
Methodology:

Two hundred and six participants (18 – 72 years old) completed the online survey. Family relationships included: living with partner only (20%); parents living with children (41%: single-parents, 19%; partnered-parents, 22%); and living as an adult-child with parents (36%). The majority of participants identified themselves as female (83%), Australian (77%) and with English as their first language (83%).

Results:

Effective family communication was strongly correlated with family climate. The model predicted 60% of the variance in family climate. Effective family communication was found to be more influential for adult-children (children over 18 living at home). Constructive communication was related to more emotion regulation (less dysregulation), more effective family communication and better family climate. Traditional communication was related to higher dysregulation, less effective family communication and lower overall family climate ratings.

Implications:

Families wishing to improve family climate/communication might benefit from strengthening their constructive personal communication and effective family communication skills. These skills may have further benefits in supporting emotion wellbeing, constructive communication appears to support parents own emotion wellbeing. Results suggest constructive and effective family communication by parents and other family members continues to be important and beneficial into emerging adulthood.