“What You Look Like is Such a Big Factor”: Exploring the Role of Peer Appearance Cultures in the High School Environment

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This thesis is presented for the degree of Doctor of Philosophy
Murdoch University
2010
I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution.

.............................................................

Renee Carey
ABSTRACT

Body image is a particularly troubling issue during adolescence, with many reporting significant weight and shape concerns during this time. The surrounding sociocultural environment can be seen to be integral to the experience of these concerns, and to shape the form they subsequently take. A major context in which this culture may manifest and be reproduced is the school environment, with the high school being seen as a key venue for the development and expression of body image concerns in adolescent girls. More specifically, the school environment may contribute through body perfection codes and dominant discourses embedded in the curricular structure and general school ethos, or in a more informal way through the formation of peer appearance cultures, which have been found to contribute to eating disorders and related issues in adolescent girls.

This thesis aimed to further examine the role of the school environment in contributing to body image concerns and disordered eating in adolescent girls, using a mixed-methods design. The first stage of this project, an ethnographic analysis, focused on the transmission of, and value placed upon, body image and weight concerns in a particular all-girls’ school. Interviews (both group and individual) and open-ended surveys, as well as observations and textual analysis, were employed in this phase of the project, with data collected from teachers, parents, and students. Results indicated that an appearance-based culture was evident in this school environment, with students, parents and staff members all noting the importance of the school, and peers in particular, in fostering weight consciousness and influencing eating habits.

Following this, the contribution of the school and friendship groups to body image and weight concerns was quantitatively examined. Questionnaires were administered to 314 students (224 females and 90 males) from 2 coeducational schools and an all-girls’ school, in a replication and extension of a previous Australian study investigating friendship clique similarities in body image concerns and eating behaviours (Paxton, Schutz, Wertheim, & Muir, 1999). This
phase also aimed to explore the potential differences between single-sex and coeducational schools in terms of their students’ body image and weight concerns. Overall, findings indicated that all-girls’ students exhibited more body image concern than coeducational girls, with different predictive factors emerging in each school-type, indicating that the gender composition of a school is an important factor. Furthermore, this study verified that body image concern and dieting behaviour are more similar within friendship cliques than across the whole school cohort, particularly in all-girls’ schools, replicating and extending the findings of Paxton and colleagues.

Overall, this study indicates that the school environment and the peer cultures embedded within play an important role in the development and maintenance of body image and weight concerns, particularly within all-girls’ schools. This has implications for the prevention and treatment of such concerns, moving away from a narrow focus on individual concomitants towards more complex cultural influences. This thesis also adds significantly to the research literature, providing greater insight into how peers, and more broadly schools, may contribute to disordered eating and body image concerns.
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ACKNOWLEDGEMENTS

My thanks to all of my family and friends without whose support, encouragement, and understanding this thesis would never have been completed.

Above all, I wish to acknowledge my supervisors, Ngaire Donaghue and Pia Broderick, for your constant reassurance and help in finding a way through the obstacles encountered in the course of this thesis.

I would also like to thank Dylan, for your support and encouragement in more ways than one, and my family for your unwavering belief in my ability.

Finally, my thanks to my fellow officemates for your friendship and encouragement. You have helped to make this a fun and enjoyable experience, and I will genuinely miss sharing an office with you.
During its preparation, portions of this dissertation were presented at the following conferences:

1\textsuperscript{st} & 2\textsuperscript{nd} July, 2008 - Appearance Matters 3, Bristol, United Kingdom

\textit{A multi-method exploration of the culture of weight consciousness in an all-girls’ school}

28\textsuperscript{th}-30\textsuperscript{th} August, 2008 – The 6\textsuperscript{th} Annual Conference of the Australian and New Zealand Academy for Eating Disorders, Fremantle, Western Australia

\textit{A preliminary investigation into the culture of weight consciousness in an all-girls’ school}

In addition, portions of this thesis were published as:

Carey, R.N., Donaghue, N. & Broderick, P. (in press). “What you look like is such a big factor”: Girls’ own reflections about the appearance culture in an all-girls’ school. \textit{Feminism & Psychology}
Eating disorders are widely thought to be multidimensional in nature, arising from the interplay of numerous factors including those of a psychological, biological, developmental, familial and sociocultural nature. Clinically, eating disorders are classified into three subtypes, namely anorexia nervosa (AN), involving an unremitting quest for thinness and a morbid fear of becoming ‘fat’; bulimia nervosa (BN), whereby compensatory behaviours, such as vomiting and excessive exercise, follow periods of binge-eating; and eating disorder not otherwise specified (EDNOS), comprising a mixture of anorexic and bulimic symptomatology focused around weight concerns and dissatisfaction with body image (American Psychiatric Association, 2000). This latter diagnosis is similar to partial syndrome or subclinical eating disorders, in which individuals engage in many of the same disordered eating behaviours as those with clinical disorders, but at a somewhat lower level of severity.

Research suggests that the prevalence of eating disorders as a whole has increased in recent years, particularly in the adolescent population, with the lifetime prevalence rate for eating disorders in adolescent girls increasing from 2.3% in 2000 (Lewinsohn, Striegel-Moore, & Seeley, 2000) to 7.66% in 2009 (Stice, Marti, Shaw, & Jaconis, 2009). Furthermore, research suggests that a much greater proportion of women and girls partake in various problematic eating behaviours at a subclinical level, with the prevalence of these likely to be highest among adolescent and student populations. Indeed, the lifetime prevalence of subthreshold disorders in adolescent girls has been estimated at 11.29% (Stice, et al., 2009), while 26% of normal-weight Canadian adolescent girls report regularly eating less to lose weight (Woodruff, Hanning, Lambraki, Storey, & McCargar, 2008). Additionally, in Australia, a recent survey of over 47,000 adolescents found body image to be cited as a significant issue of concern, ranking alongside drugs and suicide (Mission Australia, 2009).

The surrounding sociocultural environment has been found to be a major influence on the development of body image concerns and disordered eating in adolescence, with a multitude
of research suggesting that adolescents, particularly girls, interact within a sociocultural environment which emphasizes appearance and equates thinness with beauty. The media is thought to be an especially influential component of this environment, playing a significant role in transmitting thinness ideals, which may then be embraced by closer influences, including family and friends, and assimilated into an appearance culture which both mirrors and shapes the adolescents’ own behaviours and attitudes surrounding body image (e.g. Jones, Vigfusdottir, & Lee, 2004). Thus, it can be seen that the surrounding culture plays an important role in the manifestation and maintenance of body image concerns and disordered eating.

However, the exact role culture plays needs to be clarified. The predominant view in the literature appears to be that culture is a trigger which may intensify already existing vulnerabilities (e.g. van den Berg, Thompson, Obremski-Brandon, & Coover, 2002). However others, such as Susan Bordo (Bordo, 1989, 1993) and Susie Orbach (Orbach, 1986), view eating disorders as characteristic manifestations, or crystallizations, of the culture itself. Although neither the predominant nor alternative view denies the contributory role of other, and particularly individual, factors, there is some contention regarding whether culture is seen as one among many potential triggers, as in the first view, or as a necessary condition for the onset of eating disorders and body image concerns, as in the second. This thesis takes the latter view, whereby culture is seen as playing a predominant and necessary role in the onset of eating disorders and body image concerns, and indeed as influencing the particular form these concerns will subsequently take.

The purpose of this opening chapter is to provide a brief overview of the current research project. The aims and methodology of this thesis will be presented, as well as a brief outline of the subsequent chapters. To begin, this chapter will describe the theoretical grounding of this research project, outlining how eating disorders and body image concerns will be conceptualized throughout this thesis.
CONCEPTUAL BACKGROUND

The surrounding culture is undoubtedly a significant influence on the manifestation and maintenance of disordered eating symptoms and weight and body image concerns. Various theories of culture’s role in this area have been postulated, including the Tripartite Influence model (van den Berg, et al., 2002), Dual Pathway model (Stice, Ziemba, Margolis, & Flick, 1996), and Objectification Theory (Fredrickson & Roberts, 1997). Many of these share the view that culture is one risk factor among many, either acting as the ‘final straw’ or trigger for disordered eating, or providing a general climate in which other, generally individual, factors exert their influence. Furthermore, body image research generally attributes responsibility for body image disturbance to the individual; societal pressures are seen as external factors that must be resisted (Blood, 2005).

However, other research has viewed culture as playing a much more central role in the onset of eating disorders. That is, culture has been viewed as central to the experience of disordered eating and body image concerns, shaping the way in which these concerns manifest. Perhaps one of the chief proponents of this view is Susan Bordo, who argues that eating disorders are in fact characteristic manifestations, or crystallizations, of the culture itself (Bordo, 1989, 1993). Bordo argues that eating disorders are entirely “continuous with a dominant element of the experience of being female in this culture” (Bordo, 1993, p. 57), and that culture performs a paramount function in supplying the necessary foundations for the development of disordered eating. Further, Bordo contends that anorexia nervosa in particular represents a “caricature of the contemporary ideal of hyperslenderness for women” (Jaggar & Bordo, 1989, p. 18), and that disordered eating and body image concern reproduce, rather than transform, the cultural environment that produces them.

One of the ways in which this has been postulated to occur is through the creation of peer appearance cultures, which are produced by cultural norms and expectations that are subsequently reinforced within the peer society (Jones & Crawford, 2006). That is, peer appearance cultures are thought to highlight, emulate, and attach importance to “cultural ideals of beauty and body shape” (Jones, et al., 2004, p. 324), bringing the wider cultural
environment into the peer world. The current thesis adopts this viewpoint, arguing that culture plays a principal and necessary role in the onset and maintenance of disordered eating and body image concern, in fact shaping the form these take, and, more specifically, that peer appearance cultures represent a manifestation of this wider culture in the high school peer environment.

The current research project thus aimed to investigate peer appearance cultures in varied high school environments, further exploring and clarifying the role of culture in producing and maintaining disordered eating and body image concerns in adolescents. In addition, the current thesis aimed to provide a more comprehensive view of risk factors for these concerns in a secondary school setting, focusing particularly on factors of a social and cultural nature.

**AIMS AND IMPLICATIONS**

The primary goal of this thesis is to provide a more comprehensive understanding of disordered eating and body image concerns in the adolescent population, and in particular to clarify the role of school and peer cultures in relation to these. In doing so, the existence and contribution of peer appearance cultures are investigated in various school environments, both single-sex (all-girls’) and coeducational. The importance of the school’s gender composition is also explicitly investigated, as it is expected that body image concerns and disordered eating, as well as peer appearance cultures, will differ across diverse school environments.

Previous research has investigated peer appearance cultures in adolescents, finding the collective experiences within these cultures to both mirror and influence individual body image and weight concerns (Jones & Crawford, 2006). In addition, adolescent girls’ friendship groups have been found to share similar levels of body image concern, dietary restraint, and extreme weight loss behaviours (Paxton, Schutz, Wertheim, & Muir, 1999), supporting the idea that one’s friendship clique environment is an important influence on individual attitudes and behaviours. Furthermore, Paxton and colleagues found this friendship group similarity to be partially explained by various factors including perceived pressure from the media, social comparison, and friends’ concern with thinness, consistent with the idea that
various other influences can work with the peer environment in influencing body image concerns and eating behaviours.

However, Paxton and colleagues’ (1999) study focused solely on female students, as is common in this area. Accordingly, the concerns, and indeed the potential influence, of boys was not investigated. Furthermore, while research on appearance cultures has found these cultures to be more important for girls than boys, and for older than younger girls, no study has yet investigated the contribution of school gender composition to the formation of peer appearance cultures, and thus this remains an under-studied area. The role boys play, whether in magnifying or lessening the body image concerns and peer appearance culture of girls, will necessarily be a function of the gender composition of the school. Therefore, this study aims to investigate peer appearance cultures in greater detail, paying particular attention to gender differences and the impact of school gender composition.

Gaining a greater understanding of peer appearance cultures potentially has both clinical and theoretical implications. Firstly, as peer appearance cultures have been found to be an important arena for the production and maintenance of body image concerns and disordered eating, it is also likely that they represent important contexts at which prevention programs should be directed. Thus, enhancing our knowledge of these cultures may be an important first step in improving current prevention programs, which are predominantly focused on the individual and pay little, if any, attention to the wider peer culture. Indeed, those programs that do focus on peer culture generally encourage girls to ‘resist’ appearance-related pressure, thereby transforming wider cultural issues into an individual concern. Enhancing our understanding of peer appearance cultures thus represents a first step in answering the call for more comprehensive interventions which concentrate on factors occurring at multiple levels of influence (e.g. Haines, Neumark-Sztainer, Perry, Hannan, & Levine, 2006; Piran, 1999). Further, increasing our understanding of peer appearance cultures may also help in the treatment of disordered eating and body image concerns, both within the school environment and externally.
It is also likely that enhancing our understanding of appearance cultures will add significantly to the research literature, providing greater insight into how peers, and more broadly schools, contribute to eating behaviours and body image concerns. This could then increase our awareness of the risk factors leading to these issues within a school environment. Further, including male students and coeducational schools in this investigation of peer appearance cultures allows for an increased understanding of the contribution of boys and school gender composition, potentially adding to the debate concerning the merits of coeducational versus single-sex education that has recently been revived (see e.g. Department of Education and Training Western Australia, 2009).

**METHODOLOGY**

This research project comprised two main stages, the first of which took the form of a predominantly ethnographic study, and the second a more comprehensive quantitative survey of various high school populations. The first stage of this project was conducted with the explicit aim of defining and identifying norms and communications surrounding body image and eating behaviours in the adolescent population. An in-depth ethnographic analysis of social processes in this population was conducted, with a particular focus on the transmission of, and value placed upon, eating, weight, and body image concerns.

Ethnography is a general term for a collection of research tools and methodologies which emphasise the perceptions, behaviours, cultural milieu, and networks of a group of participants, aiming to develop an understanding of how participants interpret their surroundings (Quimby, 2006). Ethnographic analyses are commonly conducted to investigate such questions as how friendship networks react to new members, how norms and customs are conveyed through groups and how they shape group and individual behaviour, and how competition is resolved among friends (Douvan, 1983). These analyses are typically unstructured, permitting the researcher to observe natural, unprompted behaviour as well as the ways in which the group’s culture is actively created (Eder, 1993). Thus, through
ethnography, the most significant concerns and activities of the group emerge naturally, rather than being outlined in advance.

In an attempt to increase the generalisability and applicability of the current study’s findings, a quantitative measurement phase followed the ethnographic analysis, aiming to clarify and confirm the results of the ethnography in a range of different schools. Such a technique is common in mixed-methods studies, where quantitative and qualitative methods are collected, whether simultaneously or successively, in a single research project in an attempt to reduce ambiguity surrounding results and provide a more comprehensive understanding of the social phenomena under study. To accomplish this quantitative phase, and hence provide a more complete understanding, Social Network Analysis was employed, as well as various questionnaires. This phase aimed to replicate and extend an earlier study by Paxton and colleagues (1999) in which friendship cliques were found to influence body image concerns, dietary restraint, and extreme weight loss behaviours, as well as quantitatively investigate the contribution of additional variables which arose in the ethnographic study.

Social Network Analysis involves the measurement of relational links between individuals and is used to provide an illustration of the configuration and composition of a dyad or group (Koehly & Shivy, 1998). It enables the investigation of such aspects of social groups as their cohesiveness, incidents of cliquing, and the initiation of group interaction, as well as the meaning and impact of relationships on both the individual and the larger network. Social network data can then be correlated or compared with individual measures to enable the association between individual characteristics and the wider social environment to be investigated. In this study, the data from questionnaires were correlated with social network measures in an attempt to quantitatively investigate the social concomitants of individual eating behaviours and attitudes. This was carried out with the aim of providing a clear understanding of eating behaviours and body image concerns, and the factors leading to and maintaining them in the adolescent population, paying particular attention to the role of friendship cliques and peer cultures.
THESIS STRUCTURE

This thesis comprises a total of nine chapters, including the current overview chapter. Chapter Two presents a more in-depth review of the literature in this area, providing a rationale for the current study. It starts by outlining the challenges of adolescence, focusing particularly on concerns surrounding body image, weight and eating. Eating disorders are then considered in more detail, including literature related to prevalence, diagnosis, and prevention. The specific role of culture in the development and maintenance of eating disorders and body image concerns is also addressed, incorporating a review of the research concerning the school environment and appearance cultures. Finally, individual factors which may work in concert with cultural influences are discussed.

Following this, Chapter Three provides an overview of the schools participating in this research project. This chapter aims to contextualise the current research project, and provide sufficient detail in order that the reader can judge whether the findings presented in this thesis may be generalized to other particular school settings. The greater part of this chapter refers to the first school, at which the ethnographic analysis was conducted. A brief physical description of the school is provided, followed by an overview of the student body and staff, and curricular structure. Results of a textual analysis and observational study conducted as part of this thesis are also presented here in an attempt to explore the school culture. The schools participating in the quantitative phase of this project are then outlined in less detail, with the student body and basic curricular and co-curricular structure briefly described.

Chapter Four is the first of the methodology chapters, and describes the steps taken in the ethnographic analysis. The different data collection stages, comprising focus groups, open-ended surveys, and interviews, are explained here. For each stage, the participants and materials are detailed, and a brief overview of analytic strategies provided. This leads logically to the ethnographic analysis chapter (Chapter Five). This chapter presents the results from the three data collection stages. The analysis is organized with reference to the emerging themes, with the common theme of culture pervading throughout. Analysis of each stage is presented separately, with the focus groups described first, followed by the open-ended
surveys and student interviews. Extracts from the data are presented throughout, as well as reference to past research. In addition, analysis of the survey data from members of the school community provides some quantitative statistics which are intended to complement the qualitative analyses. The chapter concludes with a general discussion, aiming to bring together each of the qualitative data collection stages.

Chapter Six is the second methodology chapter, describing the steps undertaken in the quantitative phase of this project. This chapter begins by providing a rationale for including several different schools, rather than the original school involved in the ethnographic study, and goes on to describe the participants both as a whole and separately by school. The measures used are then described in detail. In addition, this chapter describes the friendship nomination and clique-assignment process, and presents the results of preliminary analyses investigating the possibility of selection bias for those assigned versus not assigned to cliques.

This chapter is followed by the first of the quantitative analysis chapters, which describes in detail the conceptual replication of Paxton and colleagues’ (1999) study. This chapter begins by providing a brief rationale for this phase of the research project. The analysis itself is then presented, with a whole-sample analysis presented first. The aim of this section is to provide an overview of the characteristics of the sample as a whole, and to begin to describe differences between school types on the key variables of interest. Following this, the results of the clique-assignment process are presented, with particular attention paid to the social characteristics of these cliques and the individuals assigned to them.

The subsequent analyses then refer only to those students assigned to cliques, and include a conceptual replication of Paxton and colleagues’ (1999) study, an extension of this analysis, and lastly a series of analyses intended to identify differences between school types. The final analysis then attempts to further investigate the influence of boys upon girls’ body image concern and disordered eating, looking specifically at those girls who had nominated boys as friends. This chapter concludes with a general discussion and conclusion, which aims to draw together each of the analytic stages.
Chapter Eight is the second of the quantitative analysis chapters, describing the hierarchical linear modelling (HLM) process and results thereof. A brief overview of HLM is provided, as well as an outline of the analytic steps undertaken. Results of the HLM analyses are then presented. This chapter again concludes with a short discussion, aiming to clarify the results of the HLM analysis.

The final chapter is a general discussion and conclusion, aiming to bring together the two phases of this research project into a coherent whole, and to draw conclusions based on the data corpus in its entirety. This chapter also describes in detail the implications of the findings of this project, and provides some recommendations for future research. Limitations of the project are also discussed. Finally, three major conclusions are drawn in light of the findings of this thesis as a whole.
CHAPTER TWO
LITERATURE REVIEW

Adolescence is widely recognised as a period of considerable transition (Harter, 1999), a time of significant social, cognitive, and emotional development linking childhood and adulthood (Jaffe, 1998). Throughout this period, individuals experience multiple changes in numerous domains, including changes stemming from the onset of puberty, changes in self-concept, the development of more complex cognitive abilities, and the redefinition and evolution of social roles (Eccles, et al., 1993; Steinberg, 1993). Accordingly, adolescence has been identified as the period of life in which greater transformations are taking place than at any other time of life, with the exception of infancy and early childhood (Hill, 1983).

As a reply to the countless changes taking place, one of the key tasks of adolescence involves the attainment of a new, positive sense of identity (Simmons & Blyth, 1987). This generally necessitates exploration of, and experimentation with, a diversity of identities, as well as comparison with peers and significant others (Jaffe, 1998). Adolescent identity formation also entails transformations in one’s interpersonal relationships (Blyth & Traeger, 1988), including the differentiation of oneself from one’s parents (Harter, 1990) and the resulting intensification in peer interactions (Berndt, 1979). The process of identity formation and consolidation is thought to be a positive contributor to one’s mental health in later life (Simmons & Blyth, 1987), and for many the passage through adolescence to adulthood is a positive and constructive time (Bonino, Cattelino, & Ciairano, 2005), characterised by optimism and anticipation rather than concern and insecurity (Jaffe, 1998).

For others, however, adolescence may be a time of increased vulnerability, characterised by role confusion and self-concept instability (Jaffe, 1998). During adolescence, the self becomes progressively more differentiated and self-descriptions vary across social contexts, potentially provoking substantial distress in the adolescent (Harter, 1999). Adding to this, self-evaluations at this time are expanded to include self-appraisals in multiple domains, including one’s romantic appeal, close friendships, peer likeability, physical appearance, and
behavioural conduct. Many of these domains are based in social interaction, leading to self-concepts being centred on interpersonal characteristics and social skills to a much greater extent during this period. This may in turn cause individuals to become engrossed with others’ opinions and views of themselves. This is particularly relevant for girls, who place more value on peer popularity than do boys, and whose self-evaluations are therefore much more influenced by significant others (Simmons & Blyth, 1987).

OVERVIEW OF BODY IMAGE CONCERNS

Girls may also find adolescence a particularly troubling time as this is the stage during which they are increasingly expected to adopt a feminine gender role (Basow & Rubin, 1999). This intensification of gender role prescriptions is thought to result, in part, from pubertal bodily changes and the resultant escalation of family and peer pressures to adopt traditionally feminine behaviours, as well as cognitive developments which enable adolescents to become more attentive to, and concerned about, gender role prescriptions (Marmion & Lundberg-Love, 2004). The feminine gender role may be particularly problematic, as it places emphasis on physical appearance and connectedness to others, and thus may communicate values that act to endorse the experience of weight and body image concern, as well as eating disorders (McHale, Corneal, Crouter, & Birch, 2001). When accompanied by the increased social importance of appearance during adolescence (Lieberman, Gauvin, Bukowski, & White, 2001), as well as the bodily changes one is undergoing, it is perhaps no wonder that one of the major issues at this time involves questions of body image and weight concern.

Indeed, research has found body image to be a particularly relevant concern during adolescence, being as it is a time characterised by pubertal changes, increased awareness of cultural standards, and escalating concerns with appearance and acceptance (Harrison, 2000; Lieberman, et al., 2001). A recent survey of over 47,000 young people in Australia found 25.5% of respondents to be highly concerned about body image, with adolescents in the 15-to-19 year old age group ranking it as their greatest concern (Mission Australia, 2009). Accordingly, Ricciardelli and McCabe (2001) found that 76.8% of Australian adolescent girls
want to be thinner, while 43% of girls aged 16 to 19 in the United States have been shown to be dissatisfied with their body (Presnell, Bearman, & Stice, 2004). In addition, up to 90% of white adolescent girls in the United States have been found to show some level of negative body image concern (Parker, et al., 1995). That young women express such high levels of dissatisfaction and concern about their bodies is not surprising, given the relentlessness with which Western cultural representations of girls and women emphasise the importance of desirability and attractiveness and increasingly equate beauty with extreme thinness (Jeffreys, 2005; Wolf, 1990).

This cultural ubiquity has contributed to the view of body image concern as normative, and indeed such concern appears to have an unchallenged nature in much of the research. That is, body image concern is seen as an ordinary part of being an adolescent, and particularly an adolescent girl, and becomes a notable issue only when it leads to clinical outcomes such as eating disorders. However, some researchers contend that body image concern is problematic in its own right, not just as a risk factor for other outcomes (e.g. Bordo, 1993). For example, body image concern is known to be a significant contributor to the self-esteem of adolescent girls (Hargreaves & Tiggemann, 2004), with Paxton and colleagues (Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006) finding that body image dissatisfaction predicted depressive symptoms and low self-esteem in early adolescent girls. Body image concern has also been found to impact upon everyday life experiences and feelings such as self-confidence (Grogan, 1999), identity formation (Levine & Smolak, 2002), and academic pursuits (Yanover & Thompson, 2008).

**EATING DISORDERS AND DISORDERED EATING**

Body image concern may also lead to behavioural outcomes, including body checking behaviours as well as eating and/or weight control behaviours. Unhealthy weight control behaviours are thought to be highest in prevalence among adolescent and student populations (McVey, 2004; Zuckerman, Colby, Ware, & Lazerson, 1986), with research in the United States suggesting that as many as 57.5% of adolescent girls exhibit unhealthy weight control.
behaviours such as fasting, using laxatives, or skipping meals, while 18.2% diet at a high frequency, defined as more than five times per year (Neumark-Sztainer, Wall, Story, & Perry, 2003). Other studies have found that 64.6% of American high school students report some form of abnormal eating or weight control behaviour (Forman-Hoffman, 2004), whereas 35.9% of non-overweight adolescent girls report dieting to lose weight (Boutelle, Neumark-Sztainer, Story, & Resnick, 2002).

Although clinical rates of disordered eating are somewhat lower than those of these subclinical variants, research suggests that the prevalence of clinical eating disorders has increased in recent years, particularly in the adolescent population (Littleton & Ollendick, 2003). Lewinsohn, Striegel-Moore and Seeley (2000), for example, noted that the lifetime prevalence rate for eating disorders in adolescent females was 2.3% in data collected between 1987 and 1989, while more recent research has reported the incidence of eating disorders in adolescent girls to be 7.66% in data collected over a period of eight years (Stice, et al., 2009). Although these clinical estimates are not overwhelming, these statistics are particularly worrying when viewed in light of research which suggests that eating disorders and their subclinical variants have significant effects on psychological well-being, including depression and self-esteem (Haines, Neumark-Sztainer, & Thiel, 2007), as well as physical health outcomes (McVey, 2004).

At a clinical level, three main eating disorder diagnoses – anorexia nervosa, bulimia nervosa, and eating disorder not otherwise specified (EDNOS) – have been described in the current edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000). Anorexia nervosa has been characterised as the unremitting quest for thinness (Gilbert, 1986), and entails a morbid fear of becoming ‘fat’, a distorted body image, and the refusal to maintain a ‘normal’ body weight (American Psychiatric Association, 2000). Bulimia nervosa is a variant of anorexia, and so shares many of its clinical and demographic features (Beumont, 1995). However, those with bulimia nervosa typically maintain a seemingly ‘normal’ body weight through the use of
compensatory behaviours, such as vomiting and excessive exercise, which follow periods of binge-eating (Fairburn, 1984).

The third diagnosis, EDNOS, has arisen from the realisation that many patients exhibit a mixture of anorexic and bulimic symptomatology (American Psychiatric Association, 2000). This diagnostic category comprises a heterogeneous collection of eating and weight problems, focused around weight concerns and dissatisfaction with body image and at a level serious enough to result in impaired daily functioning and significant distress (Schwitzer, Rodriguez, Thomas, & Salimi, 2001). These disorders are similar to partial syndrome or sub-clinical eating disorders, in which individuals engage in many of the same disordered eating behaviours as those with clinical eating disorders, but at a somewhat lower level of severity (Lina A. Ricciardelli & McCabe, 2004).

ETIOLOGY AND PREVENTION

Etiology in General

A number of models have been developed to explain the etiology and rising prevalence of eating disorders and their subclinical counterparts (Story, Neumark-Sztainer, & French, 2002). These focus on a range of risk factors, including those of a psychological, biological, developmental, familial, and sociocultural nature (Sanders, Gaskill, & Gwynne, 2000), and most acknowledge that the etiology of eating disorders is likely to be multifaceted, with individual factors interacting with sociocultural factors (Story, et al., 2002). However, no one account can provide an adequate explanation of why eating disorders occur (Abraham & Llewellyn-Jones, 1997), and the various risk factors are thought to contribute to varying extents for different individuals (Healey, 2001), meaning that there is no one common etiological pathway. The presence of an eating disorder in any one individual can instead only be seen as the result of the interaction of various pathways, which may include, for example, risk factors common in the development of many disorders, including negative affect, as well as those factors specific to eating disorders, such as body dissatisfaction (Levine & Piran, 2005).
**Prevention**

These more specific factors are those which are most commonly targeted in prevention programs which aim to modify some of the factors associated with disordered eating (McVey, Davis, Tweed, & Shaw, 2004). Commonly cited universal programs include *Student Bodies*, an American program which focuses on body dissatisfaction and unhealthy weight concerns (Winzelberg, et al., 1998); *Body Traps*, a program developed in the United States which aims to modify disordered eating behaviours and attitudes (Springer, Winzelberg, Perkins, & Taylor, 1999); and *Everybody’s Different*, an Australian program aimed at improving body image in adolescents through enhancing self-esteem (O’Dea & Abraham, 2000). Other programs developed specifically for college women have utilised dissonance and cognitive-behavioural techniques in attempts to modify bulimic behaviours and thin-ideal internalisation (e.g. Kaminski & McNamara, 1996; Stice, Mazotti, Weibel, & Agras, 2000).

As a whole, these prevention programs have proven somewhat successful in the short-term, effectively impacting upon such factors as body dissatisfaction, self-esteem, and eating behaviours. *Student Bodies*, for example, has been found to reduce body dissatisfaction and weight concerns in undergraduate samples in the United States (Celio, et al., 2000; Winzelberg, et al., 1998), while *Everybody’s Different* has been found to result in improved self-esteem and reduced body dissatisfaction in Australian adolescents (O’Dea & Abraham, 2000). A more recent Australian program, *Media Smart*, focusing on media literacy and advocacy, was also found to produce clinically significant decreases in shape and weight concerns and dieting in Australian adolescent girls (Wilksch & Wade, 2009), while *Happy Being Me*, a targeted program for early adolescent girls, led to decreased thin-ideal internalisation, body comparison, body dissatisfaction, and dietary restraint (Richardson & Paxton, 2010).

However, prevention programs in this area have also produced some less encouraging findings. For example, initial improvements obtained by many programs have not been maintained over time (e.g. Bearman, Stice, & Chase, 2003; Celio, et al., 2000), and many programs have resulted in improvements in the body dissatisfaction and eating habits of both
intervention and control groups (e.g. McVey & Davis, 2002; Zabinski, et al., 2001), meaning that the effect of the intervention itself is unclear. In addition, a review of almost 30 published body image interventions for adolescent girls found that less than half of these demonstrated a significant reduction in body image concern or related attitudes, and only a small number resulted in a long-term reduction in body dissatisfaction (Durkin, Paxton, & Wertheim, 2005).

The limited success of these programs may mean that thorough consideration is not being paid to a fully comprehensive range of the potentially modifiable risk factors found to be important in the onset and maintenance of eating disordered thoughts and behaviours. This may be due to the fact that many programs have taken a predominantly individual focus, aiming to improve the attitudes and behaviours of the individual, with very little focus on features of the wider environment (e.g. Bearman, et al., 2003; Springer, et al., 1999). This is despite research showing that sociocultural and environmental factors play an important role in the onset and maintenance of disordered eating thoughts and behaviours (e.g. Abrams & Stormer, 2002; Byely, Archibald, Graber, & Brooks-Gunn, 2000). In light of this, it has been acknowledged that prevention programs need to attend to a broader range of issues and factors than those most commonly targeted (Piran, 1997).

Accordingly, some preliminary attempts at intervening in social processes have been made, with some success. For example, Haines and colleagues (Haines, et al., 2006) developed Very Important Kids, a school-based, multifaceted, universal program designed to impact eating behaviours and teasing in American children in the fourth-to-sixth grades. This program includes activities at the individual, school, and family level. While Very Important Kids was found to decrease the prevalence of teasing and negative weight-related peer norms, it had little to no impact on individuals’ body satisfaction, use of dieting or unhealthy weight control behaviours, parental pressure to lose weight, or media internalisation (Haines et al2006).

In another approach, the New Zealand Eating Difficulties Education Network (EDEN) developed the Body-image Wellbeing in Schools Education (BWISE) whole-school approach to preventing eating and body image difficulties (Burns, Tyrer, & Eating Difficulties Education Network, 2009). This program encompasses efforts at the peer, staff, parent,
curricular, policy, and community levels via six separate but related streams. EDEN’s approach was developed in response to previous failed attempts at individually-focused interventions, and recognizes that schools may be sites for the reproduction of gendered ideals surrounding body size and shape. However, this approach has not yet been subject to any empirical evaluation, and thus the outcomes of this program are currently unclear.

A similar approach was taken by Piran (1999) in a Canadian program aiming to reduce body weight and shape preoccupation in adolescent girls attending a coeducational ballet school. This intervention focused on creating a school milieu where students felt secure and comfortable with their changing bodies, through implementing systemic changes within the school as well as providing educational sessions. Piran’s program produced considerable improvements over time on measures of eating symptomatology and body image attitudes, although these improvements were not, for the most part, statistically significant. In addition, Piran’s study did not include a comparison group, meaning that other factors which may have contributed to the success of this program were not controlled for.

Despite their mixed success and methodological limitations, these programs represent an important first step in answering the call for more comprehensive interventions, concentrating on factors occurring at various levels of influence (Story, et al., 2002). Such an approach is in line with the ecological perspective (Bronfenbrenner, 1977), which holds that numerous sociocultural and individual factors interact to shape behaviours and attitudes (Story et al, 2002). This perspective emphasises the intricate, multifaceted, and interactive nature of influence (Ozer, 2006), and highlights the role of the cultural milieu in influencing individual behaviour (Piran, 2004). This is in line with research that emphasises the role of the sociocultural environment in leading to disordered eating thoughts and behaviours (e.g. Byely, et al., 2000; Szmukler & Patton, 1995).

THE ROLE OF CULTURE

The surrounding sociocultural environment has been found to be a major influence on the development of body image concerns in adolescence (Levine & Piran, 2004), leading
Hutchinson and Rapee (2007) to state that adolescents, particularly girls, interact within a sociocultural environment which emphasises appearance and equates thinness with beauty. However, the exact role culture plays, and the scope of its influence, needs to be clarified. The predominant view in the literature, exemplified in models such as the Tripartite Influence model (van den Berg, et al., 2002) and the Dual Pathway model (Stice, et al., 1996), appears to be that the sociocultural environment is one risk factor among many, acting as either the ‘final straw’ or trigger for disordered eating, or providing a general climate in which other, primarily individual, factors exert their influence.

However others, including Susan Bordo (Bordo, 1993) and Susie Orbach (Orbach, 1986), view eating disorders and body image concern as characteristic manifestations of the culture itself. While not denying the importance of other (individual) factors, these authors argue that culture is central to the experience of disordered eating and body image concern, shaping the way in which these concerns manifest (Bordo, 1993). Bordo argues that body image concern is entirely understandable within the context of Western culture and the experience of being and becoming a woman in this society. That is, Western culture is seen as playing a fundamental role in supplying the necessary foundations for the development of disordered eating and body image concerns.

This view is echoed by other authors such as Helen Malson (Malson, 1998; Malson & Ussher, 1996), who suggests that eating disorders, and anorexia nervosa in particular, can be seen as metaphors for the sociocultural anxieties apparent in current society. Malson argues that the preponderance of popular and academic literature addressing eating disorders suggests that these are not just individual psychopathologies, but rather that they are of wider cultural significance. Furthermore, she suggests that the current equation of attractiveness with slenderness is specific to the current cultural climate; that is, thin is not in essence attractive, but rather has been represented as such (Malson & Ussher, 1996). This, as Bordo (1993) notes, has led to widespread body image and weight concerns, in addition to clinical eating disorders, in today’s society. In addition, Presnell, Bearman and Stice (2004) note that
This equating of attractiveness and thinness is central to the feminine gender role, which views beauty and appearance as essential components of being a ‘successful’ woman.

Accordingly, it has been suggested, as noted earlier, that conventional gender roles may communicate those very same values which act to endorse the experience of weight and body image concerns (McHale, et al., 2001). That is, gender prescriptions may give rise to body image concerns in the degree to which they emphasize physical appearance and the importance of connectedness to others as central to the female gender role. It is therefore not surprising that one’s endorsement of conventional female gender roles has been found to be positively correlated with desiring a thinner figure than one’s current shape (Snyder & Hasbrouck, 1996). In addition, the same authors found that rejecting the feminine gender role, and adopting feminist principles, was negatively related to body image concern, drive for thinness, and disordered eating. It therefore appears that the feminine gender role, and its transmission through culture, plays a central role in the experience of body image concern and disordered eating (Bordo, 1993).

THE CONTRIBUTION OF THE SCHOOL ENVIRONMENT

A key context for the learning of gender roles is the school environment (Mensinger, Bonifazi, & LaRosa, 2007), with research suggesting that school cultures highlight and perhaps intensify gender role prescriptions endorsed by the wider community (Mensinger, 2005). Thus, the school environment can be seen to be an important microcosm which impacts upon the thoughts and feelings of those exposed to it (Wardle & Watters, 2004). That is, larger cultural norms, including gender role prescriptions and the cultural thin-ideal, are seen to be reproduced within the school environment (Rich & Evans, 2008). Specifically, in addition to informal contexts such as the playground, friendship groups, and social situations (Halse, Honey, & Boughtwood, 2008), adolescents’ experiences of school, and the weight-related practices embodied therein, are also influenced by the school culture itself (Rich & Evans, 2008).
As Rich and Evans (2008) note, wider cultural influences work together with the school culture to shape an individual’s relationship with their body. This relationship may, for example, be influenced by contact with older children within the school environment, whereby older students who have presumably internalised cultural ideals then communicate these norms to younger students through interactions with them (Wardle & Watters, 2004). This may, in turn, hasten younger students’ own recognition and internalisation of ideals. In any case, adolescents report increased pressures within the school environment to compare their own and others’ bodies in relation to the cultural thin-ideal, describing lunchtimes, for example, as contexts for the surveillance of their own and others’ weight-related behaviour (Rich & Evans, 2008).

Therefore, within schools adolescents’ bodies may be subject to constant surveillance and regulation, through the operation of body perfection codes (Rich & Evans, 2008). These codes assign particular value to certain (thin) body shapes and behaviours, and give rise to ideals of weight and shape. The perfection code principle of thinness then becomes a prerequisite for respect and popularity within the school environment, and embodying this code (through achieving the ‘right body’) is a way of demonstrating that one is of higher status than others (Evans, Rich, & Holroyd, 2004). Body perfection codes are conveyed by schools, particularly through curricular and co-curricular practices such as physical education which are directed toward the body, and are mediated by staff and other students.

In addition to perfection codes, school cultures can influence weight management and body attitudes through a one-dimensional focus on obesity and health. Fuelled by the ‘obesity epidemic’ reported on extensively throughout the media, health education in schools can now be argued to focus on weight management, and more specifically weight loss, as a way to promote health and fitness, rather than adopting a more holistic approach (Rich & Evans, 2008). This restricted definition of health – that is, as defined by weight management – transpires from and is strengthened by both the formal and informal school culture. For example, adolescents report a focus on maintaining a ‘good weight’ in physical education,
and this discourse of ‘healthism’ may then be adopted within informal peer groups (Evans, et al., 2004).

Accordingly, Halse and colleagues (2007) have identified three discourses within schools that can contribute to body image issues and the emergence of appearance cultures; namely, the discourses of self-discipline, individual achievement, and the equation of healthiness with thinness. Specifically, they note that schools, as naturally structured and ordered environments, commonly portray self-discipline as a desirable quality, which may lead students to discipline and routinise other parts of their life, such as eating and exercise. In addition, schools emphasise the need for one to be successful and to compete with one’s peers (see also Evans, et al., 2004), making the individual a focus of public display (Halse, et al., 2007).

Furthermore, schools can be seen to represent the causal relationship between health and thinness as an unquestionable truth, through the discourse of ‘healthism’ (Halse, et al., 2008). This discourse is invoked throughout the school day, in both formal curricula, such as physical and health education, and informal interactions, whereby failure to comply with this discourse can lead one to be subject to negative social experiences including teasing (Halse, et al., 2007). In addition, schools can be seen to objectify students’ bodies in a manner that makes bodily comparisons among peers possible and perhaps even expected, through, for example, compulsory dress codes (Halse, et al., 2008) and the practice of public weighing in physical education and health lessons (Rich & Evans, 2008). However, this is not to say that schools in themselves cause eating disorders, but rather that body image and eating issues can develop in students as a way of managing the cultural demands inherent in their school environments (Evans, et al., 2004). These demands are a natural, although by no means necessary, outcome of the current cultural climate.

The demands and discourses apparent in a school environment may differ depending on its gender composition; that is, whether it is coeducational or single-sex. The debate concerning the merits of coeducation versus single-sex schooling is a long-standing one, and one that has recently been revived (see e.g. Department of Education and Training Western Australia,
2009). On the one hand, for example, it has been argued that coeducational schools offer a more natural setting in which adolescents can develop necessary social skills (Marsh, 1989), while on the other hand, it has been suggested that coeducation may be disadvantageous to the academic and moral development of adolescents, and particularly that of girls (Marsh, Owens, Myers, & Smith, 1989). Single-sex schools, in addition, are thought to place greater emphasis on academic pursuits and educational attainment (Lee & Marks, 1990), and thus may be more likely to be sites for the reproduction of the discourses identified by Halse and colleagues (2008).

Research has found that all-girls’ students desire a significantly thinner figure than coeducational students, and score significantly higher on measures of drive for thinness and body dissatisfaction (Dyer & Tiggemann, 1996). In addition, Mensinger (2001), in reanalysing this data, found a positive relation between body mass index and disordered eating scores for all-girls’ students, while no such correlation existed for coeducational girls. Mensinger concluded that this points toward the greater difficulty faced by larger girls in single-sex schools as compared to their equally as large peers in coeducational schools. Furthermore, girls at single-sex schools have been found to be less satisfied with their physical appearance than coeducational girls (Granleese & Joseph, 1993). It has been suggested that these results indicate the greater observance of feminine gender roles in single-sex schools, and the consequent inflexibility in the definition of ideal bodies (Mensinger, 2001).

As well as wider cultural and school climate factors, it may be that these differences between coeducational and single-sex schools are a function of the social networks embedded within. That is, the friendships and social contacts of girls within each of these school-types may vary. For example, it may be that girls’ friendships with boys in coeducational settings play an important protective role in the body image concern domain. This is in line with research by Compian, Gowen, and Hayward (2004) which found that high levels of platonic involvement with the opposite sex was related to higher body image satisfaction in Caucasian girls. However, other research suggests that adolescent girls who are more popular with the
opposite sex experience lower body satisfaction (McCabe, Ricciardelli, & Finemore, 2002). It may also be that friendship cliques function differently in coeducational and single-sex schools, particularly as friendships are known to be generally more important for girls than for boys (see e.g. Eder, 1985). Therefore, a more fine-grained analysis of similarities and differences in adolescent girls’ social networks across these two school-types is needed in order to further clarify this issue.

**PEERS AND APPEARANCE CULTURES**

Regardless of school gender composition, however, it is clear that the school environment, and the peer subcultures embedded therein, are key determinants of adolescents’ body image concern and disordered eating. As mentioned, schools, as major socializing contexts and sources of influence for young people (Dyer & Tiggemann, 1996; Heyward, 1995), have been found to influence individuals’ body- and weight-related ideas and values (Lee & Marks, 1992), with the peer environment being a major contributor (Epstein, 1983). More specifically, research suggests that peers may be influential through pressure to diet, teasing about weight and shape, and modelling of weight- and eating-related behaviours (Dunkley, Wertheim, & Paxton, 2001). For example, Canadian adolescent girls who reported experiencing pressure to diet, being teased about their weight, and/or perceiving that their friends were dieting were more likely to also report body image concern and disordered eating (McVey, Lieberman, Voorberg, Wardrope, & Blackmore, 2003). In addition, body image concerns and eating behaviours have been found to be similar within friendship groups in a college setting, with both social contagion and selection, whereby similarly symptomatic peers select each other as friends, thought to contribute (Zalta & Keel, 2006).

Social contagion, or the idea that attitudes and behaviours can be spread throughout a population as if they were infectious (Marsden, 1998), has been found to contribute to a variety of adolescent behaviours and attributes, including drug and alcohol use (Ennett, Flewelling, Lindrooth, & Norton, 1997), cigarette smoking, and aggressive behaviour (Cohen & Prinstein, 2006), as well as eating behaviours (e.g. Crandall, 1988). This is also consistent
with research suggesting that adolescent friends tend to resemble each other on a wide range of attributes, including popularity and attractiveness, as well as eating disordered thoughts and behaviours (Paxton, et al., 1999).

In a comprehensive study, Paxton and colleagues (1999) investigated the similarity of body image concerns and eating behaviours within the friendship groups of 523 Australian adolescent girls. They found clique members to be similar in body image concerns, dietary restraint, and the use of extreme weight loss behaviours, supporting the idea that one’s friendship clique environment is an important influence on their individual attitudes and behaviour. Furthermore, this friendship group similarity was partially explained by various factors including perceived support from friends, social comparison with peers, and appearance conversations, indicating that peers can influence individual attitudes and behaviour in multiple ways. Friends’ concern with thinness and friends’ influence on body image attitudes were also found to partially explain friendship group similarity, consistent with other research which has found peer modelling of abnormal eating behaviours to show significant positive relations with bulimic symptoms (Stice, 1998) and unhealthy eating practices (Vincent & McCabe 2000), further supporting the role of social contagion.

Research also suggests that social contagion may contribute to the formation of peer subcultures which stress the importance of weight and appearance (e.g. Jones & Crawford, 2006). These subcultures are known as ‘appearance cultures’ or ‘cultures of weight consciousness’, and have consistently been found to contribute to eating disorders and related issues in adolescent girls (e.g. Jones, et al., 2004). Through appearance cultures, peer norms exert influence upon an individual’s body image concern and eating behaviours, and are in turn shaped by these individual concerns. These cultures are made up of three basic elements; namely, appearance conversations, peer appearance criticism (teasing), and exposure to appearance-focused media. That is, as well as being influenced by peer norms and behaviours, appearance cultures are also informed by the media and other influences (Clark & Tiggemann, 2006). Substantial empirical support exists for the contribution of each of these elements to the formation of body image and weight concerns.
Clark and Tiggemann (2007), for example, found the frequency of appearance conversations with friends to be directly related to body dissatisfaction and dieting, while Jones (2004) found appearance conversations to predict increases in body dissatisfaction over a period of one year. Appearance conversations are thought to contribute to the peer appearance culture by drawing attention toward appearance and weight, placing a higher value on appearance, and encouraging the creation of appearance norms and ideals (Jones & Crawford, 2006; Shroff & Thompson, 2006). That is, through appearance conversations, information related to appearance concerns is focused on and built upon on a day-to-day basis (Jones, 2004). One of the more potent manifestations of appearance conversations appears in the form of ‘fat talk’, whereby conversations focus on one’s own weight concerns and body shape complaints (Durkin, et al., 2005). As well as allowing adolescents to use their negative body image as a reference point for their emotions (Gapinski, Brownell, & LaFrance, 2003), for example allowing them to communicate unhappiness or irritation (Ousley, Cordero, & White, 2008), fat talk also represents to others that they ‘buy in’ to the cultural thin ideal.

Fat talk may also satisfy social motives, allowing adolescent girls to fit in with their peer group by conforming to the social norm for women to self-degrade (Britton, Martz, Bazzini, Curtin, & LeaShomb, 2006). Thus, appearance conversations, particularly in the form of fat talk, may contribute to relationship formation and solidarity in adolescence, functioning to establish friendship group values regarding appearance and allowing for peer support (Ousley, et al., 2008). These conversations are therefore likely to be especially influential during adolescence, as a result of the increased intimacy of friendships during this period (Jones, et al., 2004). In addition, peer appearance conversations generally impart more self-relevant information than, for example, media exposure, and therefore the content of these conversations is more likely to be integrated into one’s appearance self-concept (Clark & Tiggemann, 2007).

Appearance criticism, as the second element of appearance cultures, may also affect an individual’s core beliefs about their self-worth (Ledley, et al., 2006), with research demonstrating links between appearance teasing, low self-esteem, and depression (Keery,
Boutelle, van den Berg, & Thompson, 2005). In addition, research consistently shows that teasing by peers has a strong influence on the development of eating and weight concerns (Oliver & Thelen, 1996; Phares, Steinberg, & Thompson, 2004), and teasing about weight and shape has also been found to predict ideal-body internalisation and body dissatisfaction (Vincent & McCabe, 2000). This is likely to be particularly important in adolescence, where peer evaluations are thought to be especially significant (Harter, 1999). Appearance criticism has also been found to affect the extent to which an individual compares oneself to others (Bailey & Ricciardelli, 2010), a factor which in itself has been linked to body dissatisfaction. Appearance teasing is also thought to aid in the formation and strengthening of norms and ideals, and may represent a way in which appearance standards are communicated among peers (Jones & Crawford, 2006). Peer appearance criticism may also play a role in the internalization of these standards by indicating to adolescents the important aspects of the peer appearance culture (Jones, et al., 2004).

The negative effects of appearance criticism may also extend to vicarious situations, where people experience and become attuned to others being teased about their appearance, with Jones and Crawford (2006) finding vicarious appearance teasing to be associated with increased body dissatisfaction and the perception that appearance is important for peer acceptance. This may result from appearance being made especially salient, thereby increasing the importance that individuals place on their own attractiveness (Clark & Tiggemann, 2007). Vicarious appearance criticism may also be experienced through media models, whether through positive reinforcement received by those fitting the cultural thin-ideal, or punishment directed at average-weight or heavier bodies (Fouts & Burggraf, 2000).

Appearance-focused media, the third component of appearance cultures, plays an undisputed role in communicating sociocultural ideals regarding appearance, and in influencing individual’s evaluations of their own bodies through social comparison (Shomaker & Furman, 2009). Magazines in particular are a key means through which appearance ideals are formed (Jones, et al., 2004), and these are thought to be more conducive to modelling than other forms of media, including television (Harrison & Cantor, 1997).
Accordingly, Thomsen, Weber and Brown (2002) note that reading fashion magazines leads adolescent girls to accept and espouse the cultural thin ideal, and consequently inspires them to attempt to achieve it. This may be a particular issue in the school environment, where fashion and celebrity news magazines are regularly read by students, and the communal poring over of these magazines provides ‘jumping-off points’ for conversations among friends (Clark & Tiggemann, 2006).

Accordingly, girls who are more frequent readers of appearance magazines have also been found to be more likely to belong to friendship groups that direct greater attention towards appearance (Jones, et al., 2004). In forming peer appearance cultures, therefore, it seems that adolescents actively adopt appearance ideals gathered from appearance-focused media into their own appearance norms (Britton, et al., 2006). These norms are then discussed and shared among peers, cementing their importance in the peer culture. Therefore, while the media itself can be understood as an important influence on the development of body image concerns, media pressures are generally strengthened by an individual’s more immediate subculture comprising peers and family (Wertheim, Paxton, Schutz, & Muir, 1997). Indeed, it is possible that media messages have their most potent influence when they are emphasized by closer sociocultural agents such as peers and family members (Ata, Ludden, & Lally, 2007).

In addition to peer environments, then, the family context is another important arena for the development of appearance cultures, with Rodgers and Chabrol (2009) noting that some families may encourage a climate that contributes to the appearance of disordered eating. Specifically, the family environment may highlight the importance of thinness and weight control (Smolak, Levine, & Schermer, 1999) and play an important role in communicating cultural messages regarding body size and shape (Wertheim, Mee, & Paxton, 1999). These messages may become particularly more potent as adolescents mature and become more sensitive to cultural pressures toward thinness, and more specifically the cultural thin ideal (Francis & Birch, 2005). This ideal may be communicated by close family members in similar ways as by peers, through the use of direct negative comments regarding body weight and
shape, and/or modelling of one’s own body image concerns (Cooley, Toray, Wang, & Valdez, 2008; Vincent & McCabe2000).

Research has indeed found that family members’ negative commentary regarding body size predicts adolescents’ thin-ideal internalisation, body image concern, dieting, and disordered eating (Vincent & McCabe2000), while maternal comments regarding weight have been shown to be related to their daughters’ subsequent attempts at weight loss (Smolak, et al., 1999). Additionally, encouragement from mothers to engage in weight control efforts is related to daughters’ body image and weight concerns (Cooley, et al., 2008). Maternal modelling may also play a role, with Smolak and colleagues (1999) finding mothers’ modelling of dieting and weight concerns to be correlated with weight loss attempts by their daughters. However, these modelling effects appear to be strongest when combined with weight criticism, with one study finding no relationship between mothers’ eating attitudes and daughters’ disordered eating when such criticism was not also present (Cooley, et al., 2008).

Thus it appears that a variety of sociocultural agents are influential in transmitting ideals of thinness and thereby contributing to body image concerns and disordered eating in adolescents. The media can be seen to shape individuals’ evaluations of their bodies, through encouraging social comparisons and communicating sociocultural ideals (Shomaker & Furman, 2009), while these messages may be taken up and indeed strengthened by an individual’s more immediate subculture comprising peers and family (Wertheim, et al., 1997). The extent to which others around the individual exert social pressures to be thin may also impact upon their internalisation of the thin-ideal, a factor which has been found to lead to increased body dissatisfaction (Stice, Schupak-Neuberg, Shaw, & Stein, 1994).

In addition, the wider cultural environment has been argued to be central to the experience of disordered eating and body image concern, shaping the way in which these concerns manifest (Bordo, 1993). However, although a significant majority of individuals are exposed, at least to some extent, to these sociocultural and ecological influences, not all of these exhibit significant levels of body image concern, and only a small proportion go on to develop
clinically significant disordered eating attitudes and behaviours. There are two possible reasons for this.

Firstly, research suggests that sociocultural influences are most potent when in combination (Dunkley, et al., 2001), that is, when wider cultural messages are reinforced by closer influences such as friends and family (Ata, et al., 2007). It therefore seems to be the convergence of influences, rather than any one alone, that increases an individual’s vulnerability to body image concern and disordered eating (Gordon, 2000). Thus, it may be that those adolescents who do not progress toward clinically significant behaviours are not fully immersed in a ‘subculture of thinness’. This may be the case, for example, when friends or family members foster positive body evaluations and discourage unhealthy weight control behaviours (Paxton, 2000), or, on a broader level, provide social support and model positive coping behaviours (Littleton & Ollendick, 2003).

It may also be the case that individual differences mediate the relationship between sociocultural pressures and eating behaviours (Twamley & Davis, 1999), in line with the ecological perspective, which emphasises the interdependence between individuals and their environments in explaining behaviour (Butterworth, 1995; Vincent & Trickett 1983). This perspective acknowledges the existence of multiple levels which may impact upon an individual, including one’s immediate context and relationships, larger social institutions, and the wider culture as a whole (Bronfenbrenner, 1977). Accordingly, it is important to consider both environmental and sociocultural factors as well as those characteristics which may increase individual vulnerability (Paxton, 2000).

**THE ROLE OF INDIVIDUAL FACTORS**

Fredrickson and Roberts’ (1997) objectification theory provides a sound starting point from which to consider how individual factors may interact with cultural pressures to produce body image concern. This theory holds that cultural experiences of objectification lead girls and women to internalise the objectifying gaze, and, at least to some extent, to view themselves as objects to be evaluated. That is, with frequent exposure to cultural pressures, girls and women
come to self-objectify, defining their body by reference to how it looks as opposed to how it feels (Aubrey, 2006). Objectification theory therefore takes a social constructivist approach, explaining how sociocultural variables interact with individual factors to impact women’s and girls’ body image and related constructs (Augustus-Horvath & Tylka, 2009). It takes into account the fact that some are more willing to adopt the objectifying gaze than others, therefore allowing that individual characteristics may play an important role in determining the impact of cultural pressures.

An individual’s willingness to adopt the objectifying gaze may depend on such individual characteristics as self-esteem, personal empowerment, and sexual orientation (Augustus-Horvath & Tylka, 2009; Fredrickson & Roberts, 1997). For example, Aubrey (2006) found exposure to objectifying media to be associated with increased self-objectification only for those women with low self-esteem, while Peterson, Grippo and Tantleff-Dunn (2008) suggested that feelings of empowerment may reduce one’s tendency to self-objectify. In addition, Hill and Fischer (2008) theorised that those with a lesbian identity may be less likely to experience self-objectification, and Kozee and Tylka (2006) found the relationship between exposure to objectifying experiences and self-objectification to be weaker for lesbian than heterosexual women, although this relationship was still significant in both samples.

More generally, body mass index, self-esteem, depressive symptoms and maturational status have been found to be related to adolescents’ body image concern and disordered eating. For instance, American adolescent girls with a higher BMI and lower self-esteem have been shown to exhibit greater body image dissatisfaction (Wiseman, Peltzman, Halmi, & Sunday, 2004), while depression has been found to be a significant predictor of adolescents’ disordered eating (Gardner, Stark, Friedman, & Jackson, 2000). The embeddedness of one’s body image may also be important, with Lewis and Donaghue (2005) finding that the importance one placed on the achievement of their body ideal determined its impact on their wellbeing. Early maturation relative to peers has also been found to be a risk factor for disordered eating in American high school students (Shisslak, et al., 1999), while personality traits such as perfectionism, neuroticism (Steiner, et al., 2003), and sociotropy (Duemm,
Adams, & Keating, 2003) have been found to be associated with disordered eating and body image concern.

Sociotropy is a personality style characterised by an elevated need for affection and approval, an increased sensitivity to interpersonal criticism, and a determination to escape social rejection (Oates-Johnson & DeCourville, 1999). As well as being implicated in the development of social phobia and related constructs such as fear of negative evaluation and public self-consciousness (Mack, Strong, Kowalski, & Crocker, 2007), sociotropy has also been linked to problematic eating attitudes and behaviours. For example, female undergraduates scoring high on measures of sociotropy have been found to be more accepting of the cultural thin-ideal (Duemm et al2003) and to have more restrictive eating attitudes (Gilbert & Meyer2005). In Canada, both male and female undergraduate students exhibiting sociotropic characteristics have also been found to show greater weight concerns (Oates-Johnson & DeCourville, 1999).

Although research in this area is sparse, the available evidence suggests that sociotropy and its related constructs may interact with sociocultural and environmental factors to produce eating disordered thoughts and behaviours, as predicted by the ecological approach and objectification theory. For example, Oates-Johnson and Clark (2004) present evidence that sociotropy influences an individual’s susceptibility to social pressures, which consequently influences the development of disordered eating behaviours. This is consistent with research by Mason and Chaney (1996), which demonstrated that individuals with a higher need for approval were more vulnerable to external social pressures in general. These authors also found that social conformity, an important precursor to social contagion (Antonishak, Sutfin, & Reppucci, 2005), was correlated with public self-consciousness, a facet of sociotropy (Mason & Chaney, 1996).

The interaction of sociotropy and sociocultural factors is further evidenced by the finding that individuals who are more socially anxious have a greater tendency to become aware of weight teasing and to be more negatively affected by it (Vander Wal & Thelen, 2000). It may also be argued that as sociotropy encompasses a greater sensitivity to interpersonal criticism
(Oates-Johnson & Clark, 2004), those with sociotropic personality characteristics may be more attuned to weight teasing. Accordingly, Levine and Smolak (2002) found that teasing had a more harmful impact on those who experienced anxiety and self-consciousness around their body. Thus, this evidence lends support to the view that individual factors, such as a sociotropic personality style, interact with environmental factors to produce body image concern as well as eating disordered thoughts and behaviours.

AIMS AND SUMMARY

Research in this area is still in its infancy, and a variety of questions remain to be answered. Although previous research has established a place for sociocultural and contextual variables in the experience of body image concern in the adolescent population (e.g. Barker & Galambos, 2003; Byely et al2000; Keery, van den Berg, & Thompson, 2004), the exact nature and contribution of these factors is as yet unknown. The role of the school environment, including its gender composition, is also a relatively new area of investigation, and thus this study aims to expand on this body of research. In addition, many studies have focused solely on female students and have not investigated the concerns, and indeed the potential influence, of boys. Therefore, this study takes the form of an exploratory study, aiming to investigate peer appearance cultures in greater detail, and paying particular attention to gender differences and the impact of school gender composition.
PART ONE
ETHNOGRAPHIC ANALYSIS – INTRODUCTION

With the bulk of the research literature indicating a rising trend in the experience of body image concerns in adolescent girls, a more thorough understanding of the specific environments in which these concerns may manifest is needed. It is well-established that the surrounding sociocultural environment in general contributes to body image concern, having its effect through the placing of emphasis on the value of thinness and attractiveness (Hutchinson & Rapee, 2007), however aspects of the local environments that adolescent girls spend time in have only recently been investigated as contributing to body image and weight concerns (e.g. Jones & Crawford, 2006). It is likely that appearance cultures, whereby adolescent girls incorporate sociocultural standards for female beauty into their peer cultures (Jones, et al., 2004), are an important local context for the experience and expression of these concerns.

One environment in which such appearance cultures may be created or intensified is the high school, given that adolescents spend a large amount of time interacting with and influencing each other in these environments (Dyer & Tiggemann, 1996). The school culture itself can be seen to impact upon the thoughts and feelings of those exposed to it (Wardle & Watters, 2004), and to be a context for the reproduction of larger cultural norms, including gender role prescriptions and the cultural thin-ideal (Rich & Evans, 2008). In addition, schools, as major socializing contexts and sources of influence for young people (Heyward, 1995), have been found to influence individuals’ body- and weight-related ideas and values (Lee & Marks, 1992), for example through the operation of body perfection codes (Rich & Evans, 2008).

The gender composition of a school – that is, whether it is coeducational or single-sex – may also impact upon the existence of peer appearance cultures and the extent to which the school environment influences students’ body image concerns. Specifically, all-girls’ schools may be a particular context for the formation of appearance cultures, given the greater
importance of thinness and attractiveness reported by girls as compared to boys (Phares, et al., 2004). Research has indeed shown that girls in single-sex schools desire a thinner figure than coeducational students, and that they score significantly higher on measures of drive for thinness and body dissatisfaction (Dyer & Tiggemann, 1996). Additionally, in Mensinger’s (2001) reanalysis of this data, a positive relation was found between body mass index and disordered eating scores for all-girls’ students, while no such relationship existed for coeducational girls. This led Mensinger to conclude that larger girls in single-sex schools face greater difficulty than their equally as large peers in coeducational schools. Further research has found girls at single-sex schools to be less satisfied with their physical appearance than coeducational girls (Granleese & Joseph, 1993).

These differences between school-types may be due to both wider cultural and school climate factors as well as the social networks embedded within these schools. In other words, the friendships of girls within coeducational and single-sex schools may vary and thus differentially affect the experience of body image concerns. Friendship cliques themselves may also function differently across the two school-types, particularly as friendships are known to be generally more important for girls than for boys (see e.g. Eder, 1985). This may then impact upon the formation of appearance cultures, as these are likely to be formed within close friendship groups or cliques (Jones, et al., 2004). However, little research has focused on these differences between school-types, and hence this is an area for further investigation.

In addition, although a number of quantitative studies have explored appearance cultures in adolescent girls, the existence of such cultures has typically been inferred from the attitudes and behaviours of girls in particular social contexts. Little research has explored girls’ reflexive experience as participants within these cultures. The first step in this research project, therefore, explored the existence of appearance cultures in a single all-girls’ school (“Southern College” as described in the following chapter), aiming to identify the social processes surrounding appearance and body image concerns in this setting. As the focus was on the broad social context of the school, rather than individual concerns, a predominantly ethnographic approach was adopted, with focus groups, surveys and interviews used to
explore the eating- and weight-related beliefs of various members of the school community.

This methodology is explained in more detail in Chapter Four.
CHAPTER THREE
THE PARTICIPATING SCHOOLS

INTRODUCTION

The Western Australian education system consists of 163 public or government secondary schools which cater for over 74,000 students. These schools receive the bulk of their funding from the state and federal government. In addition, there are 148 private or non-government schools, catering for around 56,000 secondary students, which receive approximately half of their funding from the government and the remainder from private sources including school fees. These private schools are generally, although not always, associated with a religion, including Catholic, Anglican, and Baptist, and vary in both fee structure and socioeconomic status. In Western Australia there are also 10 all-boys’ and 11 all-girl’s schools, all of which are private.

This research project was initially conducted at a single all-girls’ school (Southern College), however the focus was later extended in the second phase to include three more schools, including one all-girls’ school and two coeducational schools. All schools were private (non-government) and affiliated with a Christian religion (whether Catholic or Uniting Church). Schools were initially approached by either mail, email, or personal contact, and each was provided with a letter outlining the study and inviting participation. This initial contact was followed by a series of formal and informal correspondence with each school during which the project was co-negotiated.

SOUTHERN COLLEGE

Physical Description

The school in which the first phase of this research project was conducted was one of the largest all-girls’ schools in Perth, Western Australia. The school-grounds are expansive yet well-kept, with vast spaces of lawn beside more secluded gardens. These gardens provide a
multitude of spaces for students to congregate during break periods. There are also a host of hallways, corridors, and covered areas which provide refuge for students in wetter weather.

The school is located on a large block and bounded by main roads on all four sides. It is comprised of a number of buildings which house classrooms, laboratories, and a library, while recreational facilities, including a pool, playing fields, and courts are situated towards the rear of the school-grounds. Boarding facilities are located at the front of the school-grounds.

**The Student Body and School Personnel**

The total student population at the time of this research project exceeded 900, with approximately 150 (16%) of these being boarding students. Boarders were drawn from a variety of predominantly rural towns across Western Australia, while day students resided in a range of suburbs across metropolitan Perth, although 137 (15%) resided in the suburb in which the school was located. The Australian Bureau of Statistics’ Socio-Economic Indexes for Areas (SEIFA) taken from the 2006 Census data (Australian Bureau of Statistics, 2006) indicates that day students were drawn predominantly from the middle-to-upper range of the socioeconomic scale, with 93% of suburbs in which the students resided being at or above the sixth percentile of this index. The student population at this school was also largely monocultural, with only 3% originating from countries other than Australia. In addition, students may be regarded as predominantly Catholic, whether nominal or practicing, as a result of enrolment procedures privileging girls of a Catholic background.

One hundred and thirty-five staff members were employed at the school, of whom 76 (56%) were teaching staff. The remainder were predominantly administrative staff, including counsellors and administrative assistants, as well as maintenance and boarding staff. Only 12 staff members (8%) were male, and 8 of these were teachers. However, six of these male staff members held positions of authority, including a Deputy Principal, Campus Dean, and Year Level Heads, with the Principal being female. Staff members held a wide range of qualifications, ranging from certificates to master’s degrees, with the majority (89.6%) holding a minimum of a bachelor’s degree.
Curricular and Co-Curricular Structure

The school’s education program is made up of four different facets – curriculum, co-curriculum, Pastoral Care, and faith formation. The academic curriculum is broadly based, with students in Years 8 to 10 required to complete a variety of compulsory subjects, including English, Health Education, and Science, while also being provided with a range of elective subjects, including drama, languages, and home economics. In Year 11, the curriculum divides into those subjects leading to either tertiary studies or a vocational pathway. Year 11 and 12 students study six subjects, which they choose from a list of 23 tertiary entrance subjects which generally lead to university entry (including humanities, arts, languages, mathematics, and science) and/or 16 wholly school assessed subjects. Religious and physical education are compulsory for all students.

This school also offers a co-curricular program which encourages a diversity of student interests, emphasising sporting, cultural and service interests. Sporting activities offered include swimming, athletics, and cross-country, while cultural endeavours include choir, dance and debating. Service interests are fostered through the assisting of various organisations, including Princess Margaret Hospital, the Red Cross, and Amnesty International. The third facet, Pastoral Care, presents an opportunity for students to acquire life skills, whilst encouraging the development of values within a Catholic environment. Skills covered in dedicated Pastoral Care periods include decision making and problem solving, stress management, building and maintaining relationships, self-esteem and self-care, and resiliency and optimism. Additionally, the school’s house structure, consisting of eight houses each integrating students from all year levels, is a central part of Pastoral Care.

The final aspect of this school’s educational program is faith formation. This is addressed through religious education, liturgies, and community service. While religious education is a required part of the curriculum for all students, students also have the opportunity to participate in liturgies held at year group, house, and whole school levels. In addition, a variety of reflection days are offered to students by organisations such as Disciples of Jesus and Foundations Catholic Youth Ministry. Students must also complete a number of activities.
as part of their community service requirement, ranging from 10 hours service in Year 8 to more than 20 hours in a not-for-profit organisation in Years 11 and 12.

**School Culture**

As part of establishing the background of this school, two hours of observations were conducted during school lunch-times, and 27 school documents, including 13 newsletters, were collected for textual analysis. This enables a broad overview of the school culture, both in general and specifically pertaining to eating and weight issues, to be provided.

**General school ethos.** This school seemed to have a strong commitment to Christian values, with the school’s belief statement affirming that “education must be founded on the Christian vision of the human person”. Christian values were continually referred to both in newsletters and on the school website, and the five virtues of mercy, compassion, justice, service, and excellence were repeatedly extolled. These values were seen to be “integrated into every aspect of [school] life”. There was also an emphasis on the integration of individual and community values, combining “academic excellence with faith, compassion and service”. While promoting individual achievement, integrity, and leadership (“encouraging students to become independent and life-long learners”), the school could also be seen to seek to foster a sense of community and relationship, as “the building of good relationships is [seen as] central to the purpose of education”.

This emphasis on relationships was also observed during school lunch times, whereby the school generally appeared to be quite close-knit, with students regularly acknowledging other students, teachers, and visitors. The teachers appeared able to join in on student conversations quite easily, possibly indicating a relaxed teacher-student relationship, and students seemed to be able to indicate, with some accuracy, where other students congregate at lunch-time. The vast majority of girls appeared to be happy, as evidenced by the high prevalence of smiles and laughs. There was also a lot of physical contact between the girls, who hugged, embraced, and even sat on each other’s laps.
The composition of friendship groups within the school also reflected this image. These groups ranged in size from around three members to upwards of twenty, and were connected by ‘liaisons’ or ‘links’ (Ennett & Bauman, 1996), groups of two or more girls who moved from one group to the next throughout the lunch period. With the exception of one girl, who spent the entire lunch period checking her locker, there did not appear to be any social isolates (see e.g. Adler & Adler, 1998) within the school. The groups seemed to sit quite close together, with some room for overlap, although the larger groups were usually segregated. Within the friendship groups, both whole group and smaller, more intimate conversations seemed to take place, with those taking part in the smaller conversations physically separating themselves from the rest of the group by either turning around or moving a short distance away. Additionally, although some groups seemed to have a clear leader who could be seen to direct the conversation and generally attract attention to herself, most had no obvious leader.

**Appearance & weight.** On the whole, there seemed to be very little attention paid to appearance and weight issues in the school documents collected. When these issues were mentioned, they were presented within the context of individual potential and/or the building of relationships. For example, sports were strongly emphasised in the Head Girl’s message on the website and also throughout the newsletters, but rather than being seen as a way to gain fitness or weight control, they were presented as an “opportunity to develop skills, gain friends, and to become involved in a competitive environment”. Additionally, emphasis on the ‘physical’ person was couched in terms of personal achievement and development, rather than beauty or appearance.

However, this was not reflected in the observations conducted, where it appeared that an acute awareness of appearance existed in this school. The majority of students at this school appeared conventionally attractive, and of thin to average build. Those girls who could be seen as being of larger than average weight seemed to sit together (although there were some thinner girls in these groups), and it appeared that their ‘deviant’ size status was noticed by other students, who nicknamed one such girl “fatty”. Additionally, the students’ conversations appeared to be, at least in part, oriented around weight and appearance. One group of girls
commented to a friend “You’re going anorexic” as she wasn’t eating any lunch, while another group were seen to be comparing the length of their skirts. They were also concerned with the appearance of the opposite sex, discussing one boy’s “six-pack” and the fact that another is “soooo hot!” Thus, it appeared that health, weight, and attractiveness were important issues within this student population, despite the school documents de-emphasising such issues.

**Food & eating.** There also seemed to be a culture of healthy eating at this school, as indicated both by a focus on sensible eating habits in the school documents, and by observations conducted during lunch times. Most, if not all, of the girls appeared to use the lunch period for its main purpose, eating. The canteen, which was consistently busy throughout the lunch period, stocked a variety of predominantly healthy food, including fruit salad, sushi, and fruit, while the fridge was stocked with fruit juice and water. The food choices brought from home also seemed largely healthy, with sandwiches, apples, yoghurt, and salads predominating. The girls’ conversations also seemed to reflect a concern with healthy and appropriate eating, with one girl commenting authoritatively “Yeah, but the tuna has no fat”, and another providing an excuse for not eating lunch by commenting to her friend “I feel really full ‘cos I ate so much at recess”. Thus, it appeared from both their behaviours and conversations that the girls were aware of health and weight issues.

**History of Eating Disorders at Southern College**

Informal discussions with administrative and counselling staff before this research project itself began revealed some existence of eating disorders among the college’s students, and staff members were willing to acknowledge these as noteworthy problems. However, this was never mentioned in any formal data collection, and in fact staff members tried to downplay the existence of eating and body image issues in their school. The reasons for this are unclear. However, weight management and health were obviously important issues within the school, with the Principal noting during a conversation: “If you look at our girls, you notice that there’s none too fat and none too thin. We’ve worked really hard on promoting a healthy image here”.
WESTERN COLLEGE

The second school to be involved in this project was a coeducational Catholic day school located close to the city in a predominantly upper-class area (according to SEIFA 2006 data; Australian Bureau of Statistics, 2006). This school has a student population of approximately 700 students in Years 8 through 12. Most of these students are from a Catholic background, as a result of enrolment priority being given to Catholic students, however students of other religious backgrounds are considered if places are available. One of the most culturally diverse schools in Western Australia, the students come from over 65 different cultures, while the teaching staff also reflect a similar cultural diversity, resulting in a truly multicultural community. This requires the school to foster a culture of care and acceptance, where diversity is welcomed and indeed valued.

This multicultural make-up also means that this school strives to provide a learning environment characterised by openness, high-quality relationships, responsibility, critical thinking, and personal growth. This is, at least in part, fostered by the school’s Pastoral Care program, which involves every person in the school and pervades all educational endeavours. This program includes policies relating to bullying and drugs, a code of conduct, social work, and religious education, and is facilitated through the school’s social worker, chaplain, and Minister. The school also offers an extensive co-curricular program, including performing arts, practical arts (e.g. metal work, craft, home economics), and sports. The wide range of sports offered includes soccer, basketball, cross country and swimming, as well as specialist programs in rugby and netball.

NORTH SCHOOL

The second coeducational school involved in this research project was situated on two campuses in Perth’s northern suburbs, both of which may be classified as high in socioeconomic status according to SEIFA data (Australian Bureau of Statistics, 2006). Both campuses cater for students from pre-primary through to Year 12, with all years generally gender-balanced, and together employ over 300 staff. Although a Uniting Church school,
students from different faith backgrounds are welcomed, with enrolments being made up of one-third active Uniting Church members, one-third other Christian church members, and one-third non-denominational students. However, although students do not necessarily need to be active church members, they do need to be willing, along with their parents, to uphold the Christian ethos of the school.

As a Uniting Church school, education here is based on the five core values of learning, faith, care, service, and community. These values are facilitated via a diverse curriculum, the Pastoral Care program in which all students participate, the House system, whereby each of the three Houses is comprised of students from each year level, and a service program supporting charities and campaigns. The school also offers a co-curriculum program which includes chess, debating, and mock trials, as well as a strong performing and visual arts program. Parents are actively encouraged to be involved in the school via (for example) parent/teacher interviews, involvement in the co-curricular program, and fundraising. Further extending this focus on community and relationships, quality student-staff interactions are encouraged in order to facilitate the learning process.

CENTRAL COLLEGE

The final school to be involved in this research project was a centrally located Catholic all-girls’ school. This school embraces the five core values of compassion, excellence, justice, integrity, and service, and caters for approximately 800 students in Years 7 through 12, with enrolment priority given to girls of a Catholic background. This Catholic focus is evident in the school’s curriculum, which aims to contribute to the development of the whole person within a considerate and encouraging Catholic environment. All students are required to undertake Religious Education and complete a set number of Christian service hours, as well as a variety of core curricular (English, Science, Society and Environment, and Mathematics) and co-curricular subjects. These co-curricular activities include music, art, drama, home economics, and specific sports programmes, including softball, netball, and rhythmic gymnastics.
Each student is also allocated to a particular House as part of the school’s Pastoral Care program. Each House, of which there are four in total, includes students from all year levels, and students are expected to strongly identify with their House and participate fully in House activities. Pastoral Care is also facilitated by specific behavioural policies, including a Caring Behaviour policy, which attempts to provide a school environment based on positive relationships and encouragement. Positive relationships are also fostered through the involvement of parents in the school community.
CHAPTER FOUR
ETHNOGRAPHIC ANALYSIS: METHODOLOGY

OVERVIEW

Schools are thought to be places where a culture surrounding body image and weight consciousness may exist, and research suggests that single sex schools in particular may manifest such a culture (e.g. Dyer & Tiggemann, 1996). With this in mind, the decision was made to study the culture of weight consciousness in a particular all-girls’ school (‘Southern College’). A series of informal meetings were set up with members of this school’s staff, at which it was disclosed that body image and weight concerns, as well as sub-clinical and even clinical eating disordered behaviours, were existent in the student population. This led to the original formulation of the first phase of the current research project, which then evolved over time as new information came to light, both through further meetings and from the data collected. The focus of this phase thus developed in collaboration with the school and its members, rather than being determined in advance.

The phase of the research project that this chapter presents took the form of a predominantly ethnographic study, with the explicit aim of defining and identifying the social processes occurring in a school population. Particular attention was paid to the transmission of, and value placed upon, body image and weight concerns as well as eating disordered thoughts, attitudes, and behaviours. In order to study this school culture comprehensively, multiple informants and sources of data were needed, and thus data collection proceeded in a variety of stages. Specifically, the techniques of interviewing (both group and individual) and open-ended surveys, as well as observations and textual analysis (described previously in Chapter Three) were employed in this phase of the project, with data collected from teachers, parents, and students at the school. A timeline of these data collection stages is provided in Figure 4.1. All procedures were approved by the Human Research Ethics Committee at Murdoch University.
FOCUS GROUPS

Two separate focus groups were conducted with school staff from a variety of disciplines and backgrounds in an effort to obtain an objective view of the issues surrounding body image and eating attitudes and behaviours in the student population, and to gain an insight into how such concerns are perceived and understood within this particular school. A third focus group was planned with members of the school’s boarding community staff, however this group never came to fruition, as a result of both a lack of interest and some reluctance on the behalf of the staff members to be involved.

Participants

The first focus group was conducted with a group of seven teachers, all of whom were Year 10 homeroom teachers. All but one of these teachers were women, a gender distribution which is roughly in line with that of the general staff population of this school. These teachers were drawn from varying disciplines within the school, including drama, business and technology, and art.

The decision to conduct a second focus group was made as a result of comments produced by members of the first group, particularly in relation to the importance of a supportive counsellor. This is an example of a reactive sampling strategy (as described by Corsaro, 1985), whereby sampling procedures are responsive to changes and events in the research process. This second group was conducted with two members of the school leadership and support staff, both of whom were women.
**Focus Group Format**

Both focus groups used a semi-structured interview format. That is, a standardised question schedule was used for both groups, such that each group was taken through the same sequence of questions using essentially the same wording. The session began with the researcher providing a brief overview of the nature of the project, and then the group was invited to respond to a variety of questions, with the broader, introductory questions being asked first, and the more specific questions, as well as those requiring further thought and insight, appearing toward the end of the group interview. This question sequence was designed to allow for more thoughtful and complete responses, and, at least to some extent, to allow the participants to become comfortable with the question process. Questions focused on the signs and symptoms of disordered eating, the role of social and peer group factors, and how factors promoting disordered eating and body image concern might be ameliorated or modified. A copy of the question schedule used is provided as Appendix A.

Probing questions, including “What is it specifically…” and “Any ideas about why that might be…” were also used when required, in order to extend participants’ responses and elicit more complete replies (Berg, 2001). In addition, participants were given considerable leeway in answering the questions, and were allowed to deviate from the main topic for some time before being brought back to the current question by the researcher.

**Procedure**

All prospective participants were provided with a letter explaining the aims and purpose of the research project, the anticipated requirements (participation in a group discussion), the nature of the discussion (including the topics to be covered and the fact that they would be audio-taped for purposes of analysis), and further contact details for both the researcher and research supervisors. The researcher also presented these details to the participants verbally, and explained the nature of confidentiality (namely that individual responses were confidential unless there was a question of potential danger). All participants then signed a
consent form to indicate that they had understood the information presented and were willing to participate in the discussion.

Following the conferral of consent, the researcher asked the participants if they had any questions relating to the research process. Any such questions were then answered to the participants’ satisfaction, and the focus group discussion per se was commenced. The discussion followed the question schedule as presented in Appendix A. Following the final question on this schedule, the participants were given the opportunity to add anything further which they felt important, and they were thanked for their participation. All participants were also provided with a debriefing form, which explained again the purpose of the research, thanked the participants for their time, and provided contact details of further support services.

Following each focus group, the audio-tapes were transcribed by the researcher, using a modified version of the Jeffersonian transcription system (ten Have, 2004). However, for the purposes of this thesis, all extracts are provided in orthographic form. All transcripts were analysed by the researcher.

**OPEN-ENDED SURVEYS**

In an attempt to achieve a comprehensive understanding of the awareness of different members of the school community surrounding of body image, weight, and eating concerns, open-ended surveys were distributed to members of school staff as well as all Year 10 students and their parents. These aimed to gain some insight into participants’ views and understanding of the sociocultural aspects of disordered eating and related issues, and particularly those aspects related to the school environment.

**Participants**

Fifty copies of the survey were provided to the school for distribution to members of school staff. Of these 50, 20 were returned to the researcher (a response rate of 40%). These 20 participants included 15 women and 5 men, with 8 (40%) aged under 30.
Surveys were also sent to all Year 10 students enrolled at the school and their parents (172 packages in total). Of these, 46 student surveys and 49 parent surveys were returned, an overall response rate of 26.7% for students and 28.5% for parents. All students were female, and ranged in age from 14 to 16, with a mean of 14.92. Of the parents, 46 were female and 3 were male. They ranged in age from 35 to 54, with 46.9% aged between 40 and 44.

**Survey Format**

Each participant group (staff, students, parents) received slightly different versions of the same survey, tailored to their specific area of experience. All surveys started with a space asking participants to detail their thoughts on the existence of a culture of weight consciousness in their school environment. Surveys also contained a series of questions related to media exposure, societal and school views of appearance, and individual weight concerns. In total, the staff surveys consisted of eight questions, while student and parent surveys each contained 11 questions. Copies of the teacher, student and parent surveys are provided as Appendices B, C, and D, respectively.

All surveys were predominantly open-ended, and in those cases where participants were required to provide a numerical answer (on a rating scale from one to seven), a space was also provided for participants to expand on their answers. The majority of participants (88.7%) used these spaces, resulting in a primarily qualitative response set. This survey format (predominantly open-ended with some rating scales) was designed to increase the number of surveys returned and provide the most comprehensive responses possible. The provision of rating scales allowed the participants to simply answer with a number if they wished to (although, as mentioned, the majority expanded on this with a written response), while the open-ended questions aimed to collect natural, unstructured replies (Fielding, 1993). Research suggests that open-ended questions are most appropriate for potentially threatening issues (Bradburn & Sudman, 1979), a category into which questions about weight and body image could be considered to fall, while rating scales are considered to be easy to use and unaffected.
by participants’ level of verbal fluency (Truby & Paxton, 2002), which may increase response rate.

**Procedure**

Staff members were informed about the opportunity to participate in this research project at a staff meeting. Those interested were then able to pick up a survey package from a box located in the staff room. Each package consisted of an information letter outlining the purpose of the research project, a consent form indicating that they were willing to participate, the survey itself, a debriefing form explaining what the gathered information would be used for and providing contact details of various support services, and a reply-paid envelope. Staff members were asked to complete the survey in their own time and return it to the researcher in the supplied envelope.

Later in the term, a survey package was posted to the home address of all Year 10 students. This package consisted again of an information letter, consent form, the survey itself, a debriefing form, and a reply-paid envelope. In addition, a second survey package was included in the same envelope for completion by one of the student’s parents. These two packages were colour-coded for ease of use, with the student survey package being pink and the parent package green. Students and parents were again asked to complete the survey in their own time, and return them to the researcher in separate reply-paid envelopes. In order to increase participation rates, and provide an incentive for participating, students returning surveys were offered the opportunity to enter a draw for one of 10 gift vouchers. This incentive was, however, not considered of sufficient value to coerce students into participating against their will, and just over two-thirds (67%) of the students chose to enter this draw.

**Data Analysis**

Upon receipt of the surveys, the data was collated by the researcher. Open-ended data from the surveys was analysed with the aim of identifying major themes surrounding the manifestation of appearance and weight issues in the school environment, and the important
influences on this. Quantitative responses from the surveys were analysed using a series of Pearson’s correlations.

Information regarding media (both magazine and television) exposure was also collected in the survey. Following Clark and Tiggemann (2006), these media sources were classified according to their level of appearance focus and endorsement of the thin ideal (0 denoting no emphasis; 1 some emphasis; 2 large emphasis). Examples of magazines in the present study include Cleo (rating = 2), Famous (rating = 1), and Time (rating = 0), while examples of television programs include Australia’s Next Top Model (rating = 2), Heroes (rating = 1), and Animal Rescue (rating = 0). The ratings for each magazine and television program that an individual reported being exposed to were summed, resulting in an appearance media exposure score for each participant.

**STUDENT INTERVIEWS**

In an effort to gather more in-depth information regarding students’ perceptions of body image and weight concerns in their school, a number of students were interviewed by the researcher. These interviews aimed to expand on the information collected during the survey phase, and to gather further information regarding the students’ views of eating disordered attitudes and behaviours.

**Participants**

All students who received a survey package were also invited to indicate, on a separate form, if they were interested in participating in an individual interview. This resulted in 14 interested students, of whom two did not provide complete (parental and student) consent and were hence excluded. A further three students could not be contacted, resulting in a total of nine students being interviewed.

**Interview Format**

The interviews, like the focus groups conducted earlier, used a semi-structured question guide, although the specific order of questions varied between interviews. Questions focused
on definitions of disordered eating; the role of peer group factors; and the characteristics of
participants’ own friendship groups. A copy of the question schedule is provided in Table 4.1
as well as Appendix E.

Table 4.1

*Student Interview Question Schedule*

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What issues come to mind when you think of eating behaviours?</td>
</tr>
<tr>
<td>2. What do you think are some of the factors that may lead to problematic eating behaviours?</td>
</tr>
<tr>
<td>3. Can you think of any examples of social or peer group factors that may lead to problematic eating?</td>
</tr>
<tr>
<td>(a) If yes, allow respondent to answer. If no, prompt with:</td>
</tr>
<tr>
<td>(i) What about the idea that these behaviours and body image issues can be kind of ‘infectious’ or ‘catchy’? So they might be more common within a particular group or school? Do you think these factors might be important in your school or peer group? How do you think these thoughts and behaviours might be spread in your school or peer group?</td>
</tr>
<tr>
<td>(ii) There’s also the notion of weight teasing. Can you think how this might be related to eating disorders? Do you think weight teasing is important in your school or peer group? Then continue to (b).</td>
</tr>
<tr>
<td>(b) Can you think of any other social or peer group factors that might contribute?</td>
</tr>
<tr>
<td>4. Do you think these social or peer group factors are important in the adolescent population?</td>
</tr>
<tr>
<td>(a) What about in your school?</td>
</tr>
<tr>
<td>(b) Are they as important as other factors?</td>
</tr>
<tr>
<td>5. Do you have any ideas how any of these issues we’ve talked about today might be prevented or changed?</td>
</tr>
<tr>
<td>6. Would you say your group of friends is similar? In what ways?</td>
</tr>
<tr>
<td>7. Do you think the way you look is important to your friends or other people at school?</td>
</tr>
<tr>
<td>8. Do you think these kinds of concerns would be more of a problem in a coeducational school or an all-girls’ school?</td>
</tr>
</tbody>
</table>

Questions were presented in a logical sequence, with broad introductory questions opening
the interview, and the more focused questions appearing toward the end of the interview. This
question sequence was designed to allow the students to become as comfortable with the
question process as possible, and to attempt to engender the most comprehensive answers possible.

Probing questions were also used when required, in order to expand participants’ responses, and students were given some leeway in answering the questions. That is, they were not required to adhere strictly to the topic being discussed, but allowed to deviate from the topic for some time before being brought back to the current question. This was so as not to restrict the participants’ thought processes (see e.g. Babbie, 2007), and to allow for the most complete answers achievable.

**Procedure**

All students who indicated their interest in being interviewed were provided with an information letter explaining the aims and purpose of the research project, the anticipated requirements (participation in an individual discussion), the nature of the discussion (including the topics to be covered and the fact that they would be audio-taped), and further contact details for both the researcher and research supervisor. A similar letter was also provided to each student’s parents, along with a consent form. Parents were required to sign this form and provide it to their daughter to be returned to the researcher at the agreed-upon interview session.

Before the interview itself commenced, the researcher explained the nature of the interview to the participant, including the fact that interviews would be audio-taped, and also clarified the nature of confidentiality. All students then signed a consent form to indicate that they had understood the information presented and were willing to participate in the interview. No interview was conducted without both the students’ and their parents’ informed consent.

Following the conferral of consent, participants were given the opportunity to ask any questions they had relating to the research process. Any such questions were answered before the interview itself commenced. The discussion followed the question schedule as presented in Table 4.1, and following the final question participants were again given the opportunity to have any further questions answered. The students were then thanked for their participation,
and provided with a debriefing form which explained again the purpose of the research, thanked the participants for their time, and provided contact details for further support services.

Following each interview, the audio-tapes were transcribed by the researcher, using a modified version of the Jeffersonian transcription system (ten Have, 2004). However, for the purposes of clarity, extracts presented herein are provided in orthographic form. These transcripts were then analysed by the researcher.

SUMMARY

As mentioned earlier, this phase of the research project proceeded sequentially, with each method of data collection being informed by preceding methods. That is, the methods used were not pre-determined, but developed as the data collected provided a better understanding of the school and its members. This allowed for a comprehensive understanding of the school’s culture surrounding body image and weight consciousness, as will be shown in the next chapter.
CHAPTER FIVE

“A COLLEGE FULL OF GIRLS IS ALWAYS GOING TO HAVE THE PRESSURE OF APPEARANCE”: RESULTS FROM THE ETHNOGRAPHIC ANALYSIS

Sections of this work have been accepted for publication in Feminism & Psychology

OVERVIEW

The following sections present the results obtained from the ethnographic analysis.

Analysis of each stage is presented separately, with the results from the two focus groups described first, followed by the surveys and student interviews. In each case the analysis is organised with reference to the emerging themes, with the common theme of culture pervading throughout.

FOCUS GROUPS

Definition and Scope of Eating Disorders

As a starting point, both groups were first asked to discuss eating disordered thoughts and behaviours in general. This resulted in some confusion regarding the scope and definition of eating disorders in both groups, with no clear definition of what an eating disorder is being produced in either group discussion. In the first group in particular, the scope of eating disorders seemed to be continually redefined throughout the discussion; while some saw any kind of problematic eating as a disorder:

*ES*: As far as I’m concerned a girl has an eating disorder if she doesn’t know that a packet of chips isn’t an appropriate lunch.

others looked for a more clinical or serious definition:

*AS*: We’re talking about outrageous … the extremities of disorders.

These two positions were most clearly exemplified by two particular teachers, ES and AS respectively, as in the following excerpt:

*AS*: We’re talking about outrageous, the extremities of disorders aren’t we, not … somebody whose got a ball or something like that coming up and wants to … drop a size?
ES: But I mean, that’s still … a disorder, isn’t it, if you’re crash dieting so that you can look good for a particular event?

AS: I don’t know, I mean, what’s classed as an eating disorder then?

This disparity between disorder and ‘normal’ weight concern was also exemplified in the account of one teacher (JI) who presented herself as accepting of her body with an interest in healthy eating, but who then revealed that she was on a “health kick” and “trying to lose ten kilos in ten weeks” for an upcoming holiday.

The significance of, and inconsistencies inherent in, this teacher’s account were then picked up by another teacher (ES), who is mentioned above as taking an inclusive approach to eating disorders:

ES: Why are you on a … health kick?

JI: Because I’m going to Melbourne, so I need something to wear.

ES: Are you crash dieting?

JI: I’m not crash dieting, I’m having six healthy meals a day.

The notion of weight concern being ‘normal’ or ‘normative’ among women is also expressed in the research literature (Haworth-Hoeppner, 1999; Rodin, Silberstein, & Striegel-Moore, 1984). However, despite being ‘normative’, such concerns may in fact be harmful (Neumark-Sztainer, 1995). Striegel-Moore and Franko (2002), for example, argue that all levels of body image or weight concern have been linked to potentially harmful consequences, including lowered self-esteem and disordered eating behaviours. This problematic nature of ‘normality’ is perhaps most clearly exemplified in the earlier extract, whereby “drop[ping] a [dress] size” was seen by at least one participant to be within the realms of normality. Hence, in their trying to negotiate among themselves the scope of eating disorders and what “we’re talking about”, these teachers could be seen to be recognising the inherent complexity that is involved in distinguishing disorder from what is ‘normal’, as acknowledged in the research literature.

As members of the second focus group were part of the school’s support staff, they could arguably be seen as having more awareness of the complex distinction between ‘normal’ and
‘disorder’. Thus, though there was still a clear distinction drawn throughout their discussion between “eating disorders” and “eating issues”, those behaviours not seen as clinically significant were still seen as somewhat “abnormal” and problematic. However, there was still some confusion regarding the scope of eating disorders in this group, suggesting that the term ‘eating disorder’ itself may be problematic within this population, consistent with Beumont and Carney’s (2003) argument that language plays an important role in how we think about concepts.

Although no clear definition of an eating disorder arose, both groups were able to pinpoint a variety of signs which may point to body image or eating issues. These included weight loss, changing eating patterns, depression, and withdrawal, and are similar to those most frequently mentioned in the research literature (e.g. Fulkerson, Sherwood, Perry, Neumark-Sztainer, & Story, 2004). An excerpt from the second group’s discussion of these signs is provided below:

CM: At school … it would come to our attention if someone had lost a lot of weight, or if they were on a camp [and] girls weren’t eating or they were making a really big fuss about eating, or saying ‘no, I don’t want to eat this’ or eating too much at one point of time that was, I guess, abnormal to what the other girls were doing…

SS: Sometimes peers come and … they’re concerned about someone’s eating patterns changing … could be behavioural in other ways, you know, a bit of … what would look like depression or … someone becoming more withdrawn. Changing behaviour or their patterns, maybe not wanting to do sport or maybe the opposite, doing too much sport.

*Causes of Eating Disorders*

The causes of, and risk factors for, disordered eating that were identified by school staff varied between groups. The first group paid particular attention to the media and technology as important causes of disordered eating. Advertising, particularly weight loss and fast food advertisements, was noted as a form of media contributing to eating disorders and obesity, as was internet technology. The use of ‘MySpace’ which is “all about looking good” and other
internet chat sites were cited as increasing the pressure to be thin, or at least to portray oneself as such. Pro-anorexia websites were also discussed:

ES: When I was at [another school], a young girl told me that she had been on a pro–she was suffering from anorexia–she told me that she had been on a pro-anorexia website and I was horrified.
JI: They’re horrible.
ES: Teaching them tricks and encouraging each other … it’s awful.
JI: And … I had a uni assignment last year and I went on one, and then I saw it … you could put in your goal weight and they said what to do to get to it in the quickest amount of time and it was … horrible …
JW: Because these girls have got access to all that.

Teachers in the first group also noted the perpetuation of the “ideal woman” in the media, using celebrity examples including Nicole Richie and Kate Moss, and proposed that the increased media attention directed toward these celebrities and eating disorders in general may contribute to making these disorders “more acceptable” and even “attractive”, as shown in the following two extracts:

AS: I think it supports, probably, that notion of the media, because a lot of models starve. There’s more interesting things than having someone like Nicole Richie or Victoria Beckham because they’re totally skinny.

AS: I wonder if maybe the amount of media attention – I mean, obviously you’ve got to report cases or deal with … eating disorders. It’s in magazines and such things, models, film stars, and I feel you’re a bit bombarded by … other people’s eating disorders. And I wonder if, because … there’s that access to it, it almost becomes more acceptable to have an eating disorder, just because … there’s such a big deal made of it.
JD: They’re publicised.
AS: Yeah. It possibly becomes an attractive …

However, although the members of the second group agreed that the media was a possible cause, they instead focused predominantly on peer group factors. Generally speaking, this group viewed peers as especially influential in the domain of weight and appearance, stating:
CM: I certainly think that the peer group can be very influential on what they eat, how much they eat, how they look, you know, all those types of things.

This group cited interpersonal competition and communication as potential causes of eating disordered thoughts and behaviours in their students, consistent with research by Dyer and Tiggemann (1996) and Eckert (1993):

SS: ... Seem to almost compete against - you know - they say 'who’s fattest?' ‘I’m fat. I’m so fat.’ But in their mind, I think they’re actually comparing who’s thinnest, you know. So they ... put themselves down but what they ... are saying is, you know, ‘I’m really not fat, someone tell me I’m thin.’

The description provided of the mechanisms through which this competition and communication occurs (e.g. “I’m fat, I’m so fat”) also fits the definition of ‘fat talk’ provided by Nichter (2000) and Britton and colleagues (Britton, et al., 2006), whereby negative body image is seen to be portrayed verbally. These authors suggest that women may use fat talk as a way to perform certain social functions and fulfil social motives, including impression management and conformity. Likewise, Craig and colleagues (Craig, Martz, & Bazzini, 2007) argue that ‘fat talk’ represents one of the most powerful forms of peer pressure to be thin.

The first group also mentioned peer group factors, stating that peers may act to reinforce the messages provided by the media and influential others. This is consistent with previous research showing that media messages may be intensified when they are repeated in peer groups (Collins & Steinberg, 2006). An increased interest in boys and the resultant competition between students were also mentioned by these teachers, who noted that “it’s much more competitive to look good here”. This effect did not seem to be negated by the fact that this school is single-sex, and indeed teachers noted that “it’s even more competitive cos they don’t [see boys everyday]”.

As well as peers, family and the school environment in general were also seen by this group to pick up on the media’s theme of ‘thinner is better’. For example, the teachers identified that while strong family support may protect against body image problems, pressure
from parents to be thin may act to increase these concerns. Parental, particularly maternal, behaviours were also discussed, with teachers noting that they may affect their daughters’ perceptions and body image attitudes:

JD: It’s true, though, they’re wearing short skirts and high heels … and if their parents are like that then what are their daughters’ … perceptions that they should look like?

This is consistent with research showing that parental encouragement to lose weight and negative maternal modelling are related to eating disturbance and body dissatisfaction (Annus, Smith, Fischer, Hendricks, & Williams, 2007). The link between media and family influences has also been identified in the literature, with researchers noting that parents, and particularly mothers, may be potent conveyors of the societal pressure to be thin, and that they may communicate to their children the significance of appearance in society (Cooley, et al., 2008; Rodgers & Chabrol, 2009).

The importance of appearance espoused by the media, peers and family may also affect how students relate to their teachers. During their discussion, teachers recognised their own importance as “role models”, and noted that the way they looked and the language that they used could affect their students:

KR: We were talking within our office about … one of the other teachers had gotten their Year 8s to maybe reflect on what they looked for in a teacher, and everything that they came up with were all to do with physical appearance. You know, ‘I want a teacher who looks great, who wears fashionable clothes,’ you know, nothing to do with whether they’re actually learning … They gotta look good, so … it’s all about role models and … what they see as important or what they value … seems to be appearance.

The importance of attractiveness or appearance for teachers was also noted by McRobbie (1991). In an ethnographic study of working-class London girls, McRobbie observed that teachers, particularly female teachers, were consistently categorised by their appearance and adherence to prevailing fashion trends. The significance of teachers in both transmitting and working against societal appearance norms has also been noted by a variety of researchers.
(e.g. O’Dea & Maloney, 2000; Piran, 2004). Brown and Gilligan (1992), in addition, noted that the influence of teachers may be incorporated with that of parents and the media to impact on adolescent girls and their sense of self.

Other factors were consistently mentioned by both groups, including the idea of social contagion. Participants in the second group noted that there may be “some unwritten rule in the group” leading group members to value thinness and adopt certain behaviours, which may be related to a pressure to conform and also to gender socialisation, whereby girls “generally are more social” and “chat more”, while boys “would really be out doing things and don’t really talk as much”.

CM: ... feel that there’s a pressure maybe to conform and to be like everyone else, or to try the diet that other people are trying. I think certainly having even just one person in the group who’s doing that, certainly there’s a huge risk factor for that to play onto the other girls, because that’s what they see. And like you mentioned before, their peers are the most influential at this point in time in their life, and they’re certainly going to be more likely to do what their peers are doing.

Accordingly, the first group identified a core group of girls (“queen bees”) for whom “image is paramount” and who can be seen to value appearance and attractiveness. However, although accepting the idea of social contagion as a possible contributory factor in their school environment, teachers in this group did appear reluctant to relate these behaviours to disordered eating, stating “I don’t think it’s an eating thing, it’s a social thing”. That is, the teachers viewed these behaviours as reflecting a need to ‘fit in’ rather than indicating some underlying psychopathology. This was also reflected in the functions that teachers identified eating disordered behaviours as performing, which included “popularity” and “peer acceptance”. The second group also noted that eating and weight behaviours may play a part in helping students to ‘fit in’ with their group;

SS: Because if that’s what the group’s doing ... it’s fashionable.

These behaviours were also seen to promote acceptance, not only by peers but also within the family:
SS: If mums are talking about dieting ... they might, you know, feel that they’re gonna get greater acceptance by ... following in that path.

Both groups also mentioned weight teasing, although there was some disagreement between groups regarding its occurrence in this school environment. The first group rejected the idea that it occurs in their school environment, but conceded that it may exist in other environments:

JD: I don’t think it’s a problem in this school ...  
JW: I think it only happens when they’re younger.  
KR: ... I’ve seen it in coed schools, among ... sort of teenagers, fifteen year olds, particularly boys saying things about girls ... So I think ... maybe it’s more prevalent in a coed school. I’m not sure but I think it definitely exists.

In contrast, the second group remarked that weight was something that was “open to a lot of discussion” and that talking about the weight of others and oneself “seems to be quite socially acceptable”. This group also noted that weight was “definitely” something their students would talk about, and confirmed that weight teasing does occur at their school, in contrast with the first focus group. When this inconsistency between the two focus groups was mentioned, one participant noted that weight teasing “can be very subtle” and that it is understandable that teachers may not notice it. This may reflect the general school culture, whereby it is the responsibility of school support staff to deal with and notice things such as bullying and weight problems, and that therefore such things may not come to the attention of teaching staff.

Finally, in addition to these social factors, both groups also mentioned personality factors such as perfectionism and need for control as potential causes of eating disorders, consistent with previous research (e.g. Bardone-Cone, Abramson, Vohs, Heatherton, & Joiner, 2006). Sociotropic personality characteristics, including a need for approval and sensitivity to interpersonal criticism (Oates-Johnson & Clark, 2004), were also supported by teachers as important in the onset of disordered eating, although the recognition of these did not emerge
spontaneously but rather was prompted by the researcher. One teacher in particular identified a student exhibiting such characteristics, as shown in the following extract.

*JD:* I’ve got one girl that’s pretty much down to a tee all of those things that you mentioned, and she has had a problem. Last year … she just didn’t want to eat at school, she wasn’t hungry, and after we’d run a race she didn’t wanna eat. So attention seeking, but her personality is that she wants to be noticed, and I know that another teacher criticised her for something and she was really upset about that.

Teachers also recognised the importance of these characteristics in general, noting that girls with eating disorders and related behaviours tend to be “needy” and “socially isolated”. This is consistent with the research literature, which has found that sociotropic characteristics are important in the onset of disordered eating, and particularly bulimic, symptoms (e.g. Friedman & Whisman, 1998).

**Ameliorating Eating Disorders**

Both groups of staff identified a number of strategies for ameliorating or modifying disordered eating patterns in an adolescent population, including involving families and particularly parents, promoting healthy living and “having a balance in life”, and instituting activities to “help [students] to be more self-accepting… and accepting of others” through, for example, promoting self-esteem. Staff members also identified that they needed to be more aware of their capacity as “role models”, and the values they may be promoting, however inadvertently, in this role. Making parents aware of their role as models for eating behaviours and body attitudes was also suggested, as were other social interventions such as promoting group interaction in spheres other than body image. This ability to identify various means of intervention may be taken to suggest that staff were aware of eating disorders and body image concerns as a problem in need of attention.


**Eating Disorders and ‘Our School’**

Although staff members were willing to recognise that eating disorders are a “massive problem” in general and were able to find causes and interventions for them, as shown above, there seemed to be a general reluctance to accept them as a problem at this particular school. The first group, in particular, repeatedly mentioned that eating disorders did not appear to be a concern at their school, and noted that the students “are comfortable with themselves” and “don’t think it’s a good thing to have a[n]… eating disorder”. However, throughout the discussion various accounts of individual students exhibiting problems with eating were provided, suggesting that eating disorders do in fact occur in this population.

Additionally, teachers recognised that students at their school appeared “way, way skinnier here than what I’ve seen”, that there was more competition to “look good here”, and that their students seem to value appearance. Thus, there appears to be no connection drawn between the behaviours themselves (such as competing to be thin and valuing appearance), and their potential outcome (an eating disorder).

It is possible that these staff members themselves recognised the inconsistencies in their account, as they attempted to explain why they didn’t perceive eating disorders as a problem at their school. Specifically, the teachers noted that the presence of a supportive and trustworthy counsellor, as well as the lack of attention that they personally directed at such problems, may have led them to overlook the true existence of eating and weight problems in their school’s student population, as illustrated in the following excerpts:

*ES: Here, you know, we’ve got a counsellor … that the girls really trust and that they go to a lot, so I think that maybe that’s helpful in … avoiding some of those cases, because … they feel comfortable going to her when they’ve got problems. And … if staff notice anything she’s very personable so it’s easy to … in the hallway have a quick chat and just sort of say ‘oh, I just noticed this’ and … she’s good at chatting to the girls informally and finding out information. So I think that that’s important in preventing or nipping … these things in the bud.*
ES: To be honest … because I’m new to this school perhaps, I haven’t … focused my attention on actually looking for it, you know, because I’ve been concerned with other things.

In order to further clarify the role and occurrence of eating disorders in this school, the second group was asked specifically how much of a problem they saw these disorders as being in their student population. This was in response to the general reluctance of the first group to acknowledge eating disorders as an issue at this school. In keeping with this reluctance, although not denying the existence of eating disorders at their school outright, the second group tended to refer to eating disorders in general terms only, with little reference to this particular school. This tendency is reflected in the extract below, whereby the reply is foreshadowed with a discussion of society in general. In addition, body image and eating concerns are seen as normative or inevitable, and therefore not in themselves a cause for concern, as can be seen below:

CM: I think, yeah, like eating disorders are certainly … a small percentage, like three to five percent of the population, and then I guess … eating disordered thoughts I think is probably much more common. I think most women will have eating disordered thoughts … in their lifetime, or insecurities about how they look, et cetera. Yeah, I think the same would apply to the school as well as to what it would be generally.

However, once mentioned, the group was then willing to expand on the existence of eating and weight problems in their school, noting that, due to the greater proportion of adolescent girls in their school compared to the general community, the percentage of such problems may be higher in their student population (although “not a huge problem”):

SS: I think a girls’ school is a place where, you know, there’s gonna be a, probably a greater percentage of people who are thinking about … body image, and maybe thinking negatively about their body and things like that. Because one, they’re women, and two, they’re adolescents, and very … sensitive about things like that. So, you know, probably greater than the general population but … overall it’s not a huge problem. But … we do have our girls with concerns.
OPEN-ENDED SURVEYS

A Culture of Weight Consciousness?

The first question in all surveys asked participants to comment on the possibility of a culture of weight consciousness existing within a school environment. Fifteen of 20 teachers responded, with 13 agreeing with both the statement in general and its relevance to this particular school. The other two teachers, both male, supported the school, commenting that “we are very sensitive to body shape” and “[our] students seem to be pointed towards healthy lifestyle and balance”. However, these two teachers did not disagree with the statement as a whole, stating that “there are those in the school environment who do have weight and body image issues”. This contrasts with the focus group discussions reported earlier, where there was a general reluctance to accept eating issues as a particular problem at this school.

Expanding on their comments, teachers noted that “students… spend their vast majority of time at school, and socialising with these friends is going to be a major place of influence”, in keeping with comments made in the focus groups that peers are especially influential in the domain of weight and appearance. Additionally, teachers noted that the culture of weight consciousness could be greater in an all-girls’ school, with “continuous pressure on the girls to fit into a certain stereotype”:

This is especially true of an all female population – it seems to exaggerate problems.
Female teacher, aged 50-54

This was also exemplified by the observations of a young female teacher:

I have noticed, particularly working in a female college, that the girls seem to spur each other on when discussing weight loss and unhealthy body image etc. I have observed them discussing what they eat, talking about other students who are ‘fat’, etc.
Female teacher, aged under 30

Students also generally agreed that a culture of weight consciousness could exist in their school environment. Of the 28 students who responded to this question, only two disagreed outright. However, these two girls still offered comments which seem to agree with such a
culture’s existence, and hence contradict their original position. For example, one stated “no but at all girls school I found a lot more people are on diets and always talk about weight than at co-ed schools” (original emphasis). The other girl noted that “there is no pressure to be skinny, more to be healthy and fit”, indicating that there is still some form of culture surrounding weight consciousness in this school.

Other students “definitely” agreed that “your school environment places pressure on your [body] image”, although some believed that other factors could be seen as more important than the school:

> Schools are by no means the root of the problem.  
> *Student, aged 15*

Additionally, one student offered an explanation for why some girls may be more affected by this culture of weight consciousness than others:

> I think that weight consciousness and body issues are things everyone at school thinks about, it’s just some people view it positively and others view it negatively.  
> *Student, aged 15*

In contrast to the teachers mentioned earlier, the students disagreed as to whether this culture would be more prevalent in a single-sex or coeducational school. For example, students noted that “people who go to all-girls’ schools generally do have a stereotype to fit in with”, consistent with the teachers’ views, and stated “especially at all-girls’ schools body image is important”. However, others argued that “this isn’t so common in private school where the whole school is one-sex”, contrasting with previous research which suggests that single-sex environments are more likely to produce a culture of weight consciousness (e.g. Dyer & Tiggemann, 1996).

Parents were more uniform in agreeing with the teachers that body image “can be a monstrous issue” in “female schools”, and on the whole agreed that a culture of weight consciousness could exist in a school environment. Two mothers “strongly agree[d]” with this, noting that “the whole eating disorder issue is huge, discussed at length, and [it is] almost a ‘fashion’ to have or pretend to have an eating disorder problem”. However, while none of
the 26 parents responding to this question disagreed completely, some believed that other factors could be more important:

I agree ... but I believe that the media plays a more impacting, negative impact upon young women.

Mother, aged 40-44

Supporting the comments of other members of the school community, and the results from focus group discussions reported earlier, parents realised the importance of peers in adolescence - “peers are as important or more important than family views” - and in particular their relation to the culture of weight consciousness:

‘Social groups’ at school indicate that adolescent girls strongly feel the need to ‘fit in’ and feel part of a larger group. Suppressing their emotions to gain acceptance can lead to controlling their food/bodies as a way of maintaining a sense of self.

Mother, aged 40-44

Peer pressure is huge. The standards set by the media re thinness are seen as normal/standard when in actual fact they are abnormal. This encourages girls to starve themselves to achieve dangerous weight loss.

Mother, aged 45-49

However, the parents also appeared to support this school, with one mother stating that “I support the school promoting a balanced view re girls’ image and think [this school] is a school that does do this, providing an environment for the girls to grow in a positive way”.

In these observations regarding the culture of weight consciousness, many participants mentioned the perceived importance of appearance and thinness within both the school and society as a whole. All participants were also asked to comment specifically on this, and the mean and range of responses to these questions, across all participant groups, are shown in Table 5.1 (see over page). As this table shows, appearance was generally seen as more important than thinness. However, all means are well above the scale’s mid-point of four, indicating that both appearance and thinness are viewed as somewhat important in both the school and society as a whole.
Table 5.1

Descriptive Statistics for Importance of Appearance and Thinness for All Participant Groups

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance in society</td>
<td>114</td>
<td>5.59</td>
<td>1.08</td>
<td>2-7</td>
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<tr>
<td>Appearance in school</td>
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<td>1-7</td>
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<tr>
<td>Thinness in society</td>
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<td>4.63</td>
<td>1.53</td>
<td>1-7</td>
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<tr>
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<td>4.44</td>
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<tr>
<td>Teachers</td>
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<td></td>
</tr>
<tr>
<td>Appearance in society</td>
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<td>5.85</td>
<td>0.99</td>
<td>4-7</td>
</tr>
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<td>5.71</td>
<td>1.19</td>
<td>3-7</td>
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<tr>
<td>Thinness in society</td>
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<td>1-7</td>
</tr>
<tr>
<td>Thinness in school</td>
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<td>5.23</td>
<td>1.36</td>
<td>3-7</td>
</tr>
<tr>
<td>Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance in society</td>
<td>46</td>
<td>5.70</td>
<td>1.06</td>
<td>3-7</td>
</tr>
<tr>
<td>Appearance in school</td>
<td>46</td>
<td>4.70</td>
<td>1.41</td>
<td>1-7</td>
</tr>
<tr>
<td>Thinness in society</td>
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<td>4.55</td>
<td>1.36</td>
<td>1-7</td>
</tr>
<tr>
<td>Thinness in school</td>
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<td>4.05</td>
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<td>1-7</td>
</tr>
<tr>
<td>Parents</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance in society</td>
<td>48</td>
<td>5.41</td>
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<td>2-7</td>
</tr>
<tr>
<td>Thinness in society</td>
<td>48</td>
<td>4.57</td>
<td>1.61</td>
<td>1-7</td>
</tr>
</tbody>
</table>

Notes. Scale ranged from 1 (“not at all important”) to 7 (“very important”).

* These questions were answered only by students and teachers.

The Importance of Appearance. All of the teachers agreed that appearance was at least ‘somewhat important’ in society as a whole, with 30% indicating that it was ‘very important’.

Seventeen teachers also responded qualitatively, noting that appearance was particularly important for women:

People, particularly women, are very concerned about appearance.

Female teacher, aged 35-39

They also noted that this was influenced heavily by the media. One female teacher noted that the “media reinforces society’s obsession with appearance”, while another stated that the “media places huge importance on this” and the “media’s influence is becoming increasingly strong”. This is consistent with the focus group discussions, where the media was seen as an important influence on body image and related issues. The teachers here were also aware of
the importance of society on a broader level, with one female teacher noting that “how you look determines success in employment and many other aspects of life”.

Teachers were also asked about the importance of appearance in their school in particular. All but one indicated that it was at least ‘somewhat’ important, with 31.6% indicating that appearance was ‘very important’ in this school. Clothing was seen as an important marker of this, with one female teacher noting that students are “very conscious of what they wear when out of uniform and what the teachers wear”. This acknowledgement of the staff’s appearance, also seen in the focus group discussions and previous research (e.g. McRobbie, 1991), was mentioned by another female teacher, who stated that “the girls always comment on clothing/accessories of myself and other staff”. In addition, appearance was seen to play a part in peer acceptance at this school:

Acceptance among peers is a big issue; appearance is one factor that governs this.
*Female teacher, aged 30-34*

and the fact that this school was single-sex was also seen as a potential contributing factor:

A college full of girls is always going to have the pressure of appearance.
*Female teacher, aged 35-39*

When students were asked about the importance of appearance in society, all but two indicated that appearance was at least ‘somewhat important’ and 26.1% indicated that it was ‘very important’. Forty-three students also responded qualitatively to this question, stating that the media and peers play a part in influencing how important appearance is seen to be:

The media release lots of pictures of drop dead gorgeous girls, so there is a lot of pressure coming from the media which society seems to have picked up.
*Student, aged 14*

A lot of people judge others by their appearance. With pressure from the media & peers people begin to feel uncomfortable with their bodies.
*Student, aged 15*
This issue of ‘judgment’ was mentioned consistently by the students, who stated that ‘today’s society is very judgmental and appearance is everything’. The significance of first impressions, which rely primarily on appearance, was seen as contributing to this importance:

People value appearance when you first meet.

*Student, aged 15*

One student also noted that “life is a lot easier if you look good, anyone who says otherwise is lying”, further establishing the perceived importance of appearance to these students.

When students were asked to comment on the importance of appearance in their school in particular, responses were mixed – 4.3% stated that appearance was ‘not at all important’ in their school, 19.6% ‘somewhat important’, and 8.7% very important. Those who assigned lower importance ratings generally maintained that their school, being single-sex, was somewhat, although not wholly, protective:

I go to an all-girls’ school and besides gossip and judgement which occurs students also have no pressure to look their best and therefore focus on sport and school work.

*Student, aged 15* (emphasis added)

On the other hand, those who assigned higher ratings generally argued that the gender distribution of their school contributed to appearance concerns, for example:

Because it is an all-girls’ school, people are rated not only on who they are, but how they look.

*Student, aged 15*

This conflict was also noted earlier, in students’ discussions of the culture of weight consciousness.

Students generally attributed the perceived importance of appearance in this school, like that in society as a whole, to pressure and judgment, with girls noting that “people are judged on what they wear and how they look” and that “there are standards you have to live up to, pressure from other students”. Expectations of friendship groups were also mentioned here, with one student stating that “it depends on who you hang out with, but every group has their own expectations”. The importance of friendship groups, noted earlier by other members of
the school community and in the staff focus group discussions, was also echoed by other students here:

> It’s hard to escape the vanity & superficial values put upon us, and yes, I think it holds water in some circumstances at school, like the social aspect of things. It is visible when you observe social groups, pretty girls have pretty friends, harsh but true.  
> *Student, aged 15*

Finally, 79.2% of parents agreed that appearance was at least ‘somewhat important’ in society, and 14.3% indicated that it was ‘very important’. Forty parents also responded qualitatively and, consistent with their daughters, noted that first impressions and judgment contributed to this perceived importance. One mother, for example, stated that “most people judge on first appearance or impressions, so it can be somewhat important… especially for teenagers”. However, some also noted that there is a limit to the importance of appearance, with one dad noting that “it’s obviously not the be-all and end-all… but there are occasions when appearances are important”. The contribution of the media was also acknowledged, consistent with comments from others:

> It is pounded at us through billboards, magazines, and TV.  
> *Mother, aged 40-44*

**The Importance of Thinness.** In addition to commenting on the importance of appearance, all participants were also asked about the perceived importance of thinness in society. As can be seen in Table 5.1, responses to this question for all participant groups were wide-ranging, with ratings varying from ‘not at all important’ to ‘very important’. However, most acknowledged that thinness was at least ‘somewhat important’ in today’s society – of the teachers, for example, 25% indicated that thinness was ‘very important’, and 80% that it was at least ‘somewhat important’. Those teachers who assigned a lower importance rating were more likely to be responding from a personal viewpoint, rather than from society’s as a whole, offering a possible explanation for the range of responses received:

> This is not important at all, from my point of view.  
> *Female teacher, aged 40-44*
On the whole, teachers noted that the media played a part in the perceived importance of thinness, with “all advertising… about being thin and ‘looking good’”. Additionally, an example of the pervasiveness of thinness as an ideal in society (and the school) was given by another teacher:

I gave my YR11 students images to analyse. Each contained a girl aged between 18-22, and they were a size 12. Most girls said they were ‘large’ girls and overweight. What was perplexing was that their size was not part of the analysis.

Female teacher, aged under 30

Teachers were also asked to comment on the importance of thinness in the school in particular, with 85% noting that thinness was at least ‘somewhat important’, and 20% that it was ‘very important’. The relationship between thinness and attractiveness was mentioned here, with one female teacher noting that “thinness is probably seen as attractive” to the students. The composition of the student population was also seen to influence the importance of thinness, with one male teacher stating that “they are girls between 12-17 years old. It is in their nature”. However, some disagreed that thinness was important at their school, maintaining that “I definitely don’t think we have a major problem with weight loss or gain at this school”. This is consistent with the reluctance of staff in the focus group discussions to acknowledge weight as a problem, but contrasts with earlier comments made by staff in relation to the existence of a culture of weight consciousness.

Students generally saw thinness as being important, with 87% indicating that it was at least ‘somewhat important’ and 6.5% ‘very important’ in today’s society. Supporting the teachers’ comments regarding the link between appearance and thinness, one student noted that “I think that appearance and thinness go hand in hand – you don’t look good unless you are skinny”.

The media was also cited as an important influence in this regard, although there seemed to be some disagreement regarding whether the media was a positive or negative influence. On the one hand, students noted that “magazines seem to encourage a more curvy body image” and that “the media show ‘skinny’ is better but slowly mags such as Dolly are turning this around”. However, others stated that “everyone wants to feel good about themselves, and if
they are as skinny as people in the media then they do usually feel like one of them” and that “many people aspire to have ‘celebrity bodies’ and celebrities are usually stick thin, so apparently, it’s important to be a carbon copy of celebrities”.

The importance of others’ opinions, judgments, and pressures were again mentioned here, with one student noting that “it’s hard being around so many girls who talk about their weight and not think about it”. Students stated that there was “pressure to fit in and be thin” and that “judgment and peer pressure” contributed to the importance of thinness in society. This is consistent with comments made in the staff focus groups regarding the role played by body image in peer acceptance and ‘fitting in’. However, students were also able to see that thin does not necessarily equal health, with one student noting that “not being thin but being healthy and happy” (original emphasis) was important.

When asked about the importance of thinness in their school environment, students’ responses were mixed, with 4.3% indicating that it was ‘not at all important’, and 65.2% indicating that it was at least ‘somewhat important’. Those assigning lower importance ratings to thinness generally emphasised personality over thinness, although one girl stated that “I don’t think it is that important because I’m skinny” (emphasis added). Additionally, the distinction between thinness and health arose again, with one student noting that “as long as you’re happy and fit, it doesn’t matter that much”. Weight issues were identified as a major topic of conversation within the school, “often talked about with students”, and students noted that this often leads to judgment or “bitch[y]” comments. The importance of weight for peer acceptance was also mentioned by one student, who stated that “being thin allows acceptance within any community of similarity to the school setting”.

Finally, parents were also asked to comment on the importance of thinness in society. Again, responses were mixed, with 6.3% indicating that it was ‘not at all important’ and 75% rating it as at least ‘somewhat important’. However, similar to the teachers, those rating thinness as less important generally seemed to interpret the question in regards to their personal views, rather than those of society:
I don’t believe you have to be thin.

Mother, aged 40-44

while those assigning mid-to-high ratings generally referred to the importance assigned to thinness in society:

Too much emphasis is put on thinness in society.

Mother, aged 45-49

This disparity between personal and societal views was recognised by one father, who stated “personally, it’s not top of my list of important things in society – but society itself values it disproportionately”. Parents also noted the importance of the media in contributing to this “disproportionate” importance of thinness, with one mother stating that “thinness is held up by the media and our culture as the benchmark of perfection in human form”.

Weight Concerns

In order to ascertain the level of individuals’ concerns regarding their own weight, all participants were asked how concerned they were with losing or maintaining their weight. Table 5.2 shows the mean and range of responses to this question for all participant groups.

Table 5.2

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>4.38</td>
<td>1.55</td>
<td>1-7</td>
</tr>
<tr>
<td>Teachers</td>
<td>4.55</td>
<td>1.57</td>
<td>1-7</td>
</tr>
<tr>
<td>Students</td>
<td>4.37</td>
<td>1.62</td>
<td>1-7</td>
</tr>
<tr>
<td>Parents</td>
<td>4.33</td>
<td>1.51</td>
<td>1-7</td>
</tr>
</tbody>
</table>

Note. Scale ranged from 1 (“not at all concerned”) to 7 (“very concerned”).

As can be seen in this table, responses from all participant groups again varied across the entire range. Staff showed the highest level of weight concern, although these means were not significantly different (F (2, 114) = .147, p>.05, ns).

Eighty percent of staff members indicated that they were at least ‘somewhat concerned’ with their weight, while 5% were ‘not at all concerned’ and 10% ‘very concerned’.

However,
even in those assigning lower ratings, it would seem that some level of weight concern was still evident. A male teacher, for example, stated that “as long as I am healthy, physically fit, it does not matter”, while a female teacher stated that “I am keen to maintain my weight and continue living a healthy lifestyle”. This relationship between weight and health was frequently mentioned – a female teacher noted “I like being healthy and within my health range”, while a male indicating that he was ‘very concerned’ with his weight stated that “my health is important to me”. Additionally, in line with common societal norms and beliefs, females generally rated their level of concern as higher than did males (with the exception of the aforementioned male teacher).

Students’ level of concern was also somewhat varied. While 8.7% indicated that they were ‘not at all concerned’, 71.7% indicated they were at least ‘somewhat concerned’ and 4.3% ‘very concerned’. However, similar to the pattern found in teachers, it appears that even those students assigning lower ratings evidenced some level of weight concern. Specifically, three of the four students indicating that they were ‘not at all concerned’ about their weight referred to their current weight status in explaining this lack of concern – for example stating “I am not that heavy anyway – only 50kgs” and “coz I am thin and happy with my body”. Also in line with comments made by teachers, the students related their weight to their health status, noting that “I want to be a healthy weight” and “I want to get fit and healthy, and thin is a bonus”.

Some students however indicated higher levels of concern. One student stated that “I wish I could snap my fingers and be the weight I used to be last year, haha”, while another revealed that “I really wanna lose a few kgs” (see also the extract below). Additionally, one student noted that “there is no point in getting fat”, indicating that weight concerns are indeed an issue in this age group, while another observed that “I think it’s also the environment I’m surrounded in”.

I really wanted to lose weight because I am a bit fat, and have tried a few times, but have not been able to stick to the diet. But it always is on my mind, wanting to lose weight.

Student, aged 15 (original emphasis)
Finally, parents’ responses to this question were also mixed, with 4.1% indicating they were ‘not at all concerned’ with losing or maintaining their weight, and 71.4% indicating that they were at least ‘somewhat concerned’. Once again, those assigning lower ratings still appeared to reflect some level of concern, with one mother noting that she has “always been slim – I am active and maintain a healthy diet” and another stating that “I don’t have a weight problem but am quite conscious of maintaining that situation”. Parents’ level of weight concern was also seen to be associated with age and health concerns:

As I’m getting older, I find it much harder to maintain an acceptable weight.
Mother, aged 45-49

I would like to lose weight, but as long as I feel healthy I am not too concerned.
Mother, aged 45-49

Additionally, parents also noted the effect of weight on self-esteem:

I can see how my self esteem can take a hammering if I put on too much weight.
Mother, aged 40-44

as well as the influence of broader societal factors:

Whilst I have worked a lot on self acceptance there is still a part of me wanting to be thinner & more ‘model perfect!’
Mother, aged 40-44

**Optimal Curricular Attention to Eating & Weight Issues**

In addition to the aforementioned questions, students and parents were also asked how much attention they believed should be directed at eating and weight issues in the school curriculum. Table 5.3 shows the mean and range of responses to this question for both participant groups. As can be seen in this table, students’ responses to this question varied across the entire range, while parents’ responses were a little less varied. On the whole, parents believed that significantly more curricular attention should be directed at eating and
weight issues than did students (t (93) = 2.49, p<.05), although all means were above the scale’s mid-point.

Table 5.3

**Optimal Level of Curriculum Attention as Perceived by Students and Parents**

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
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<td>4.74</td>
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<td>1-7</td>
</tr>
<tr>
<td>Students</td>
<td>4.48</td>
<td>1.26</td>
<td>1-7</td>
</tr>
<tr>
<td>Parents</td>
<td>5.03</td>
<td>1.09</td>
<td>3-7</td>
</tr>
</tbody>
</table>

*Note.* Scale ranged from 1 (“no attention at all”) to 7 (“a lot of attention”).

Of the students, 2.2% replied that ‘no attention at all’ should be directed at these issues, 56.5% ‘some attention’, and 6.5% ‘a lot of attention’. This reflects some disagreement between the students, some of whom thought that these issues were covered enough - “it’s already covered so much, so monotonously” - while others believed that “the school doesn’t focus on it enough” and that more attention was necessary:

> I don’t think that the school pays much attention to this issue, but I believe it would [be] hard to educate on this topic without ‘promoting’ eating disorders in some way.
>
> *Student, aged 15*

Similarly, the students indicated that there was a fine line between covering these issues in the curriculum and ‘boring’ the students, with one girl stating that “enough [attention] to get the message across but not bore the students” was needed. Further to ‘boring’ them, another student felt that “it sometimes feels like everyone is accused of being anorexic”, indicating that too much attention can appear to place blame on or disparage the students in some way. Thus it appears that a fine balance is needed when planning prevention programs in schools.

However, some students indicated that curricular attention was particularly relevant to an all-girls’ school, with one noting that attention is necessary “especially at an all-girls’ school where everyone is self conscious about their appearance”. Furthermore, the importance of educating about these issues was highlighted by one student who volunteered the information that “many girls have eating problems”, although one student appeared to disagree with this,
stating that “most girls at my school are healthy and thin so weight issues do not seem like a big problem”. This is interesting when viewed in light of findings from the focus group discussions indicating some reluctance on the part of staff to acknowledge eating and weight issues as a problem.

Parents’ responses to this question were somewhat less varied, with 95.9% indicating that at least ‘some attention’ was necessary and 14.3% feeling that ‘a lot of attention’ should be directed at these issues. There was however some disagreement as to whether eating and weight issues were best covered at school or in the home:

They should be dealt with but families also need to take responsibility for these issues.

Mother, aged 50-54

The importance of focusing on health rather than appearance was emphasised by some parents, for example a mother who stated that “students should be well informed about healthy eating, but it shouldn’t become an obsession in regard to appearance”. Additionally, some parents noted that a focus on other issues, such as media messages, “self esteem, and understanding basic human psychology would be a better approach”. Overall, however, most parents indicated that at least some level of attention was required, or in the words of one father, “vital”:

Food is so central to our lives, and body image is so important to young people, that a sensible discussion in the school curriculum is vital.

Father, aged 40-44

**Student Relationships as Perceived by Parents**

The final questions asked of parents aimed to further ascertain their understanding of the social world of their daughters. That is, parents were asked to indicate how close they thought their daughters’ relationships were with them, as parents, and with their friends. This aimed, in part, to gather some further information regarding the relative influence of parents and peers in the world of adolescents, from the viewpoint of parents. Table 5.4 shows the mean and range of responses for these questions.
Table 5.4

*Descriptive Statistics showing Parents’ Perceptions of Their Daughters’ Relationships with Parents and Friends*

<table>
<thead>
<tr>
<th>Relationship Type</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>5.84</td>
<td>0.95</td>
<td>3-7</td>
</tr>
<tr>
<td>Friends</td>
<td>5.44</td>
<td>1.02</td>
<td>3-7</td>
</tr>
</tbody>
</table>

*Note.* Scale ranged from 1 (“not at all close”) to 7 (“very close”).

As can be seen in this table, the level of closeness in both types of relationships was seen as being quite high, with the means well above the scale’s mid-point of four. Students were seen as being significantly closer to their parents than to their friends (t (48) = 2.2, p<.05), although some parents noted that they were “close emotionally but not close in relation to her friends”, indicating some difference in the quality of ‘closeness’. This could be due to differences in the quality of communication which was frequently mentioned as important in contributing to closeness of relationships, although there seemed to be little difference in this regard between parent-daughter relationships and friendships. For example, a mother indicating that her relationship with her daughter was ‘very close’ noted that “we communicate very well with each other on all topics”, while another noted that her daughter’s friends “share all their ideas and problems”.

Paying specific attention to parents’ perceptions of their daughters’ relationships with friends, it appears that friends are seen as “tantamount” in the eyes of adolescents and their parents. This is consistent with both staff and students’ earlier comments regarding the importance of peers, and was seen by some to be particularly important in the boarding students, with one mother noting that “living in a boarding community [my daughter] has developed some very close relationships”. Some parents accept and encourage the close relationships their daughters have with their friends, although others appear to be almost resentful of this:

*She is totally focused on her friends and the social ‘scene’ which is a very hard thing to accept as a parent, that they are more important (at this stage) than the parents.*

*Mother, aged 40-44*
Parents also appear to be aware of the crowd versus clique distinction popularised by Dunphy (1969), with one father noting that his daughter “has a core group of 5-6 very close friends, then a much wider circle she is friendly with”. The closeness of relationships was generally seen as greater in the ‘clique’-type friendships in contrast to ‘crowd’ relationships, consistent with Dunphy’s research:

Friendships with friends [are] very close, almost to the extent of that of lovers.

Mother, aged 45-49

Relationships between Variables

In order to determine the relationships between each of the variables discussed above, a series of correlations was conducted. The results of these correlations for the various participant groups are presented in Table 5.5 (see over page).

As can be seen in this table, the perceived societal importance of appearance was positively related to the perceived societal importance of thinness for all participants, consistent with earlier comments by all groups linking appearance to thinness. No other relationships emerged as significant for parents, however for both teachers and students, individual weight concerns positively related to the importance of thinness in the school environment. Further, teachers’ weight concerns were positively associated with the importance of appearance in the school environment, indicating that staff members as well as students are influenced by the school appearance and thinness culture. This may be linked to staff’s awareness of themselves as role models and objects of scrutiny, as evidenced in the staff group discussions. The school culture was also seen to be influenced by the wider society, with significant positive correlations found between the perceived societal and school importance of appearance and thinness for both teachers and students.

For parents, correlations were also conducted between the desired level of curricular attention and the perceived quality of their daughters’ relationships with parents and friends. Level of curricular attention was negatively related to parents’ feelings of closeness with their daughter ($r = -0.38$, $p = .008$), indicating that the closer parents felt themselves to be with their
daughters, the less attention they believed should be directed at weight issues in the school curriculum. Desired level of curriculum attention was also related to parents’ perceptions of the importance of thinness in society \((r = .31, p=.003)\), such that the more important parents perceived thinness to be, the more curricular attention they believed should be directed at eating and weight issues.

Table 5.5

_Correlation coefficients for major variables_

<table>
<thead>
<tr>
<th>Teachers (N=20)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Appearance in Society</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. Appearance in School</td>
<td>.64**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Thinness in Society</td>
<td>.79***</td>
<td>.59**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Thinness in School</td>
<td>.52*</td>
<td>.70**</td>
<td>.61**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>5. Weight Concerns</td>
<td>.33</td>
<td>.46*</td>
<td>.29</td>
<td>.48*</td>
<td>1.00</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Students (N=46)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Appearance in Society</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Appearance in School</td>
<td>.29*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Thinness in Society</td>
<td>.46**</td>
<td>.36*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Thinness in School</td>
<td>.24</td>
<td>.40**</td>
<td>.52***</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>5. Weight Concerns</td>
<td>.24</td>
<td>.03</td>
<td>.20</td>
<td>.35*</td>
<td>1.00</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Parents (N=49)</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Appearance in Society</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Thinness in Society</td>
<td>.49**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Weight Concerns</td>
<td>.15</td>
<td>.14</td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

* p<.05; ** p<.01; *** p<.001

_The Impact of Media_

As media was commonly mentioned as a potential influence on the culture of weight consciousness by staff, students and parents alike, the impact of appearance media exposure (both magazine and television) was explored. Descriptive statistics relating to the level of
appearance-focused television and magazine exposure of staff members, students, and parents are provided in Table 5.6.

Table 5.6

*Mean Level of Exposure to Appearance-Focused Media for All Participant Groups*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
<td><strong>Teachers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magazines</td>
<td>2.20</td>
<td>2.57</td>
<td>0-7</td>
</tr>
<tr>
<td>Television</td>
<td>2.60</td>
<td>2.37</td>
<td>0-8</td>
</tr>
<tr>
<td>Overall</td>
<td>4.80</td>
<td>4.42</td>
<td>0-13</td>
</tr>
<tr>
<td><strong>Students</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magazines</td>
<td>3.89</td>
<td>2.92</td>
<td>0-14</td>
</tr>
<tr>
<td>Television</td>
<td>3.85</td>
<td>2.75</td>
<td>0-14</td>
</tr>
<tr>
<td>Overall</td>
<td>7.74</td>
<td>4.66</td>
<td>1-23</td>
</tr>
<tr>
<td><strong>Parents</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magazines</td>
<td>0.96</td>
<td>1.70</td>
<td>0-6</td>
</tr>
<tr>
<td>Television</td>
<td>1.55</td>
<td>1.79</td>
<td>0-10</td>
</tr>
<tr>
<td>Overall</td>
<td>2.51</td>
<td>2.89</td>
<td>0-12</td>
</tr>
</tbody>
</table>

As can be seen in this table, parents were exposed to less appearance media than the other participants, while students were found to be exposed to the highest levels of appearance media. One-way analyses of variance showed these differences to be significant for magazine (F (2,114) = 17.74, p<.001), television (F (2,114) = 11.67, p<.001), and overall media (F (2,114) = 20.76, p<.001) exposure.

In order to further explore the possible impact of appearance media exposure as a whole on each of these participant groups, participants were divided by median-split into high- and low-exposure groups. These groups were then compared on the importance they perceived appearance and thinness to have in society and their school, where appropriate, as well as their mean level of weight concern. As can be seen in Table 5.7, no significant differences between high- and low-exposure groups were found for any participant group.

Following this, correlations between these variables were conducted separately for high- and low-exposure groups, in order to determine whether there were any differences in the relationships between these variables across exposure groups. Due to low sample size,
however, these correlations were not conducted for teachers. Correlations for students and parents are presented in Tables 5.8 and 5.9, respectively.

Table 5.7

**Mean Level of Importance Variables by Exposure Level for All Participant Groups**

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teachers (median = 5)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance in Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>5.625 (1.06)</td>
<td>F (1, 19) = .68, p = .420</td>
</tr>
<tr>
<td>Low</td>
<td>6.00 (.95)</td>
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</tr>
<tr>
<td>Thinness in Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>4.50 (1.51)</td>
<td>F (1,19) = .69, p = .417</td>
</tr>
<tr>
<td>Low</td>
<td>5.17 (1.90)</td>
<td></td>
</tr>
<tr>
<td>Appearance in School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>5.75 (.89)</td>
<td>F (1, 18) = .01, p = .906</td>
</tr>
<tr>
<td>Low</td>
<td>5.68 (1.42)</td>
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<tr>
<td>Thinness in School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>5.50 (1.41)</td>
<td>F (1, 19) = .53, p = .476</td>
</tr>
<tr>
<td>Low</td>
<td>5.04 (1.36)</td>
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</tr>
<tr>
<td>Weight Concerns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>4.63 (1.51)</td>
<td>F (1, 18) = .03, p = .867</td>
</tr>
<tr>
<td>Low</td>
<td>4.50 (1.68)</td>
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</tr>
<tr>
<td><strong>Students (median = 7)</strong></td>
<td></td>
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<tr>
<td>Appearance in Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>5.59 (1.06)</td>
<td>F (1, 45) = .41, p = .526</td>
</tr>
<tr>
<td>Low</td>
<td>5.79 (1.06)</td>
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<tr>
<td>Thinness in Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>4.34 (1.55)</td>
<td>F (1,45) = 1.04, p = .313</td>
</tr>
<tr>
<td>Low</td>
<td>4.75 (1.15)</td>
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<tr>
<td>Appearance in School</td>
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<td></td>
</tr>
<tr>
<td>High</td>
<td>4.72 (1.39)</td>
<td>F (1, 45) = .02, p = .886</td>
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<tr>
<td>Low</td>
<td>4.67 (1.46)</td>
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<tr>
<td>Thinness in School</td>
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</tr>
<tr>
<td>High</td>
<td>3.91 (1.57)</td>
<td>F (1, 45) = .37, p = .545</td>
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<tr>
<td>Low</td>
<td>4.19 (1.52)</td>
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<tr>
<td>Weight Concerns</td>
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<td></td>
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<tr>
<td>High</td>
<td>4.73 (1.61)</td>
<td>F (1, 145 = 2.09, p = .155</td>
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<tr>
<td>Low</td>
<td>4.04 (1.60)</td>
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<tr>
<td><strong>Parents (median = 2)</strong></td>
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<tr>
<td>Appearance in Society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>5.25 (1.00)</td>
<td>F (1, 47) = .46, p = .502</td>
</tr>
<tr>
<td>Low</td>
<td>5.48 (1.19)</td>
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<tr>
<td>Thinness in Society</td>
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<td></td>
</tr>
<tr>
<td>High</td>
<td>4.21 (1.57)</td>
<td>F (1,47) = 1.37, p = .248</td>
</tr>
<tr>
<td>Low</td>
<td>4.77 (1.63)</td>
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<tr>
<td>Weight Concerns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>4.65 (1.27)</td>
<td>F (1, 48) = 1.18, p = .282</td>
</tr>
<tr>
<td>Low</td>
<td>4.16 (1.61)</td>
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</tr>
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</table>
Table 5.8

*Relationships between Variables for Students High and Low in Exposure to Appearance Media*

<table>
<thead>
<tr>
<th></th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High (N=22)</strong></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1. Appearance in Society</td>
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<td></td>
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</tr>
<tr>
<td>2. Thinness in Society</td>
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<td>1.00</td>
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</tr>
<tr>
<td>3. Appearance in School</td>
<td>.47*</td>
<td>.62**</td>
<td>1.00</td>
<td></td>
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<tr>
<td>4. Thinness in School</td>
<td>.22</td>
<td>.66**</td>
<td>.47*</td>
<td>1.00</td>
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<tr>
<td>5. Weight Concerns</td>
<td>.40</td>
<td>.35</td>
<td>.37</td>
<td>.59**</td>
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<tr>
<td><strong>Low (N=24)</strong></td>
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<tr>
<td>1. Appearance in Society</td>
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</tr>
<tr>
<td>2. Thinness in Society</td>
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<td>3. Appearance in School</td>
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<td>.08</td>
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<td>4. Thinness in School</td>
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<td>.35</td>
<td>.35</td>
<td>1.00</td>
<td></td>
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<tr>
<td>5. Weight Concerns</td>
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<td>.10</td>
<td>-.27</td>
<td>.18</td>
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</table>

* p<.05; ** p<.01

Table 5.9

*Relationships between Variables for Parents High and Low in Exposure to Appearance Media*

<table>
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<tbody>
<tr>
<td><strong>High (N=22)</strong></td>
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<td></td>
</tr>
<tr>
<td>1. Appearance in Society</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2. Thinness in Society</td>
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<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3. Weight Concerns</td>
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<td>.41</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Low (N=24)</strong></td>
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<td></td>
</tr>
<tr>
<td>1. Appearance in Society</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Thinness in Society</td>
<td>.48*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3. Weight Concerns</td>
<td>.07</td>
<td>.07</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* p<.05; ** p<.01

As can be seen in Table 5.8, a number of correlations were significant only for those students exposed to a higher level of appearance media. Specifically, correlations between the societal importance of thinness and the school importance of both appearance and thinness
were significant for those students high in exposure only, as was the correlation between the school importance of appearance and thinness. In addition, weight concerns were significantly correlated with the school importance of thinness for high exposure students only, while the societal importance of appearance and thinness were correlated for low exposure students only. No significant patterns emerged for parents.

**STUDENT INTERVIEWS**

*Definition and Scope of Eating Behaviours*

As a result of the difficulties encountered by the focus group participants in defining ‘eating disorders’, the student interviews instead used the terms ‘eating behaviours’ and ‘problematic eating’. This appeared successful, as all students were able to provide some definition of these terms. In their definitions, all of the nine students mentioned dieting or eating disorders, while only two mentioned ‘everyday’ or healthy eating. It is possible that this was in reaction to the researcher’s opening statements, which mentioned eating disorders specifically, although the participants expanded on this by mentioning specific disorders, obesity, and “starving yourself”. In addition, while some seemed to grasp the seriousness of eating disorders (see first extract), two participants saw dieting behaviours as “normal”:

RC: When you think about eating behaviours in general, what’s the first thing that comes to mind? What do you think of?
AB: Anorexia, and probably bulimia … like more serious, and then … of course, like, obesity.
RC: Mm hmm. So first thing your mind jumps to is, kind of, the ends, the disordered ends.
AB: The extremes, yeah.

CD: Especially with summer, everyone’s, like, wants to diet and all that kind of stuff, like I guess that’s normal.

Interestingly, these two girls disclosed past family experience of eating disorders, which may have contributed to their views surrounding these behaviours, consistent with research showing the familial transmission of disordered eating thoughts and attitudes (e.g. Phares, et
This incongruity also reflects the confusion between members of the first staff group discussion in delineating the scope of eating disorders.

Causes of Eating Disorders

The causes of problematic eating that were cited by students were overwhelmingly social in nature. Although this could again be a function of the researcher’s opening statements, in which an interest in social factors was specifically mentioned, the participants once more expanded on this considerably, giving a variety of examples of social factors which they saw as potentially important. In particular, specific emphasis was placed on social influence, including influence from friends and the media, and in some cases also from the family.

The concept of social influence is a complex one, with varying forms and manifestations of influence reported in the literature. Graham, Marks, and Hansen (1991), for example, argue that there are three forms of social influence, including active or overt social pressure, modelling of attitudes and behaviours, and the perception or misperception of group norms. Accordingly, as the following extracts show, participants noted that direct comments and pressure from mothers to lose weight or eat less, the modelling of family’s and friends’ attitudes and behaviours, and norms perpetuated in the media (“just like what’s normal from … the media”) as well as friendship groups were all important in leading to disordered eating thoughts and behaviours:

AB: Like, my mum’s always telling me, she’s like ‘don’t eat that, you’ll … put on weight’ and, you know … ‘you always eat too much’ or something. And so then I’m kind of like, well, if my mum’s saying it, I probably … shouldn’t really be eating as much.

EF: And also, like, around your friends, like what they think and … what weight they are or whatever might influence what you think you should be.

GH: If other people in your group, in your … social group, are dieting, then I suppose you might feel like, oh, if they’re doing it then I should do it … I guess that way it’s easy for them to think, oh, if it’s okay for everyone else not to eat, then you’re like, yeah, I’ll do it as well.
Furthermore, social pressure may also be classified as either direct, for example occurring through direct encouragement to diet, or indirect, such as that via weight loss advertisements on television (Presnell, et al., 2004). Research suggests that influence from friends is generally a result of indirect pressure, including reinforcing comments and the provision of information, rather than of direct or coercive pressure (Berndt, 1998), while influence from parents can be a function of both direct communication and indirect pressures (Byely, et al., 2000). Both direct and indirect expressions of social influence were endorsed by participants, who observed that parents and other family members can make direct comments about an individual’s weight or eating habits (see earlier extract), while also mentioning “comparing yourself to others” and the provision of dieting techniques and “new fad diet[s]” in magazines as examples of indirect influences.

Finally, as may be clear from the preceding discussion, social influence can stem from multiple sociocultural agents, including peers, the mass media, and family (Lina A. Ricciardelli, McCabe, Holt, & Finemore, 2003). These agents have been found to be differentially powerful at different developmental stages, and for varying attitudes and behaviours (Biddle, Bank, & Marlin, 1980). For example, during adolescence, peers have been found to be particularly influential with regard to immediate lifestyle choices, which may include appearance and weight concerns, while parents have more impact on long-term goals and decisions, such as career aspirations (Kandel, 1996). Accordingly, although participants mentioned all three agents, the majority of their discussions focused on friends and other peers. This is consistent with results from both the staff focus group discussions and surveys indicating the importance of peers in adolescence. Specifically, participants referred to social pressures from friends to diet or otherwise change one’s appearance, comparing oneself to others, and friends’ thoughts and beliefs regarding body image and appearance as potential causes of eating disorders and related behaviours:

GH: And also, I guess, if you compare yourself to people … then that will also - like if you were slightly bigger or something than some of them, then you might feel like ‘I want to be like them’.
IJ: I guess it depends on who you hang out with as well, like friends. I think, yeah, I think it depends on who your friends are and what they care about and … what they think is the right body shape.

The idea of social contagion, whereby friends come to resemble each other in their thoughts, attitudes and behaviours as a consequence of various social pressures toward homogeneity (Gilbert & Meyer 2004), was also mentioned spontaneously by three participants, and when prompted by the researcher, endorsed by the other six girls as possibly occurring in their school environment. Additionally, all nine students were able to give possible reasons for social contagion, including wanting to meet the ideals perpetuated in the media as well as fitting in and being accepted:

IJ: I think they all want to be, I don’t know, liked or, like, all belong, and so they feel like then that they can’t – they have to be a certain way.

In addition, most were able to give some possible mechanisms by which social contagion could occur, for example:

AB: Well, I know in groups you kind of have, not leaders, but you have like a dominant person who everyone kind of really wants to be friends with, cos she’s, like, so cool or whatever. And … she might have her close friends or something, but you kind of want to be, like you want to be close to her so you can feel like you’re more part of the group or whatever. So you might feel like, yeah … if she’s doing it, then oh yeah, maybe I can do it.

Additionally, although the idea did not arise spontaneously, eight of the nine participants acknowledged that weight or appearance teasing was something that occurred in their school, in contrast to members of the first staff group discussion, and all agreed that it could potentially lead to eating disordered thoughts and behaviours. Participants noted that teasing could have harmful effects via self-consciousness, confidence, and a desire to change in order to fit in:
EF: Cos I’ve had it before, if someone teases you about your weight, it just … makes you feel less confident and afraid of, like, letting people tease you I guess, so you kind of, yeah, want to try and change that.

They also agreed that teasing was more likely to be behind the person’s back than direct, and that this form of teasing could be “kind of worse”. In addition, weight teasing could be a result of deviating from the ‘norm’ in either direction – whether being too fat or too skinny:

KL: But often people, if they’re looking, like, too skinny, they’ll start rumours.

MN: Everyone started being really worried about their weight, and I’ve always been rather skinny and then, like … I started getting comments like, ‘oh I wish I was as skinny as you’ and whatever.

Participants also demonstrated an understanding of media influences, including the portrayal of the “right” body image (“tall and blonde and skinny and… have a good body”), the provision of dieting techniques in magazines, and comparisons with models and celebrities engendered by the media and magazines in particular. However, media influences were not always seen in a negative light, consistent with student survey responses, with one participant noting that magazines commonly take a positive approach to weight and body image, and that individuals can make their own decisions when confronted with media images:

KL: I don’t really think that it’s from magazines and stuff, cos they usually have a positive thing to … eating, cos like, you know, you don’t want to be too skinny or too, you know, big. And, like, I think it’s more … your friends, like if you’re in the wrong group that can pressure you a lot, but not if like … I don’t know, some people are just like that, like there’s some groups that … really, like, want to be skinny and stuff. But I think, yeah, that’s the main problem. I don’t think it’s really magazines and media because you can kind of make your own decisions, but when you’re pressured by your friends it’s a lot worse.

Finally, although generally less attention was paid to these influences than to the other two (peers and media), family influences were also mentioned by six of the nine participants. The
specific factors referred to included the transmission of values within the family (“what your values are like from like your family”), and pressure from parents, especially mothers:

KL: I’ve seen a lot of mums and stuff like putting stuff onto their daughters, like they want them to be what they’re not … Like I’ve … seen, like ‘oh don’t eat that’ or like, you know, ‘you want to fit into a dress or something’, so stuff like that.

Interestingly, students did not see teachers as a potential influence, in contrast to both staff focus group participants and previous research (McRobbie, 1991).

On the whole, participants viewed social factors as being especially important in adolescence, and something that “comes up quite a lot”. The reasons given for their special importance included adolescence being a time when you “find out kind of who you are” and “your body is changing”, leading to increased self-consciousness. Students also noted that peer groups had more influence in adolescence, because “you’re with people like five days a week… you’re continually around them”. They also agreed that social factors were “definitely” important at their school, with one noting that there was “pressure to… be like everyone else”:

KL: Like, you always have to conform to all the fashion and stuff like that, like the … fads, and like it’s quite a lot of pressure to … be like everyone else.

In addition, most participants agreed that social factors are more important in leading to eating disorders than individual factors, although one noted that “they’re equally important because, I mean, it depends on both”. Accordingly, individual factors, including shyness and insecurity, were for the most part mentioned only when prompted, and in some cases were seen as being a result of social influences (for example, self-consciousness arising from comments made by a male friend). In line with this, three participants suggested the idea that social factors contribute to individual factors, for example:

MN: I think, like, the social pressures probably, like, contribute to individual pressures … Like the social pressures probably … put the ideas in your mind, and then I guess the individual pressures come from those ideas in your mind, and then, like, what you
should be like and stuff like that I guess more ... I think individual's probably what finally triggers it, but then I guess like social pressures probably cause the individual pressures.

This is similar to the idea of internalisation, whereby repeated social pressure to be thin (from the media and other sources) is thought to result in women and girls internalising the thin-ideal stereotype, and in turn developing increased body dissatisfaction (Stice, et al., 1994). Additionally, other students noted that individual factors should be more important, but that social factors in reality have a greater impact:

OP: Well, the more important, like individual, but the most impact that it kind of has on you is from others. Cos individual you can kind of really say anything to yourself, you can kind of be like, you know, I like the way I am and everything like that, but you can’t ignore when people say things like ... 'you’re carrying a bit of weight’ or like even when ... the really pretty girls and stuff in our group and stuff, and they’re like 'oh I’m so fat, oh my God, I can’t eat today’.

Ameliorating Eating Disorders

The prevention strategies offered by participants generally flowed from the causes of eating disorders they identified, and included changing model sizes in the media and advertising, encouraging self-confidence, and providing individuals with information about the benefits of healthy eating as well as the dangers of eating disorders. These were quite different interventions that those suggested by staff in their group discussions, and for the most part were strategies directed at the individual, with the exception of media changes. Changes to workshops already offered by the school were also suggested, as students commented that these were not reinforced by the wider environment and that in some cases they served to make individuals more aware of dieting and other unhealthy eating practices, consistent with the survey responses. For example, one student mentioned an overwhelming focus on disorder rather than health as a potential downfall of the school’s efforts:

IJ: A big one is the way that the school focuses on eating disorders, and while it’s good to discuss them and talk about
them, I think they also need to talk about healthy options ... like I don’t remember talking about healthy eating last year ... but I remember talking about ... bulimia and anorexia and that’s what stayed in my mind.

Thus, the school’s attempts to prevent negative body image concerns were seen by some to contribute to the appearance culture, by overly emphasising disorders to the detriment of healthy living. The school’s body image and eating disorders workshops were also criticised for being somewhat unrealistic and out of touch with the reality of the pressure experienced by girls to have ‘a good body’:

OP: But when we have the workshops that come around and they’re like ‘you’re perfect the way you are,’ you know, ‘you should find inner peace within yourself’ and everything like that, most of the girls, we just sit there and, like, ‘that’s a load of crap.’ ... We know that’s not true because the first impression is what you look like ... and the good body has [something to do] with that.

This extract illustrates the mismatch between efforts of teachers and others to encourage girls to appreciate and accept themselves, and the failure of those messages to address the lived experience that what you look like does matter.

Finally, one participant noted that the school was already doing a lot, but that eating disorders were inevitable, that they were “just gonna be there anyway, like forever”:

CD: I don’t know, I think personally at this school, I think it’s really good. Like there’s lot of, like, they ... probably do everything to like try and make sure everyone, like, feels like respected and ... make sure everyone’s just equal and stuff. And like there’s like lots of campaigns, I think, try and prevent eating disorders and all that kind of stuff ... but I think, like, it’s just gonna be there anyway, like, forever, like in girls.

The Importance of the School Environment

Finally, in an effort to further elucidate the specific influences of the school environment and students’ perceptions of the school culture, participants were asked a number of questions about their school in particular. The first such question concerned the perceived importance of
appearance in the school environment. This led to the general consensus that appearance is “definitely” important in this school environment, at least for some girls who think that “appearance is everything” and for whom it is “all they think about”. This is in line with teacher’s comments in the group discussion regarding the presence of “queen bees” in their school for whom “image is paramount”, and also with data obtained from the surveys. The perceived importance of appearance was seen to extend to self-presentation in other contexts, including on the internet, and was also seen to be amplified at special occasions, such as social dances and socials with their ‘brother’ school:

**OF:** Even with Photoshop and everything, cos I know a couple girls do Photoshop their photos for like MySpace and things ... and then ... the guys that they go to meet after get a little bit disappointed. They’re just like, ‘oh’, you know, like everything like that ... Even when ... taking your photos and then, like, say putting them on your MySpace, ‘Nuh, that one makes me look fat’, that’s like the most ... it’s not ‘oh that one just makes my nose look big’ or anything, it’s just ‘nuh, that one makes me look fat, can’t put that on’.

**EF:** Especially, like, this year when we had ballroom dancing with the guys. Like before we had to go there was loads of girls in the bathroom trying to like put on makeup and stuff like that, so yeah. And they’re always talking about it, like at school, like ‘oh, I think your hair looks good that way,’ or ‘you look really pretty,’ or ... ‘that person doesn’t’ or whatever.

**RC:** Do you think it’s important to other people at this school, the way you look?

**IJ:** I think it is, yes, cos then you’ve got the girls who all look the same and stuff, so yeah ... Like we just had, like, dances and socials, and about half the girls in the room would be wearing like exactly the same outfit, except possibly the colours.

Participants were also asked about their own friendship groups, and the level of similarity present in these. Although there was an understanding that friends are generally similar, there was some separation between “my” group, being “quite different”, and other groups, in some cases described as “clones”: 95
CD: I think everyone’s actually kind of quite different ... in our group, but like in other groups, like lots of groups, people are really similar ... But yeah, I think, yeah, lots of groups, people are like almost like clones of each other, like they look the same, like ... they spend heaps of time with - like, all their parents are friends, they’re like just really similar, but I don’t think there’s that many groups that all the people in it are like really different sort of people.

Participants noted that similarity determined who one became friends with, but that it also stemmed from being friends, in line with past research suggesting the importance of both selection and influence in producing similarity between friends (Berndt, 1982; Brown & Klute 2003). One student also suggested the idea of there being certain norms or rules within groups, which serve to increase group members’ similarity to each other and define group boundaries:

AB: It’s not rules, they’re like unspoken kind of things ... that you just kind of have within the group, and then other groups ... they’re kind of different in the way maybe not what they eat, but just how they talk and what they talk about, and like the stuff they do at lunch time.

Finally, participants were asked whether they thought eating and weight issues would be more of a problem in a coeducational or single-sex (all-girls’) school. All except two participants agreed that these issues would be more prevalent in an all-girls’ school. This was attributed to predominantly environmental factors, including the observations that “the environment’s, like, kind of like bitchy” and “in [an] all-girls’ school... you’re trying to... compete in looks with all the other... girls”. Participants also noted that girls and boys influence each other in different ways, and that “girls all, like, get the same mindset” in an all-girls’ school, where there’s no boys to counteract social pressures. However, all participants were quite keen to defend their school culture, and hesitated before saying anything that could be construed as negative about their school:

OP: But the food’s really disgusting, it’s just like ... and I’m not meant to really say that here, but like I don’t know, it’s - and they try to make it healthy.
The two participants who disagreed that these issues could be more prevalent in single-sex schools also focused on the environment, but noted that trying to impress the male population in coeducational schools would lead to a greater incidence of eating and weight issues:

KL: Even more so at a coed, because there’s boys and, you know, you try and like impress them and stuff, so they put a lot more effort into, like, their appearance, definitely. And at a girls’ school, it’s kind of more like relaxed and casual, cos you don’t have to really make much of an effort.

However, the existence of boys in a coeducational school was not ignored by the other participants, who argued instead that “cos you’re around them all the time you might feel more comfortable with them”. One participant also noted that boys can stop girls “obsessing” by their refusal to talk about weight issues, and that they could “kind of defend you in a way” against the comments of other girls.

**GENERAL DISCUSSION AND CONCLUSIONS**

The findings from this phase of the current research project allow for a number of comments to be made regarding the culture surrounding weight and eating in this all-girls’ school. The existence of an appearance- and weight-conscious culture was evident across all methods of investigation used in this phase, with students, parents and staff members all noting the importance of the school, and peers in particular, in fostering weight consciousness and influencing eating habits. Participants were also able to provide examples of how a culture of weight consciousness might (and does) manifest, for example through social influence and a desire to fit in. This is consistent with previous research, which suggests that adolescents create an appearance culture with their peers that both mirrors and influences their eating behaviours and attitudes (Jones & Crawford, 2006). These cultures are thought to be made up of appearance conversations, teasing, and appearance-based peer acceptance (Jones, et al., 2004), three factors which also arose in the current research. For example, students noted that weight was a common topic of conversation, while all participants suggested that appearance may be important in gaining peer acceptance. The link between
attractiveness and thinness was also a notable feature throughout the data, with participants seemingly accepting without question the notion that thinness is a key component of attractiveness.

The appearance culture in this school also appeared to be strongly influenced by the thin ideal portrayed in the media. Focus group discussions, surveys, and student interviews all mentioned the influence of media in the domain of weight and appearance, although students were much more focused on the contribution of closer influences, including family and friends. This suggests that although teenage girls are aware of the media’s influence on their thoughts and behaviours, they may experience these pressures more intensely when they are reflected in their peer and family relationships (Collins & Steinberg, 2006). Clark and Tiggemann (2006), for example, note that magazines may be particularly influential in this regard, by offering topics of conversation that become personalised within friendship groups. Previous research has also proposed that media ideals are key components of appearance cultures, and are influential in determining standards of appearance (Jones, et al., 2004).

However, despite recognising that their students value appearance and seem to compete with each other on the basis of their looks, staff members in focus group discussions were generally hesitant in accepting that their school could play a part in the development of these concerns. Thus, there appeared to be a distinction drawn between the behaviours themselves (such as being thin and valuing appearance) and their possible outcome (an eating disorder). This may be a natural consequence of focusing on the normative nature of body image concern among girls and women, whereby an excessive concern about the school’s role becomes unnecessary. As mentioned above, parents and teachers also seemed to consider much of the pressure to be thin and attractive as coming from ‘out there’ in the media, while the girls themselves focused much more on the direct influence of their parents and peers in producing the felt pressure to monitor and maintain body weight and appearance standards. However, staff involved in providing pastoral care for students seemed to have a stronger sense of the pressure experienced by students to ‘fit in’ with the appearance and body size concerns that seem normative in this setting, and indeed the student interviews suggested that
teenage girls themselves consider their social environments, including their school, to be a crucial factor in the development and maintenance of their body image concerns.

This study provides an important insight into the culture surrounding thinness and weight consciousness in one school. By using qualitative methods, a more in-depth and rich understanding can be gathered. Qualitative methods also permit multiple viewpoints to be produced (Waszak & Sines, 2003). Additionally, the use of multiple sources contributes to the validity of the current phase, and provides a broader view than interviews or focus groups alone. While the surveys were able to provide a broad overview of the thoughts and attitudes of various members of the school community, the interviews and group discussions narrowed in on particular points of interest. This allowed for a deeper understanding of the culture of weight consciousness in this school, consistent with research showing that combining methods in this way leads to a more detailed view of reality (Berg, 2001). Mixed methods designs also allow for the flaws of one method to be counteracted by the strengths of another (Creswell, 2003).

However, despite its contributions, the current phase is limited in that it is not necessarily representative of school environments in general. The focus of this phase on a single school means that the results may conceivably be applicable to this school only. In addition, the small sample sizes obtained means that caution must be exercised in interpreting the quantitative (especially correlational) results. However, Spindler (1982) notes that a comprehensive and accurate study of one setting that is not strikingly different to other relevant settings is likely to be generalisable in key respects to these other settings. Therefore, the results of this ethnographic study are likely to be broadly reflected in other, similar school settings.

The results of this phase of the current research project have implications for the implementation of programs aimed at reducing or eliminating eating- and weight-related problems in the school community. The results suggest that such a program should go beyond the risk factors generally included in these interventions, such as body dissatisfaction and self-esteem (e.g. Scime, Cook-Cottone, Kane, & Watson, 2006), and take an ecological approach.
(Bronfenbrenner, 1977), including strategies to implement change across the school community. As adolescent girls are already exposed to an overwhelmingly body- and weight-conscious society through, for example, the media, it is important that schools work at becoming places in which the constant pressure to be thin and beautiful is ameliorated, not exacerbated.

**AFTERWORD**

Unfortunately the school involved in this ethnographic analysis declined to participate in further phases of this project. This meant that the second phase, originally planned as a quantitative analysis of the culture of weight consciousness in this same school, was transformed considerably. Specifically, the scope of inquiry was instead broadened in this second phase to include both single-sex and coeducational schools (as described in Chapter Three). The following chapter provides a rationale for including both all-girls’ and coeducational schools.
PART TWO

QUANTITATIVE PHASE – INTRODUCTION

The first phase of this research project, as outlined in the previous chapters, aimed to examine how the general social context of a school contributes to the weight and body image concerns of its students. The second phase, reported here and in the following chapters, aimed to expand this by examining in more detail the contribution of the specific social context of school friendship and peer groups. In particular, this phase aimed to replicate and extend on Paxton and colleagues’ (1999) study, which found friendship group similarities in adolescent girls’ body image concern and dietary behaviours. A more in-depth investigation of Southern College was originally planned, however, as mentioned at the end of the last chapter, this school decided not to participate in further stages. Therefore, the focus of the current phase was expanded to include a variety of private schools across metropolitan Perth, incorporating both single-sex (all-girls’) and coeducational schools.

The investigation of both single-sex and coeducational schools enabled the exploration of differences between school types. School type, or more specifically the gender composition of the school, and its relationship with students’ body image concerns has received little research attention, with the available results being somewhat inconsistent. While some studies have found little difference between school types in terms of body image and disordered eating symptoms (Tiggemann, 2001), others have shown greater body image concerns in single-sex schools (Dyer & Tiggemann, 1996; Mensinger, 2001). Thus, the gender composition of a school, a key feature of the school culture and arguably a significant influence on the peer subculture within the school, may differentially affect students’ body image concerns and related behaviours. The revised design of this phase of the study allowed the beginning of an answer to this question to be provided.

It goes without saying that the key difference between all-girls’ and coeducational schools is the presence of boys within the school environment. While boys’ experiences of body image concern and disordered eating are important avenues in their own right, the
investigation of the influence of boys on the body image concerns of girls is also an interesting yet under-studied area. Boys may potentially influence girls in one of two ways, whereby they may either lessen or magnify the body image concerns and peer appearance cultures of girls. Previous research, though limited, has provided support for both of these potential mechanisms. Compian, Gowen and Hayward (2004), for example, found that girls who had more platonic friendships with boys had less body image concerns, providing support for the idea that boys may lessen girls’ appearance concerns, or be body-supportive. This was echoed in the ethnographic analysis, whereby most of the girls interviewed stated that boys may help to counteract social pressures otherwise existing within the environment. On the other hand, however, McCabe, Ricciardelli and Finemore (2002) found that girls’ popularity with boys was related to greater weight and body image concerns, supporting the notion that boys may magnify girls’ concerns, or be body-critical. This was also mentioned in the ethnographic analysis, where some girls noted that feeling a need to impress boys may lead to body image and weight concerns.

However, research in this area is limited, and thus further investigation of the exact mechanisms by which boys may influence the body image concerns of girls is warranted. In addition, many of the findings reported in this area have examined girls’ perceptions only, and have failed to measure the actual thoughts and behaviours of boys. For example, Gerner and Wilson (2005) found that the extent to which adolescent girls believed thinness impacted on their friendships with boys predicted their body image concerns and restrained eating, while correlations have also been found between girls’ beliefs that their likability by boys is determined by their appearance, and their drive for thinness, body dissatisfaction, and dieting behaviours (Oliver & Thelen, 1996; Paxton, Norris, Wertheim, Durkin & Anderson, 2005). Although it is likely that girls’ perceptions of others’ attitudes and behaviours are important in influencing their own body image (e.g. Keery, Eisenberg, Boutelle, Neumark-Sztainer, & Story, 2006), it is also important to measure the actual attitudes and behaviours of others in order to form a more complete picture.
The current phase of this project thus explored the actual contribution of boys to the body image concerns of girls, as well as investigating the body image concerns and disordered eating of boys themselves. In addition, this phase aimed to replicate the results of Paxton and colleagues (1999) with regard to friendship group similarities in body image concerns and patterns of disordered eating, and to extend these results to the investigation of the body image concerns of both boys and girls. This phase also aimed to confirm the importance of the factors arising in the ethnographic study across different school types. While these factors, including peer norms, teasing, and media influences, appear important in Southern College, it was unclear to what extent these factors were also important in other schools. Finally, this phase aimed to provide the beginning of an answer to the question of whether single-sex and coeducational schools differ in terms of their students’ body image concerns.
CHAPTER SIX

QUANTITATIVE PHASE: METHODOLOGY

OVERVIEW

The quantitative phase of this research project had a number of aims. Firstly, it aimed to quantitatively examine the contribution of school friendship groups to body image and weight concerns. This has previously been attempted by various researchers, including Paxton and colleagues (1999), who investigated the similarity of body image concerns and eating behaviours within the friendship groups of 523 Australian adolescent girls. Paxton and colleagues (1999) found friendship clique members to be similar in body image concerns, dietary restraint, and the use of extreme weight loss behaviours, supporting the idea that one’s friendship clique environment is an important influence on their individual attitudes and behaviours. The present phase of this study thus aimed to replicate the results of Paxton and colleagues (1999), while extending the study to the investigation of multiple school contexts.

Paxton and colleagues’ (1999) study focused solely on female students, and did not investigate the concerns and potential influence of boys or school gender composition, despite including coeducational schools in their sample. The current project aimed to explicitly investigate the contribution of boys, paying particular attention to the mechanisms through which boys may influence the body image concerns of girls, and measuring the actual attitudes and behaviours of boys in addition to girls’ perceptions of these. This phase also explored the differences between coeducational and single-sex (all-girls’) school environments, with reference to the body image concerns of students contained therein.

Finally, this phase of the study aimed to test the generalisability of the results of the ethnographic study, and to determine whether the factors important in one school (in this case, Southern College) would also be relevant to other schools. That the results be at least somewhat generalisable is important for an enhanced understanding of body image concerns within school environments, and particularly important for intervention in these issues. As the ethnography employed multiple methods and informants, the results have, at least to some
extent, already been tested and confirmed within Southern College. By then attempting to
generalize these results to different schools, a more complete understanding of the role of the
school environment in producing and maintaining body image concerns can be achieved.

PARTICIPANTS

All Year 10 students from three schools (as outlined in Chapter Three) were invited to
participate in this phase, with informed consent collected from both students and parents.
Participation rates varied by school. A total of 314 students (224 females and 90 males) of
varying ethnicities and body sizes participated, as noted below.

In addition, as past research has questioned the use of BMI for children and adolescents
due to its substantial variability over time (Cole, Freeman, & Preece, 1995) – meaning, in
effect, that a BMI value represents a different body size and shape at age 10 as compared to at
age 16 (Selzer, Bowes, & Patton, 1995) – age-related reference curves were also used to
compare students’ BMI to age-stratified population statistics for weight and height. That is,
using data from the United States Center of Disease Control (McDowell, Fryar, Ogden, &
Flegal, 2008), students were classified as underweight (under the 15th percentile for their age),
normal weight (between the 15th and 85th percentiles), or overweight (over the 85th percentile).
Statistics relating to this are also presented below.

Of the 110 Western College students invited, 90 students, including 44 girls and 46 boys,
participated. This reflects a response rate of 81.8%. These students ranged in age from 14.42
to 17.92, with a mean age of 15.8 (SD = 0.65). One-third (n = 30) of these students self-
reported their ethnicity as white Australian, with the others drawn from a variety of ethnic
backgrounds including Asian (n = 19), African (n = 16), South American (n = 6), New
Zealander/Maori (n = 5), and Indigenous Australian (n = 3). Self-reported height and weight
data, available for 83 (92.22%) students, indicated that students ranged in height from
149.86cm to 200cm (mean = 170.29cm; SD = 10.50), and in weight from 31kg to 110kg
(mean = 61.13kg; SD = 12.41). Body mass indices (BMI) calculated from this data ranged
from 15.06 to 36.33 kg/m², with a mean of 21.32 (SD = 3.61). Fourteen (15.6%) students
were classified as underweight, 66 (73.3%) normal weight, and 3 (3.3%) overweight for their age. The remaining 7.8% did not provide height and/or weight data, and hence could not be classified in this way.

Seventy-two students from North School’s Campus One were invited to participated, with 65 taking part (a response rate of 90.3%). Of these students, 35 were female and 30 male. Students from Campus One ranged in age from 14.92 to 16.33, with a mean of 15.53 (SD = 0.34), and were predominantly white Australian (89.2%). Self-reported height and weight data (available for 92.3%) show a mean height of 171.27cm (range 140-190cm; SD = 10.13) and a mean weight of 60.3kg (range 40-80kg; SD = 9.57), resulting in a mean BMI of 20.65 kg/m$^2$ (range 14.87-35.71; SD = 3.03). Fifteen students (23.1%) were classified as underweight, 43 (66.2%) as normal weight, and 2 (3.1%) as overweight.

Forty-four of a possible 179 students (a response rate of 24.6%) from North School’s Campus Two also participated in this study. These included 30 girls and 14 boys, ranging in age from 14.92 to 16.42 (mean = 15.49; SD = 0.37). These students were more ethnically diverse than those from Campus One, with 61.4% being white Australian, 18.18% British, and the remainder being drawn from ethnicities such as Danish, Indian, and South African. Those students providing height and weight data (90.9%) ranged in height from 153cm to 186cm (mean = 168.33cm; SD = 9.29) and in weight from 38kg to 90kg (mean = 62.13kg; SD = 11.35). The mean BMI was 21.90 kg/m$^2$ (range 15.63-27.22; SD = 3.21). Seven students (15.9%) were classified as underweight, 33 (75%) as normal weight, and no students from this campus were classified as overweight.

Of the 128 students from Central College invited to participate, 115 did so, a response rate of 89.84%. These students, all girls, ranged in age from 14.25 to 15.58, with a mean of 14.75 (SD = 0.30). Students were predominantly white Australian (74.8%), with other ethnicities including Italian, Burmese, and Indian. Height and weight data (provided by 95.65%) showed a mean height of 164.24cm (range from 145cm to 190cm; SD = 7.82) and a mean weight of 54.69kg (range from 37kg to 100kg; SD = 9.99). Body mass indices ranged from 15.06 to
35.86 kg/m², with a mean of 20.30 (SD = 3.53). Based on this data, 31 students (27%) were classified as underweight, 74 (64.3%) as normal weight, and 5 (4.3%) as overweight.

**PROCEDURE**

Questionnaires were administered in classroom groups as part of the regular class period. In all cases the classroom teacher supervised the questionnaire administration, aided by an instruction and information sheet which assisted them in answering any questions. The researcher was also present at one of the schools during the questionnaire administration, and rotated between the four classes of students completing the questionnaires in order to assist the classroom teachers.

All questionnaires were completed within 40 minutes. Participants completed the demographic and friendship nomination questions first, followed by the body image, social pressure, and eating concerns measures. These measures are presented in the order they appeared in the next section (see also Appendices F, G, and H). Participants were also provided with a debriefing form at the end of the session, informing them of further resources and contact numbers if needed.

**MEASURES**

There were three different questionnaire packages administered – coeducational girls, coeducational boys, and single-sex girls. These were comprised of the same basic set of measures, with some wording changes, and in some cases extra questions to assess in more detail the specific contribution of the participants’ gender and school type. Where questions differed between participants, this is noted below. In addition, these questionnaires are included as Appendices F, G, and H, respectively.

*Demographics*

Each participant was asked to provide their age (in years and months), nationality, and height and weight. Body mass index (BMI) was then calculated from this self-reported height.
and weight data, and weight-for-age compared to norms established in the United States (McDowell, et al., 2008).

**Friendship Nomination**

Each participant was provided with a list of Year 10 students at their school, which showed each student’s name alongside an arbitrarily-assigned identification number. Participants were required to provide their own identification number at the top of their questionnaire package, and to use only the identification numbers of their friends when replying to the friendship nomination questions. This ensured that no names appeared anywhere on the questionnaire.

Responses to the following questions, adapted from Paxton and colleagues (1999), were used to define friendship groups:

1) “Using the list provided, write down the numbers of your best friends, that is, the friends who you hang around with the most and are closest to.”

2) “Is there a particular group of friends you normally hang around with?”
   a) Yes
   b) No, I hang around with a number of different ‘groups’ or with people from a number of different ‘groups’
   c) No, I spend most of my time with one other friend
   d) No, I spend most of my time alone”.

3) “If you answered (a) to Question 2, write down the numbers of the friends in the ‘group’ you hang around with.”

4) “If you answered (b) to Question 2, write down the numbers of the friends from the different ‘groups’ you hang around with.”

5) “If you answered (c) to Question 2, write down the number of the friend you spend most of your time with.”

The UCINET-VI statistical package (Borgatti, Everett, & Freeman, 1999) was used to analyse the data resulting from these questions. Firstly, the data was symmetrised so that only reciprocated ties were maintained. This is in keeping with Jansson’s (1997) assertion that
reciprocated friendship ties tend not only to be stronger but also to be retained over time. A similar view has been expressed by Urberg (1992), who stated that mutual friends are likely to spend more time together and thus have more opportunity to influence each other. Reciprocated friendship ties of 2 or more individuals were therefore identified, after which a hierarchical clustering matrix, utilising responses to Questions 3 and 4 above, was used to identify non-overlapping cliques. In order to corroborate the accuracy of these friendship groupings, cliques so identified were then compared against the raw sociometric data. This resulted in a small number of alterations which served to maximize the individuals assigned to cliques without compromising the cohesion of these groups.

As dyads have been found to show different patterns of interaction and influence than larger groups (Brown 1989), dyads were excluded from any further clique analyses. In addition, as independence of groups was a necessary requirement for the statistical analysis to follow, cliques were not allowed to overlap. That is, no participant was allocated to more than one group. Those found to have links to more than one group were allocated to the group to which they had the most potent ties, and those individuals who could not readily be allocated to any single group were omitted from the clique analyses. Forty-four friendship cliques of 3 or more individuals were thus identified. These 44 cliques accounted for a total of 193 participants (37 boys, 156 girls), while 121 (53 boys, 68 girls) were omitted from further clique analyses. The number of cliques of different sizes are shown in Table 6.1 (see over page).

In order to ascertain the representativeness of the clique sample compared to the whole sample, and to investigate whether the exclusions led to any systematic bias in participant selection for the clique analyses, a multivariate analysis of variance (MANOVA) was conducted, following Paxton and colleagues (1999). This MANOVA compared those placed in friendship groups with those excluded on the 2 dependent variables of interest (body image concern and disordered eating) as well as body mass index (BMI), self-esteem, and psychological status (depression and anxiety). As boys and girls were found to differ on these variables ($F$ (6,219) = 20.02, $p = .000$), analyses were run separately for each gender. In
addition, as the variables were not normally distributed and could not be satisfactorily transformed, a set of parallel analyses were run using trichotomised variables. These analyses did not differ from those run using original values, and thus untransformed results are presented here.

Table 6.1

*Frequency of Friendship Cliques of Different Member Size*

<table>
<thead>
<tr>
<th>Clique size</th>
<th>Number of cliques</th>
<th>% cliques</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>20</td>
<td>45.5</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>20.5</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>15.9</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>6.8</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>6.8</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>2.3</td>
</tr>
</tbody>
</table>

The results showed no significant difference between clique members and unallocated students for girls ($F(6,174) = 1.69, p = .125$) or boys ($F(6,63) = .62, p = .715$). Mean values for each variable, separated by clique assignment and gender, are shown in Table 6.2.

A further MANOVA was conducted comparing the two groups on the variables of perceived social support from friends, social anxiety, and peer acceptance (means presented in Table 6.2). Parallel analyses were again run using trichotomised variables; however, as the results did not differ, the results presented here are untransformed. Analyses were also run separately by gender, as significant gender differences were found on these variables ($F(3,268) = 25.75, p = .000$). No significant difference between groups was found for girls ($F(3, 192) = 1.42, p = .238$) or boys ($F(3, 72) = 1.07, p = .367$).
Table 6.2

Descriptive Statistics for Dependent Variables for the Whole Sample and by Clique Assignment (CA – assigned; NA – not assigned)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Whole Sample (N=314)</th>
<th>CA-female (n=156)</th>
<th>CA-male (n=37)</th>
<th>NA-female (n=68)</th>
<th>NA-male (n=53)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
</tr>
<tr>
<td>Body image concern</td>
<td>2.46 (1.19)</td>
<td>2.78 (1.14)</td>
<td>1.40 (.38)</td>
<td>2.90 (1.23)</td>
<td>1.66 (.73)</td>
</tr>
<tr>
<td>Disordered eating</td>
<td>.26 (.28)</td>
<td>.28 (.30)</td>
<td>.17 (.14)</td>
<td>.34 (.33)</td>
<td>.19 (.16)</td>
</tr>
<tr>
<td>BMI</td>
<td>20.88 (3.44)</td>
<td>20.27 (2.78)</td>
<td>20.90 (3.40)</td>
<td>21.50 (4.35)</td>
<td>21.90 (3.70)</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>2.98 (.56)</td>
<td>2.89 (.55)</td>
<td>3.23 (.52)</td>
<td>2.93 (.60)</td>
<td>3.14 (.48)</td>
</tr>
<tr>
<td>Depression</td>
<td>.27 (.37)</td>
<td>.23 (.36)</td>
<td>.29 (.38)</td>
<td>.28 (.38)</td>
<td>.37 (.39)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.04 (.55)</td>
<td>1.08 (.54)</td>
<td>.83 (.47)</td>
<td>1.10 (.56)</td>
<td>.97 (.57)</td>
</tr>
<tr>
<td>Friend support</td>
<td>5.90 (.99)</td>
<td>6.16 (.84)</td>
<td>5.53 (.89)</td>
<td>5.89 (1.08)</td>
<td>5.38 (1.11)</td>
</tr>
<tr>
<td>Social anxiety</td>
<td>2.06 (.58)</td>
<td>2.03 (.54)</td>
<td>1.90 (.40)</td>
<td>2.20 (.72)</td>
<td>2.06 (.56)</td>
</tr>
<tr>
<td>Peer acceptance</td>
<td>3.18 (.79)</td>
<td>3.09 (.74)</td>
<td>3.69 (.47)</td>
<td>2.92 (.78)</td>
<td>3.42 (.91)</td>
</tr>
</tbody>
</table>

*a* Possible scores ranged from 1 to 6; 
*b* Possible scores ranged from 0 to 3; 
*c* Possible scores ranged from 1 to 4; 
*d* Possible scores ranged from 1 to 7; 
*e* Possible scores ranged from 1 to 5.
**Body Image Concern**

Body image concern was assessed using the Body Shape Questionnaire-Revised-10 (BSQ-R-10; Mazzeo, 1999). This is a 10-item scale designed to measure body image preoccupation, with items rated on a 6-point scale varying from Never (1) to Always (6). For the purposes of analysis a mean of the 10 items was computed for each individual, with possible scores ranging from 1 to 6, and higher scores indicating greater body image concern. This scale exhibited excellent internal reliability, with a Cronbach’s alpha for this sample of .96. This scale also demonstrates acceptable criterion validity in its correlation with measures of disordered eating (Mazzeo, 1999).

Two questions in this scale (Questions 2 and 10) are gender-specific, and so wording was changed for the boys’ questionnaire to reflect this. For example, Question 10 was changed from “Has seeing thin girls...” to “Has seeing thin or muscular boys...”. In addition, the word “shape” in the original questionnaire was changed to “size” for the boys, in line with the findings of Grogan and Richards (2002) indicating that 16-year-old boys evidence a concern with size rather than shape.

**Perceived Social Support**

The ‘Friends’ and ‘Family’ subscales of the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) were used to measure perceived social support from friends and family. Each subscale consists of four questions, rated on a 7-point scale ranging from Very Strongly Disagree (1) to Very Strongly Agree (7). Item responses were averaged for each individual, with higher scores indicating higher levels of perceived support. This scale has demonstrated construct validity with an adolescent sample (Canty-Mitchell & Zimet, 2000). The Cronbach’s alpha for this sample was .86.

**Social Anxiety**

Social anxiety was assessed using the Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998). This scale consists of 20 questions designed to measure fear encountered in
social interactions, using a 5-point scale which ranges from Not at all (1) to Extremely (5). Means were calculated for each individual, with possible scores ranging from 1 to 5 (higher scores indicate greater social interaction anxiety). The SIAS has demonstrated test-retest reliability of .92 for both 4- and 12-week periods, and also exhibits adequate construct validity (Mattick & Clarke, 1998). The Cronbach’s alpha for this sample was .90.

Peer Acceptance

Levels of perceived acceptance by peers and friends was measured using a scale derived from Paxton and colleagues (1999). All participants were asked to indicate, on a 5-point scale ranging from Not at all (1) to Extremely (5), how accepted they felt by friends at school and by other students of the same gender as themselves. Coeducational students were also asked to indicate how accepted they felt by peers of the opposite gender. Thus, all-girls’ students answered two items, and coeducational students three. To allow comparability between questionnaire types, scores for all items were averaged for this measure, with higher scores indicating greater peer acceptance. Both scales demonstrated adequate internal reliability, with a Cronbach’s alpha of .80 for all-girls’ students, α = .65 for coeducational girls, and α = .80 for boys.

Social Influence

Four agents of social influence were assessed – friends, media, family, and teachers. Female participants only were asked to respond to these items, using a 5-point scale ranging from Not at all (1) to Extremely (5). The first measure, the Friends as Source of Influence Scale, adapted from Paxton and colleagues (1999), assessed how important participants believed their friends to be in shaping five key areas – namely, their ideas of the perfect body, the diet products they used, the exercises they used to tone up, how to get the perfect body, and diets they used to lose weight. Higher scores indicated greater perceived influence. Cronbach’s alpha for this sample was .91.

Similar items were used to assess the influence of media and family on these five areas. Cronbach’s alpha for the Media as Source of Influence Scale was .95, and for the Family as
Source of Influence Scale $\alpha = .84$. Influence from teachers was assessed with a three-item scale, measuring how important participants believed their teachers to be in influencing their ideas of the perfect body, what is attractive, and what clothes suit different body types (Cronbach’s alpha = .84). These items, with the exception of the first, were devised for the current study, based on both the earlier-reported qualitative study (see Chapter 4) and previous research showing that the appearance of teachers is an important talking point for, and influence on, adolescent girls (see e.g. McRobbie, 1991).

Identification with Peer Group

Four items adapted from Kiesner and colleagues (Kiesner, Cadinu, Poulin, & Bucci, 2002) were used to assess how important participants felt their peer group was to them (peer group identification). These items asked participants to indicate, on a 5-point scale ranging from Not at all (1) to Extremely (5), how important it was for them to belong to their friendship group; how happy they were to be described as a member of this group; whether they liked the same things as this group; and whether their friends were the kinds of people they’d like to be themselves (Cronbach’s alpha = .80). Higher scores indicated greater identification with the peer group.

Peer Concern with Thinness

Measures of participants’ perceptions of their peers’ concern with thinness differed by participant group. All items were ranked on a 5-point scale, with higher scores indicating greater perceived peer concern with thinness. These items were adapted from Paxton and colleagues (1999) and Schutz and colleagues (2002). All-girls’ students were asked 12 questions, as shown in Table 6.3. Girls attending coeducational schools were also asked to answer these questions, as well as two others relating specifically to their experience in this school type – namely: “How important do you think it is to boys at school that your weight stay the same as it is now?” and “Do you think that boys at school take a lot of notice of girls’ weight and shape?”. These scales demonstrated adequate internal consistency, with $\alpha = .79$ for all-girls’ and $\alpha = .81$ for coeducational girls.
Table 6.3

*Items Assessing Peer Concern with Thinness in All-Girls’ Students*

<table>
<thead>
<tr>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How important are weight and shape to your friends?</td>
</tr>
<tr>
<td>2. Compared to other things in their lives, how important do you think your friends’ body weight and shape are to them?</td>
</tr>
<tr>
<td>3. How important do you think it is to your friends that your weight stay the same as it is now?</td>
</tr>
<tr>
<td>4. How important do you think it is to other girls at school that your weight stay the same as it is now?</td>
</tr>
<tr>
<td>5. How often do your friends encourage you to lose weight?</td>
</tr>
<tr>
<td>6. How often do your friends comment on each other’s weight?</td>
</tr>
<tr>
<td>7. How often do your friends encourage each other to lose weight?</td>
</tr>
<tr>
<td>8. How often do your friends diet?</td>
</tr>
<tr>
<td>9. How often do your friends worry about their weight?</td>
</tr>
<tr>
<td>10. How often do your friends worry about what they eat?</td>
</tr>
<tr>
<td>11. How often do your friends skip meals?</td>
</tr>
<tr>
<td>12. Do you think that your friends take a lot of notice of each others’ weight and shape?</td>
</tr>
</tbody>
</table>

For the boys, a total of 11 questions were used to assess perceived peer concern with thinness. These asked boys to rate the importance of girls’ weight in their male friends’ decisions regarding friendship and relationship partners, as well as in general (three questions), and also to rate how invested their male friends were regarding their own body weight and shape. Boys were also asked to answer questions 6 to 12 in Table 6.3, however the wording of these questions was changed to assess boys’ perceptions of girls’ concerns with thinness. That is, instead of asking “How often do your friends…””, boys were asked “How often do you think girls…”. They were also asked to provide their opinion of this frequency, by specifying whether it was *Too much, Okay, or Too little*. Finally, a further 3 questions asked boys to indicate their own concern with the body weight and shape of girls – in general,
when choosing female friends, and when choosing girlfriends. This scale demonstrated a Cronbach’s alpha of .71.

**Thin-Ideal Internalisation**

Participants’ internalisation of the thin-ideal stereotype was assessed using the Ideal Body Stereotype Scale – Revised (Stice, et al., 1996). This measure, rated on a 5-point scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (5), asks participants to indicate their agreement with six statements relating to the ideal body – for example, “Slender girls are more attractive”. Higher scores indicate greater thin-ideal internalisation. This scale has previously been used with adolescents (e.g. Stice, Marti, Spoor, Presnell, & Shaw, 2008; Stice, Shaw, Burton, & Wade, 2006), and demonstrates adequate test-retest reliability (10 month; $r = .63$) and internal consistency ($\alpha = .89$) in adolescent samples (Stice, 2001). Cronbach’s alpha for this sample was .81.

In the current study, the wording of this questionnaire was changed to reflect the age of participants, with “women” in the original measure changed to the more appropriate “girls”. A further two items, devised for the current study, asked participants to indicate their agreement with the following statements: “People should do what they can to be as attractive as possible”; and “People should do what they can to maintain a slim body”. Cronbach’s alpha for these two items was .69.

In a separate section, participants were also asked to describe what they thought the ideal girl and boy look like, in open-ended spaces. This was an attempt to gain an unbiased insight into participants’ internalisation of societal ideals. The majority of participants (83.6%) provided an answer to these questions.

**Appearance Conversations**

One item was used to assess girls’ appearance-based conversations with friends. This item was adapted from Paxton and colleagues (1999), and asked participants to rate on a 5-point scale, ranging from *Never* (1) to *Always* (5), how often they talked about weight, weight loss, and dieting with their friends. Higher scores indicated higher incidence of appearance
conversations. Two items assessed appearance conversations in the boys’ questionnaire. Specifically, boys were asked to rate how often they thought girls talked about weight with their friends, and to provide their opinion of this frequency (Too much, Okay, or Too little). They were also asked how often they talked about the weight of girls with their friends, ranked on a 5-point scale as above.

**Peer Teasing & Appearance Criticism**

Frequency of peer teasing was assessed on a 5-point scale ranging from Never (1) to Always (5), with higher scores indicating greater frequency of teasing. These items, differing by participant type, were adapted from Paxton and colleagues (1999). All-girls’ students were asked a total of four items in this category, assessing how often they had been teased by their friends and other girls at school about being either too thin or too fat. Although Paxton and colleagues only asked about ‘fat’-teasing, results from the earlier ethnographic study (see Chapter Four) indicate that teasing about being too thin is also a cause for concern. These subscales demonstrated adequate internal reliability (‘fat’ teasing α = .77; ‘thin’ teasing α = .91). In addition to these items, girls from coeducational schools were asked how often they had been teased by boys at school about being too thin or too fat (two additional items). Cronbach’s alpha for the ‘fat’ subscale was .74 and ‘thin’ subscale α = .84. Finally, boys were asked to indicate how often they teased girls about being too fat or too thin (two items), as well as how often they themselves had been teased about being too fat or too thin (two items).

Appearance criticism was assessed using a further two items adapted from Jones and colleagues (Jones, et al., 2004). These items, asked of girls only, assessed how often participants perceived that boys and other girls had said they would look better if they were thinner. A 5-point rating scale (as above) was used, with higher scores indicating greater levels of perceived appearance criticism. This scale demonstrated adequate internal reliability (α = .87).
**Social Comparison**

Four items adapted from the Social Comparison to Models and Peers scale (Jones, 2001) were used to assess social comparison. Girls were asked to indicate, on a 5-point scale ranging from *Never* (1) to *Always* (5), how often they compared their weight and shape to models and other girls. Higher scores indicated greater frequency of comparison. Boys were asked to provide their perception of how often girls compared in these ways, and also to rate this frequency in terms of whether it was *Too much, Okay, or Too little*. Cronbach’s alpha for this sample was .91.

**Pressure to be Thin**

The pressures girls perceived from peers, family, and the media to be thin were assessed using items adapted from Paxton and colleagues (1999). Pressure from peers was assessed using two items for all-girls’ students (α = .73), and three items for coeducational students (α = .87). These asked participants to rate, on a 5-point scale ranging from *None* (1) to *A lot* (5), how much pressure they felt from friends, other girls, and boys at school (coeducational students only) to be thin. Pressure from family was assessed with three items (mother, father, and siblings; α = .77), and from media with two items (advertising, magazines/television; α = .93). *Not applicable* options were also provided for the items relating to family, to reflect a diversity of family types.

Boys were asked to provide their perceptions of how much pressure girls experienced, rather than to provide information on the pressures they felt themselves. For example, they were asked “How much pressure to be thin do you think girls feel from their friends?” They were also asked to rate this frequency in terms of whether it was *Too much, Okay, or Too little*. Cronbach’s alpha for the boys’ scale was .76.

**Media Exposure**

The media exposure measure was devised for the current study, with reference to Jones and colleagues (2004). Participants were asked to list their three favourite magazines and television shows, and to rate the frequency with which they read/viewed these (whether *Every*
day, Several times a week, Once or twice a week, Once or twice a month, or Less often). These were then classified according to their level of appearance focus and endorsement of the thin ideal (0 denoting no emphasis; 1 some emphasis; and 2 large emphasis), following Clark and Tiggemann (2006). This was also the procedure followed in the earlier ethnographic study (see Chapter Four).

As the internet is an increasingly popular form of media, particularly among adolescents (Norris, Boydell, Pinhas, & Katzman, 2006; Wilson, Peebles, Hardy, & Litt, 2006), exposure to websites was also assessed. Participants were first asked to list their favourite website, which was classified according to appearance focus in the same manner as magazines and television shows. They were then asked to rate the frequency with which they visited three websites shown in the earlier ethnographic study to be popular, namely MySpace, YouTube, and Facebook. These websites were thought to be particularly high in appearance focus, given their emphasis on social networking and impression management. These media exposure items, however, were not used in the current analysis.

**Competitiveness**

The 20-item Competitiveness Index (Smither & Houston, 1992) was used to assess individuals’ competitiveness. Participants responded to these items (for example, “I get satisfaction from competing with others”) by indicating whether each was True or False with regard to themselves. Higher scores indicated greater competitiveness. This scale has been demonstrated to correlate well with other measures of competitiveness (Smither & Houston, 1992). The Cronbach’s alpha for this sample was .81.

**Disordered Eating**

Disordered eating attitudes and behaviours were assessed using the 26-item version of the Eating Attitudes Test (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982). This version, which correlates well with the original 40-item scale (r = .98) and has been validated for use in adolescent populations (Rosen, Silberg, & Gross, 1988), consists of three subscales (Dieting, Bulimia/Food Preoccupation, and Oral Control). Participants were asked to rate the
frequency of a variety of thoughts and behaviours (for example, “I feel extremely guilty after eating”) on a 6-point scale, ranging from *Always* (1) to *Never* (6). They were also asked to indicate whether they had participated in three extreme weight loss behaviours, namely binge eating, vomiting, and laxative/diet pill use, in the last six months, and how often this had occurred. Cronbach’s alpha for this sample was .81.

**Self Esteem**

The Rosenberg Self Esteem Scale (RSES; Rosenberg, 1965) was used to assess general self-esteem. Participants indicated their agreement with 10 items, such as “At times I think I am no good at all”, on a 4-point scale ranging from *Strongly Agree* (1) to *Strongly Disagree* (4). Higher scores indicated higher self-esteem. This scale is well-established for use with adolescents, and demonstrates adequate temporal reliability (*r* = .87) and internal consistency (Krones, Stice, Batres, & Orjada, 2005). Cronbach’s alpha for this sample was .91.

**Perceived Impact of Thinness and Appearance on Friendships**

A single item was used to assess the perceived impact of thinness on friendships for girls. This was adapted from Paxton and colleagues (1999), and asked participants to indicate their agreement with the statement “If I was thinner I would have better friends than I do now” on a scale ranging from *Strongly Agree* (1) to *Strongly Disagree* (4). A *Don’t know* option was also provided.

Boys were asked four questions regarding the impact of appearance on friendships. These items were devised for the current study, and assessed the impact of appearance for both girls and boys on friendships and romantic relationships. For example, boys were asked to indicate their agreement with the statement “Better looking girls have more friends”. Cronbach’s alpha for the boys’ scale in this sample was .90.

**Psychological Status**

Anxiety and depression were assessed using the Hospital Anxiety & Depression Scale (HADS; Zigmond & Snaith, 1983). This is a 14-item scale, with half of the items relating to
anxiety and the other half to depression. Higher scores indicated more anxiety/depression. Although originally developed for use with adult clinical samples, the HADS has been validated for use with adolescents in community settings (White, Leach, Sims, Atkinson, & Cottrell, 1999). Both subscales demonstrated low internal reliability in this sample (Anxiety $\alpha = .61$; Depression $\alpha = .43$), however the removal of items resulted in an adequate internal reliability for both subscales (Anxiety $\alpha = .76$; Depression $\alpha = .64$)

**Perceived Influence of School Gender Composition**

To gather individuals’ perceptions regarding the impact of school gender composition, girls were asked about the social pressures they thought would be experienced in other schools. That is, all-girls’ students were asked how they thought social pressures would operate at coeducational schools, including whether they thought there would be pressure from boys to be thin and whether boys would notice girls’ weight (three questions in total; $\alpha = .61$), and how accepted they believed they would be by boys. Girls attending coeducational schools were asked about their perceptions of all-girls’ schools (three questions in total; $\alpha = .73$). These were rated on a 5-point scale, with higher scores indicating greater perceived social pressures. In addition, coeducational girls were asked, in an open-ended question, whether they thought body image concerns would be different at an all-girls’ school. The majority of participants provided a response to this question.

**Perceptions of School Influence**

Two questions were asked in order to further ascertain the role participants felt their school had in contributing to body image concerns. That is, all participants were asked whether they thought there was anything about their school environment in particular that either increased or decreased students’ body image concerns. An open-ended space followed, allowing participants to explain these aspects of the school environment in their own words. Open-ended responses were not, however, analysed in the current study.
**APPROACH TO ANALYSIS**

Numerous approaches are available for the analysis of data which includes variables at multiple levels and where individual variables are nested within groups. A key issue to consider when deciding on an analytic technique for such data is at which level the analysis should take place. It is at this point that one needs to consider whether the behaviours of interest are conceptualised as individual- or group-level phenomena. That is, are these behaviours seen simply as a characteristic of individuals, albeit aggregated at a group level, or is there something about the groups themselves that contribute to these behaviours? In the case of body image concern and disordered eating, for example, are these behaviours seen as occurring solely within the individual, although they may be influenced by higher-level variables, or does the peer group itself actually play a part in the body image concern and disordered eating of its members? The answer to this question determines which of the many available analytic techniques are utilised.

When the behaviours of interest, in this case body image concern and disordered eating, have been conceptualised as individual-level phenomena, various methods including correlational analyses, analyses of variance (ANOVAs) and hierarchical regression analyses have been utilised. For example, Shroff and Thompson (2006), in a study investigating the relationships between peer variables, body image concern, disordered eating and self-esteem, used a series of correlations to investigate whether participants were comparable to those they had nominated as friends on these criterion variables. That is, the correlation between an individual’s score and the mean score of their friends was calculated, with stronger correlations indicating greater similarity between friendship group members. The variables in this case were still seen as individual-level phenomena, however, although they could be seen to aggregate at the friendship group level.

A correlational approach was also adopted by Basow, Foran and Bookwala (2007), who investigated the associations between sorority membership status, body objectification, disordered eating, and social pressure. In order to determine for which types of sorority membership these relationships were strongest, Basow and colleagues calculated and
compared the correlations between social pressure, objectified body consciousness, and disordered eating for each group. Different patterns were expected, and found, for each type of sorority membership. This study also used ANOVAs to explore how group membership related to body objectification, disordered eating, and social pressure.

Another technique commonly used to explore the outcomes of group membership is hierarchical regression. For example, a study investigating the role of peer crowds used hierarchical regression to examine the effect of peer crowd affiliation on various eating, exercise, and weight control behaviours (Mackey & La Greca, 2007). Hierarchical regression was also utilized by Lieberman, Gauvin, Bukowski and White (2001) in their study examining the links between interpersonal relationships, body esteem and eating behaviours in adolescent girls. In this case, regression analyses were employed to explore the effect of peer factors including popularity and perceptions of peer pressure on dietary restraint, bulimic behaviours, and body esteem.

Finally, the analysis plan of Paxton and colleagues (Paxton, et al., 1999) utilized all of these techniques – correlation, ANOVAs, and regression - in a comprehensive study investigating the influence of school friendship groups on individual body image and weight concerns. The first step of Paxton and colleagues’ analysis involved the use of ANOVAs to determine the covariates of body image and weight concerns, by comparing the within- and between-clique variance on body mass index, depression, anxiety, and self-esteem. A second ANOVA, aiming to examine whether clique members were similar on body image concern and disordered eating, and thus to determine the characteristics of friendship cliques, then compared the within- and between-clique variance on these criterion variables, controlling for the covariates observed earlier.

In order to examine other attributes associated with cliques exhibiting different levels of body image concern and disordered eating, Paxton and colleagues (1999) then performed correlational analyses. These used the mean of the clique members’ scores on each variable to characterize each clique. Correlations were calculated between mean clique scores on body image concern and disordered eating, and a range of outcome variables including self-esteem,
depression, peer influence variables, teasing, and peer acceptance. Finally, a series of
hierarchical regression analyses were conducted in order to investigate the role of friend- and
peer-related variables in contributing to body image concern and disordered eating, after
taking into account individual variables, including body mass index, depression, media
pressure and family support, that had been previously identified in the literature. Friend- and
peer-related variables included friend support, peer acceptance, teasing, and social
comparison, as well as the adjusted clique mean on the dependent variable of interest.

Although a useful approach to the analysis of data of this type, these techniques are limited
in that they only take into account a single-level of analysis (e.g. Kashy & Kenny, 2000). As
data of this type commonly incorporates at least two levels (individual and group), an
alternative approach is to conceptualise the behaviours of interest as group-level phenomena,
and hence perform analyses at multiple levels. This is the approach taken in the current study,
with the peer group itself being seen as contributing to body image concern and disordered
eating above and beyond the role of the individual. This type of analysis thus requires
statistical techniques that can concurrently contend with different levels of influence
(Espelage, Holt, & Henkel, 2003).

One such technique is hierarchical linear modelling (HLM), a statistical procedure
employed in the analysis of hierarchically-organised or nested data (Attar-Schwartz &
Khoury-Kassabri, 2008). HLM offers a number of advantages over other methods such as
ANOVA and regression, as it allows for the investigation of the capacity of group-level
variables to explain individual-level variance, as well as enabling one to examine both main
effects and interactions within and between levels (Payne, 2008). This technique is also useful
in adjusting for the non-independence observed within nested data (Burchfield, 2009), also
known as the intra-class correlation, which can result in an inflated alpha level if single-level
analyses are used (Espelage, et al., 2003).

Hierarchical linear modelling was thus used in this study in an attempt to investigate the
individual- and group-level predictors of body image concern and disordered eating attitudes
and behaviours. A two-level model was used, with individual variables at Level 1 and clique
variables at Level 2. Separate analyses were conducted for body image concern and various
facets of disordered eating. Model estimation followed the guidelines set forth by Bryk and

The current study attempted a comprehensive analysis, utilising each of the techniques
described above. As a first step, a whole-sample analysis was conducted in order to
investigate characteristics of the sample as a whole, utilising ANOVAs, correlational, and
hierarchical regression analyses. Subsequently, as this study was designed to be a conceptual
replication and extension of Paxton and colleagues’ (1999) study, the analysis then attempted
to replicate the analytic plan used in this earlier study. These analyses are presented in the
following chapter. A hierarchical linear modelling analysis was then conducted, with the
results presented in Chapter Eight.
CHAPTER SEVEN
RESULTS FROM THE QUANTITATIVE ANALYSIS (1)

INTRODUCTION

The current study had a number of aims, as outlined in the previous chapters. Firstly, it attempted to replicate the results of Paxton and colleagues’ (1999) study which found similarities among friendship cliques in body image concerns and disordered eating. Secondly, this study aimed to extend these results to the exploration of the actual contribution of boys to the body image concerns of girls, as well as examining the concerns of boys themselves. Finally, the current study attempted to investigate the role of various factors not studied by Paxton and colleagues, including peer group identification, competitiveness, media exposure, thin-ideal internalisation, and the potential influence of teachers and school staff. In addition, specific attention was paid to the contribution of the school’s gender composition throughout these analyses.

OVERVIEW OF ANALYSIS

This section of the quantitative analysis begins by outlining the characteristics of the sample as a whole. This includes all participants, male and female, from coeducational and all-girls’ schools, whether assigned to cliques or not. The aim of this is to investigate macro-level differences between genders and school-types. Following this, the characteristics of friendship cliques and their members are presented. The subsequent analyses are then conducted using only those individuals assigned to cliques, beginning with a preliminary analysis aiming to compare these individuals according to their gender and school-type. A conceptual replication and extension, respectively, of Paxton and colleagues’ (1999) analysis is presented next, followed by a more in-depth investigation of the differential predictors of body image concerns and disordered eating across school-types. Finally, the potential influence of boys is explored, with these analyses including only those female students who had nominated boys as friends, although these boys were not found to be part of their
friendship cliques in the Social Network Analysis. The following pages present the results of these analyses.

WHOLE-SAMPLE ANALYSIS

In order to investigate characteristics of the sample as a whole, and differences between gender and school types, a whole-sample analysis was first conducted. As a first step, a multivariate analysis of variance (MANOVA) was conducted to compare each gender and school-type combination (all-girls’, coeducational girls, and coeducational boys) on body mass index (BMI), depression, anxiety, and self-esteem. This MANOVA was significant ($F(8,544) = 5.54, p = .000$), with univariate $F$ values revealing significant differences on self-esteem ($F(2,274) = 9.09, p = .000$) and anxiety ($F(2,274) = 3.97, p = .020$). Follow-up t-tests showed both all-girls’ ($t(192) = 2.67, p = .008$) and coeducational girls ($t(184) = 4.50, p = .000$) to demonstrate significantly lower self-esteem than coeducational boys. In addition, coeducational girls demonstrated significantly greater levels of anxiety than coeducational boys ($t(180) = -2.75, p = .007$). Means for these variables are presented in Table 7.1.

Table 7.1

Means for Psychological Variables by Gender and School Type

<table>
<thead>
<tr>
<th>Variable</th>
<th>All-girls’ (n=107) M(SD)</th>
<th>Coed. girls (n=93) M(SD)</th>
<th>Coed. boys (n=77) M(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>20.35 (3.55)</td>
<td>21.05 (3.18)</td>
<td>21.43 (3.69)</td>
</tr>
<tr>
<td>Self-esteem a</td>
<td>2.98 (.59)*</td>
<td>2.83 (.56)*</td>
<td>3.19 (.49)*</td>
</tr>
<tr>
<td>Depression b</td>
<td>.24 (.36)</td>
<td>.25 (.37)</td>
<td>.33 (.39)</td>
</tr>
<tr>
<td>Anxiety b</td>
<td>1.04 (.56)</td>
<td>1.12 (.53)*</td>
<td>.89 (.51)*</td>
</tr>
</tbody>
</table>

* indicates significant difference

a Possible score ranged from 1 to 4; b Possible score ranged from 0 to 3

A series of multivariate analyses of covariance (MANCOVAs) were then conducted to determine group differences on sociocultural variables. These were conducted for females only, as data for some variables were not available for boys. Firstly, a MANCOVA was
conducted with all family, teacher and media variables as dependent variables, and self-esteem and anxiety as covariates. This MANCOVA was not significant \((F (7,190) = 1.26, p = .273)\). A second MANCOVA was then conducted with peer- and friend-related variables as dependent variables, and self-esteem and anxiety as covariates. This was significant \((F (12,177) = 19.55, p = .000)\), with univariate \(F\) values revealing significant differences on peer acceptance \((F (1,188) = 143.17, p = .000)\), ‘thin’ teasing \((F (1,188) = 5.16, p = .024)\), and friends’ concern with thinness \((F (1,188) = 7.68, p = .006)\), whereby coeducational girls experienced greater acceptance and less ‘thin’ teasing, and perceived their friends to be more concerned with thinness, than all-girls’ students. Means for these variables are presented in Table 7.2.

A further MANCOVA was then conducted to compare each gender and school-type combination on the dependent variables of body image concern, disordered eating, dieting behaviour, bulimic behaviour, and oral control, with self-esteem and anxiety entered as covariates. This MANCOVA was significant \((F (8, 516) = 9.01, p = .000)\), with univariate \(F\) values revealing significant differences on body image concern \((F (2,260) = 35.89, p = .000)\) and dieting behaviour \((F (2,260) = 5.12, p = .007)\). Post-hoc analyses showed all-girls’ students to evidence significantly greater body image concern than coeducational female students \((p = .035)\), who in turn showed greater body image concern than boys \((p = .000)\). All-girls’ students also showed greater dieting behaviour \((p = .002)\) than boys, while coeducational girls did not differ significantly from either all-girls’ or male students on this variable. Similar results were obtained when also controlling for peer acceptance, ‘thin’ teasing, and friends’ concern with thinness (girls only; \(F (4,175) = 3.42, p = .010)\), indicating that these differences are not due to observed differences in sociocultural variables. Means for these variables are presented in Table 7.3.
Table 7.2

*Descriptive Statistics for Sociocultural Variables by School Type (Girls Only)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>All-girls’ (n=100) M(SD)</th>
<th>Coeducational girls (n=92) M(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family support a</td>
<td>5.35 (1.54)</td>
<td>5.44 (1.49)</td>
</tr>
<tr>
<td>Family as a source of influence b</td>
<td>2.44 (1.39)</td>
<td>2.37 (1.11)</td>
</tr>
<tr>
<td>Pressure from family to be thin b</td>
<td>1.73 (.99)</td>
<td>1.91 (1.06)</td>
</tr>
<tr>
<td>Media as a source of influence b</td>
<td>3.17 (1.24)</td>
<td>3.21 (1.29)</td>
</tr>
<tr>
<td>Pressure from media to be thin b</td>
<td>2.75 (1.22)</td>
<td>2.64 (1.19)</td>
</tr>
<tr>
<td>Comparison with models b</td>
<td>2.59 (1.26)</td>
<td>2.50 (1.18)</td>
</tr>
<tr>
<td>Teachers as a source of influence b</td>
<td>1.69 (.78)</td>
<td>1.59 (.79)</td>
</tr>
<tr>
<td>Peer group identification b</td>
<td>4.21 (.72)</td>
<td>4.04 (.74)</td>
</tr>
<tr>
<td>Peer acceptance b</td>
<td>2.60 (.57)***</td>
<td>3.48 (.65)***</td>
</tr>
<tr>
<td>Friend support a</td>
<td>6.09 (.93)</td>
<td>6.09 (1.00)</td>
</tr>
<tr>
<td>Friends as a source of influence b</td>
<td>2.32 (1.08)</td>
<td>2.19 (1.01)</td>
</tr>
<tr>
<td>Pressure from peers to be thin b</td>
<td>1.73 (.87)</td>
<td>1.91 (.92)</td>
</tr>
<tr>
<td>Comparison with peers b</td>
<td>2.96 (1.19)</td>
<td>3.05 (1.15)</td>
</tr>
<tr>
<td>Peer ‘fat’ teasing b</td>
<td>1.25 (.63)</td>
<td>1.37 (.59)</td>
</tr>
<tr>
<td>Peer ‘thin’ teasing b</td>
<td>1.65 (1.02)*</td>
<td>1.35 (.66)*</td>
</tr>
<tr>
<td>Peer appearance criticism b</td>
<td>1.37 (.80)</td>
<td>1.40 (.83)</td>
</tr>
<tr>
<td>Friends’ concern with thinness b</td>
<td>2.45 (.52)**</td>
<td>2.51 (.53)**</td>
</tr>
<tr>
<td>Perceived impact of thinness on friendships c</td>
<td>1.05 (.78)</td>
<td>1.07 (.80)</td>
</tr>
<tr>
<td>Appearance conversations b</td>
<td>2.40 (.89)</td>
<td>2.54 (1.01)</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01; *** p < .001

a Possible score ranged from 1 to 7; b Possible score ranged from 1 to 5; c Possible score ranged from 1 to 4
Table 7.3

Descriptive Statistics for Dependent Variables By Gender and School Type

<table>
<thead>
<tr>
<th>Variable</th>
<th>All-girls’ (n=101)</th>
<th>Coed. girls (n=92)</th>
<th>Coed. boys (n=72)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
</tr>
<tr>
<td>Body image concern</td>
<td>2.85 (1.20)</td>
<td>2.76 (1.11)</td>
<td>1.56 (.63)</td>
</tr>
<tr>
<td>Disordered eating</td>
<td>.30 (.32)</td>
<td>.29 (.29)</td>
<td>.17 (.14)</td>
</tr>
<tr>
<td>Dieting behaviour</td>
<td>.32 (.49)</td>
<td>.29 (.41)</td>
<td>.10 (.17)</td>
</tr>
<tr>
<td>Bulimic behaviour</td>
<td>.29 (.30)</td>
<td>.31 (.35)</td>
<td>.30 (.32)</td>
</tr>
<tr>
<td>Oral control</td>
<td>.26 (.37)</td>
<td>.28 (.41)</td>
<td>.22 (.26)</td>
</tr>
</tbody>
</table>

\( ^{a} \) Possible score ranged from 1 to 6; \( ^{b} \) Possible score ranged from 0 to 3

As groups were found to differ on body image concern and dieting behaviour, correlational analyses were then conducted in order to determine the correlates of these variables for each of the gender and school-type combinations. Results of these analyses are presented in Tables 7.4 and 7.5.

As can be seen in Table 7.4, body image concern was significantly correlated with dieting behaviour, BMI, and self-esteem as well as appearance conversations, peer pressure, ‘fat’ teasing and social comparison for both all-girls’ and coeducational girls. In addition, for all-girls’ students only, body image concern was significantly related to friends’ concern with thinness, and for coeducational students only, body image concern was negatively related to ‘thin’ teasing. Both all-girls’ and coeducational girls’ dieting behaviour was correlated with self-esteem and anxiety, as well as appearance criticism, appearance conversations, pressure from peers, ‘fat’ teasing and social comparison. In addition, for coeducational girls only, both body image concern and dieting behaviour were significantly correlated with the perceived impact of thinness on friendships (PITOF). Each of these correlations was in the expected direction. Other correlations can be observed in Table 7.4.
Table 7.4

*Correlates of Body Image Concern (BSQ) and Dieting Behaviour (EAT-Diet) for All-Girls’ Students (n=114) and Coeducational Girls (n=107)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Body image concern</th>
<th>Dieting behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All-girls’ Coed. girls</td>
<td>All-girls’ Coed. girls</td>
</tr>
<tr>
<td>Body image concern</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Disordered eating</td>
<td>.604***</td>
<td>.610***</td>
</tr>
<tr>
<td>Dieting behaviour</td>
<td>.666***</td>
<td>.644***</td>
</tr>
<tr>
<td>Body mass index (BMI)</td>
<td>.499***</td>
<td>.433***</td>
</tr>
<tr>
<td>Depression</td>
<td>.404***</td>
<td>.157</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-.632***</td>
<td>-.488***</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.421***</td>
<td>.179</td>
</tr>
<tr>
<td>Friend support</td>
<td>-.099</td>
<td>-.078</td>
</tr>
<tr>
<td>Social anxiety</td>
<td>.190</td>
<td>.287**</td>
</tr>
<tr>
<td>Peer acceptance</td>
<td>-.134</td>
<td>-.381***</td>
</tr>
<tr>
<td>PITOF</td>
<td>.069</td>
<td>.268**</td>
</tr>
<tr>
<td>Friends as source of influence</td>
<td>.228*</td>
<td>.269**</td>
</tr>
<tr>
<td>Friends’ concern with thinness</td>
<td>.431***</td>
<td>.119</td>
</tr>
<tr>
<td>Appearance conversations</td>
<td>.400***</td>
<td>.311**</td>
</tr>
<tr>
<td>Peer ‘fat’ teasing</td>
<td>.476***</td>
<td>.377***</td>
</tr>
<tr>
<td>Peer ‘thin’ teasing</td>
<td>-.158</td>
<td>-.223*</td>
</tr>
<tr>
<td>Pressure from peers to be thin</td>
<td>.551***</td>
<td>.597***</td>
</tr>
<tr>
<td>Peer appearance criticism</td>
<td>.456***</td>
<td>.285**</td>
</tr>
<tr>
<td>Social comparison with peers</td>
<td>.769***</td>
<td>.685***</td>
</tr>
</tbody>
</table>

* p<.05 **p<.01 ***p<.001

For boys, as seen in Table 7.5, body image concern was correlated with self-esteem, depression and anxiety, while dieting behaviour was correlated with self-esteem only. Both body image concern and dieting behaviour were significantly related to peer acceptance, and interestingly, boys’ body image concern and dieting behaviour were also significantly related...
to their perceptions of girls’ concern with thinness. This may indicate that boys can also be
influenced by the concerns of girls, or that boys who are themselves concerned with thinness
are more likely to infer this same concern in girls.

Table 7.5

Correlates of Body Image Concern (BSQ) and Dieting Behaviour (EAT-Diet) for
Coeducational Boys (n=85)

<table>
<thead>
<tr>
<th>Variable</th>
<th>BSQ</th>
<th>Dieting Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Image Concern</td>
<td>-</td>
<td>.417***</td>
</tr>
<tr>
<td>Disordered Eating</td>
<td>.191</td>
<td>.701***</td>
</tr>
<tr>
<td>Dieting Behaviour</td>
<td>.417***</td>
<td>-</td>
</tr>
<tr>
<td>Body Mass Index (BMI)</td>
<td>.241*</td>
<td>-.011</td>
</tr>
<tr>
<td>Depression</td>
<td>.337**</td>
<td>.196</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>-.517***</td>
<td>-.268*</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.374**</td>
<td>.160</td>
</tr>
<tr>
<td>Friend Support</td>
<td>-.288**</td>
<td>-.180</td>
</tr>
<tr>
<td>Social Anxiety</td>
<td>.270*</td>
<td>.086</td>
</tr>
<tr>
<td>Peer Acceptance</td>
<td>-.253*</td>
<td>-.269*</td>
</tr>
<tr>
<td>Girls’ Perceived Concern with Thinness</td>
<td>.315*</td>
<td>.290*</td>
</tr>
</tbody>
</table>

* p<.05 **p<.01 ***p<.001

Following the correlational analyses, hierarchical regression analyses were conducted to
determine whether the predictors of body image concern and dieting behaviour differed for
each of the gender and school-type combinations. Separate analyses were conducted for boys
and girls, as equivalent data were not available for some variables of interest. All regression
equations followed the same steps. Specifically, individual, family, teacher and media
variables, where relevant, were entered in Step 1, followed by friend- and peer-related
variables in Step 2. For girls, school-type (dummy-coded as 0 for all-girls’; 1 for
coeeducational girls) was also entered at this step. In addition, interaction terms were created
for the girls’ regression analyses, whereby school-type was multiplied by various peer-related
variables, namely the perceived impact of thinness on friendships, social comparison with
peers, friends’ concern with thinness, appearance criticism, ‘thin’ and ‘fat’ teasing, peer acceptance, and appearance conversations. These variables had either earlier been established to differ between school-types (i.e. peer acceptance and friends’ concern with thinness), or were theoretically expected to differ. Interaction terms were entered at Step 3.

**Body image concern.** Girls’ body image concern was predicted by BMI ($\beta = .19$, $t (222) = 2.67, p = .009$), self-esteem ($\beta = -.20$, $t (222) = -2.37, p = .019$), and comparison with peers ($\beta = .30$, $t (222) = 2.87, p = .005$). The first two steps accounted for 71% of the variance, with both Step 1 ($\Delta R^2 = .62$, $F (11,147) = 21.62, p = .000$) and Step 2 ($\Delta R^2 = .09$, $F (14,133) = 3.01, p = .000$) adding significant variance. However the final step did not add any significant variance ($\Delta R^2 = .01$, $F (8,125) = .46, p = .885$), indicating that the prediction of body image concern did not differ for coeducational and all-girls’ students. A total of 72% of the variance was accounted for.

Boys’ body image concern was significantly predicted by self-esteem only ($\beta = -.50$, $t (88) = -2.92, p = .006$). Psychological variables added significant variance ($\Delta R^2 = .37$, $F (5,49) = 5.66, p = .000$), although peer variables did not ($\Delta R^2 = .07$, $F (7,42) = .79, p = .601$). A total of 44% of the variance was accounted for.

**Dieting behaviour.** Appearance conversations ($\beta = .41$, $t (222) = 3.12, p = .002$) was the only significant predictor of girls’ dieting behaviour. Both Step 1 ($\Delta R^2 = .35$, $F (11,150) = 7.31, p = .000$) and Step 2 ($\Delta R^2 = .12$, $F (14,136) = 2.12, p = .014$) added significant variance, while Step 3 ($\Delta R^2 = .02$, $F (8,128) = .74, p = .657$) did not. A total of 49% of the variance was accounted for.

There were no significant predictors of dieting behaviour for boys. Neither psychological ($\Delta R^2 = .06$, $F (5,51) = .63, p = .680$) nor peer variables ($\Delta R^2 = .11$, $F (7,44) = .82, p = .575$) added significant variance. A total of 17% of the variance was accounted for.

**Summary**

When all participants were considered, all-girls’ students were found to exhibit higher body image concern and more dieting behaviour than coeducational girls and boys. However,
regression analyses did not find the interaction of school-type and various peer-related variables to be significant predictors of either body image concern or dieting behaviour, indicating that the prediction of these variables does not differ for all-girls’ and coeducational girls on the whole. Coeducational and all-girls’ students were also found to differ on peer acceptance, ‘thin’ teasing, and friends’ concern with thinness, although these variables were not consistently correlated with either body image concern or dieting behaviour. Specifically, ‘thin’ teasing was negatively related to body image concern for coeducational girls only, while friends’ concern with thinness was positively related to all-girls’ body image concern. Other significant correlations were observed between body image concern and dieting behaviour and appearance conversations, pressure from peers, ‘fat’ teasing, and social comparison with peers. Boys’ body image concern and dieting were significantly correlated with peer acceptance and their perceptions of girls’ concerns with thinness, although no peer variables emerged as significantly predictors in regression analyses.

**FRIENDSHIP AND CLIQUE CHARACTERISTICS**

While the preceding analysis showed differences between school types when the sample was considered as a whole, the following analyses required the identification of friendship cliques, as a major aim of this analytic stage was to investigate the contribution of these groups to individuals’ body image concerns and disordered eating. A total of 44 friendship groups consisting of 3 or more participants were identified through the Social Network Analysis, accounting for 193 individuals (37 boys, 156 girls). One hundred and twenty-one students (53 boys, 68 girls) could not be assigned to cliques, and hence were omitted from the clique analyses which follow.

Individuals nominated between 0 and 26 best friends and between 0 and 32 friendship group members. Boys and girls both nominated more best friends than friendship group members, indicating that best friends do not necessarily form a part of one’s friendship group, although these differences were not significant (boys t (88) = .20, p = .839; girls t (218) = .77, p = .443). There was also no significant difference between the number of best friends (t (306)
= -.12, \( p = .91 \)) and friendship group members \((t (306) = -.33, \ p = .74)\) nominated by boys and girls. However, those assigned to cliques nominated significantly more best friends \((t (306) = 6.20, \ p = .000)\) and friendship group members \((t (306) = 3.59, \ p = .000)\) than those not assigned to cliques. Table 7.6 provides the mean number of friends nominated by the various participant groups.

Table 7.6

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Friend Type</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall (N=308)</td>
<td>Best Friend (BF)</td>
<td>5.53</td>
<td>4.15</td>
</tr>
<tr>
<td></td>
<td>Friendship Group (FG)</td>
<td>5.31</td>
<td>4.71</td>
</tr>
<tr>
<td>Boys (n=89)</td>
<td>BF</td>
<td>5.57</td>
<td>4.69</td>
</tr>
<tr>
<td></td>
<td>FG</td>
<td>5.45</td>
<td>4.84</td>
</tr>
<tr>
<td>Girls (n=219)</td>
<td>BF</td>
<td>5.51</td>
<td>3.91</td>
</tr>
<tr>
<td></td>
<td>FG</td>
<td>5.26</td>
<td>4.67</td>
</tr>
<tr>
<td>Clique assigned (n=192)</td>
<td>BF</td>
<td>6.60</td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td>FG</td>
<td>6.05</td>
<td>4.80</td>
</tr>
<tr>
<td>Not assigned (n=116)</td>
<td>BF</td>
<td>3.75</td>
<td>3.77</td>
</tr>
<tr>
<td></td>
<td>FG</td>
<td>4.09</td>
<td>4.30</td>
</tr>
</tbody>
</table>

Friendship groups ranged in size from 3 to 11, with a mean size of 4.39 (SD = 1.86). These groups were primarily homogeneous with regard to gender composition, with only one clique including both boys and girls. Girls’ groups were on average slightly larger (mean = 4.43, SD = 1.93) than boys’ (mean = 4.25, SD = 1.75), although these differences were not statistically significant \((t (41) = .24, \ p = .812)\).

Forty students (14 boys, 26 girls) from Western College were assigned to eight friendship groups, ranging in size from 3 to 11 (mean = 5.00, SD = 2.78). All but one of these groups were homogeneous with regard to gender composition, and girls’ groups (mean = 6.25, SD =
3.59) were larger than boys’ (mean = 3.67, SD = 1.15), although not significantly so ($t (5) = 1.18, p = .293$). Seventy-three students from North School were assigned to 19 cliques, 14 of which were at Campus One (55 students; 23 boys, 32 girls), and 5 at Campus Two (18 students, all girls). These cliques ranged in size from 3 to 8, with a mean of 3.84 (SD = 1.34). Girls’ groups were smaller (mean = 3.57, SD = .94) than boys’ (mean = 4.60, SD = 2.07), though not significantly so ($t (17) = -1.52, p = .147$). Finally, 80 students from Central College were assigned to 17 cliques, ranging in size from 3 to 8 (mean = 4.71, SD = 1.79).

The strength of friendship ties within cliques was calculated using a measure of group cohesion. This was defined as the total of within-clique links present divided by the possible number of within-clique links, where the number of possible links in a clique of size $x$ was defined by the formula:

$$(x^2 - x)/2$$

In keeping with Paxton and colleagues (1999), a minimum cohesion score of .40 was set. The majority of ties (56.8%) exhibited the maximum cohesion score of 1.00, indicating very strong within-clique links. The full range of cohesion scores are shown in Table 7.7.

Table 7.7

<table>
<thead>
<tr>
<th>Cohesion score (range)</th>
<th>Number of cliques</th>
<th>% cliques</th>
</tr>
</thead>
<tbody>
<tr>
<td>.50-.59</td>
<td>4</td>
<td>9.1</td>
</tr>
<tr>
<td>.60-.69</td>
<td>6</td>
<td>13.6</td>
</tr>
<tr>
<td>.70-.79</td>
<td>4</td>
<td>9.1</td>
</tr>
<tr>
<td>.80-.89</td>
<td>2</td>
<td>4.6</td>
</tr>
<tr>
<td>.90</td>
<td>3</td>
<td>6.8</td>
</tr>
<tr>
<td>1.00</td>
<td>25</td>
<td>56.8</td>
</tr>
</tbody>
</table>

The mean clique cohesion score was .87 (SD = .18), with boys exhibiting a slightly higher cohesion score (mean = .89, SD = .14) than girls (mean = .86, SD = .19), although these
differences were not statistically significant \((t(41) = -0.41, p = 0.687)\). There were also no significant differences in cohesion between schools \((F(3, 40) = 0.13, p = 0.943)\) or by school type \((t(42) = -0.23, p = 0.822)\).

Population scores, defined as the number of nominations an individual received, were also calculated. Population scores ranged from 0 to 33, with a mean of 10.85 (SD = 6.41).

Population did not differ significantly between boys (mean = 10.80, SD = 7.98) and girls (mean = 10.87, SD = 5.66) \((t(306) = 0.09, p = 0.931)\), however those assigned to cliques (mean = 12.96, SD = 5.81) were significantly more popular than those not assigned to cliques (mean = 7.35, SD = 5.81) \((t(306) = 8.20, p = 0.000)\). Population scores were also calculated for cliques by averaging the popularity scores of each of the clique’s members. Clique popularity scores ranged from 4.33 to 26, with a mean of 11.88 (SD = 4.83).

**CLIQUE-ASSIGNED ANALYSIS**

The following analyses refer only to those individuals who were assigned to cliques \((n = 193)\). These analyses were conducted in order to provide a preliminary comparison of those individuals assigned to cliques from each gender and school-type combination (all-girls’, coeducational girls, coeducational boys) on various dependent variables.

Firstly, the hypothesis that all-girls’ students would differ from coeducational girls and boys on BMI, depression, anxiety, and self-esteem was examined using a multivariate analysis of variance (MANOVA). This MANOVA was significant \((F(8,340) = 4.00, p = 0.000)\), with univariate \(F\) values revealing significant differences on self-esteem \((F(2,172) = 5.97, p = 0.003)\) and anxiety \((F(2,172) = 3.28, p = 0.040)\), while results for BMI approached significance \((F(2,172) = 3.05, p = 0.050)\). Follow-up \(t\)-tests showed that both all-girls’ (AG) and coeducational female (CG) students evidenced significantly lower self-esteem \((AG t(112) = -2.30, p = 0.023; CG t(109) = -4.05, p = 0.000)\) and greater anxiety \((AG t(111) = 1.99, p = 0.049; CG t(106) = 2.71, p = 0.008)\) than boys, although they did not differ from each other on these variables. In addition, all-girls’ students exhibited significantly lower BMI than

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coeducational girls ($t = -2.34, p = .020$), but not boys. Table 7.8 provides the descriptive statistics for these variables.

**Table 7.8**

*Descriptive Statistics for Dependent Variables by Gender and School-Type (Clique-Assigned Only)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>All-girls’ ($n=74$)</th>
<th>Coed. girls ($n=66$)</th>
<th>Coed. boys ($n=35$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>19.76 (2.87)</td>
<td>20.82 (2.67)</td>
<td>20.95 (3.49)</td>
</tr>
<tr>
<td>Depression</td>
<td>.24 (.39)</td>
<td>.22 (.35)</td>
<td>.29 (.38)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.04 (.57)</td>
<td>1.12 (.54)</td>
<td>.83 (.47)</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>2.97 (.60)</td>
<td>2.81 (.52)</td>
<td>3.21 (.52)</td>
</tr>
<tr>
<td>Body image concern</td>
<td>2.76 (1.19)</td>
<td>2.74 (1.09)</td>
<td>1.41 (.38)</td>
</tr>
<tr>
<td>Disordered eating</td>
<td>.27 (.30)</td>
<td>.28 (.28)</td>
<td>.17 (.13)</td>
</tr>
<tr>
<td>Dieting behaviour</td>
<td>.28 (.45)</td>
<td>.27 (.39)</td>
<td>.08 (.13)</td>
</tr>
<tr>
<td>Bulimic behaviour</td>
<td>.25 (.24)</td>
<td>.30 (.39)</td>
<td>.33 (.36)</td>
</tr>
<tr>
<td>Oral control</td>
<td>.25 (.39)</td>
<td>.26 (.42)</td>
<td>.20 (.28)</td>
</tr>
</tbody>
</table>

*Possible score ranged from 0 to 3; \(^b\) Possible score ranged from 1 to 4; \(^c\) Possible score ranged from 1 to 6*

A series of MANCOVAs were then conducted to determine group differences on sociocultural variables. These were conducted for females only, as data for some variables were not available for boys. Firstly, a MANCOVA was conducted with all family, teacher and media variables as dependent variables, and self-esteem, anxiety, and BMI as covariates. This MANCOVA was significant ($F(7,121) = 2.34, p = .029$), with univariate $F$ values revealing significant differences on pressure from media ($F(1,127) = 4.14, p = .044$) and influence from teachers ($F(1,127) = 6.19, p = .014$), whereby all-girls’ students experienced higher levels of pressure and influence than coeducational girls. A second MANCOVA was then conducted with peer- and friend-related variables as dependent variables, while controlling for self-esteem, anxiety, and BMI. This MANCOVA was also significant ($F(12,121) = 16.95, p = .000$), with univariate $F$ values revealing significant differences on peer acceptance ($F$...
(1,123) = 123.60, \( p = .000 \) and friends’ concern with thinness \( (F(1,123) = 6.04, p = .015) \). In line with the whole-sample analysis, coeducational girls were found to experience greater peer acceptance and to perceive their friends as more concerned with thinness. Descriptive statistics for all variables are presented in Table 7.9.

Table 7.9

*Descriptive Statistics for Sociocultural Variables by School Type (Clique-Assigned Girls Only)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>All-girls’ (n=72)</th>
<th>Coeducational girls (n=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M(SD) )</td>
<td>( M(SD) )</td>
</tr>
<tr>
<td>Family support a</td>
<td>5.39 (1.49)</td>
<td>5.51 (1.29)</td>
</tr>
<tr>
<td>Family as a source of influence b</td>
<td>2.35 (1.46)</td>
<td>2.32 (1.10)</td>
</tr>
<tr>
<td>Pressure from family to be thin b</td>
<td>1.59 (.82)</td>
<td>1.85 (1.00)</td>
</tr>
<tr>
<td>Media as a source of influence b</td>
<td>3.10 (1.25)</td>
<td>3.19 (1.31)</td>
</tr>
<tr>
<td>Pressure from media to be thin b</td>
<td>2.81 (1.22)*</td>
<td>2.63 (1.16)*</td>
</tr>
<tr>
<td>Comparison with models b</td>
<td>2.66 (1.27)</td>
<td>2.55 (1.20)</td>
</tr>
<tr>
<td>Teachers as a source of influence b</td>
<td>1.71 (.80)*</td>
<td>1.42 (.61)*</td>
</tr>
<tr>
<td>Peer group identification b</td>
<td>4.30 (.73)</td>
<td>4.11 (.72)</td>
</tr>
<tr>
<td>Peer acceptance b</td>
<td>2.67 (.53)**</td>
<td>3.59 (.63)**</td>
</tr>
<tr>
<td>Friend support a</td>
<td>6.12 (.89)</td>
<td>6.20 (.87)</td>
</tr>
<tr>
<td>Friends as a source of influence b</td>
<td>2.27 (1.14)</td>
<td>2.20 (1.03)</td>
</tr>
<tr>
<td>Pressure from peers to be thin b</td>
<td>1.66 (.81)</td>
<td>1.85 (.85)</td>
</tr>
<tr>
<td>Comparison with peers b</td>
<td>2.93 (1.25)</td>
<td>3.06 (1.18)</td>
</tr>
<tr>
<td>Peer ‘fat’ teasing b</td>
<td>1.22 (.59)</td>
<td>1.29 (.43)</td>
</tr>
<tr>
<td>Peer ‘thin’ teasing b</td>
<td>1.71 (1.06)</td>
<td>1.31 (.57)</td>
</tr>
<tr>
<td>Peer appearance criticism b</td>
<td>1.32 (.77)</td>
<td>1.36 (.74)</td>
</tr>
<tr>
<td>Friends’ concern with thinness b</td>
<td>2.18 (.52)*</td>
<td>2.43 (.53)*</td>
</tr>
<tr>
<td>Perceived impact of thinness on friendships c</td>
<td>1.03 (.65)</td>
<td>1.03 (.82)</td>
</tr>
<tr>
<td>Appearance conversations b</td>
<td>2.40 (.88)</td>
<td>2.53 (1.02)</td>
</tr>
</tbody>
</table>

\( a \) Possible score ranged from 1 to 7; \( b \) Possible score ranged from 1 to 5; \( c \) Possible score ranged from 1 to 4

* significantly different at \( p<.05 \); ** significantly different at \( p<.01 \); *** significantly different at \( p<.001 \)
A MANCOVA was then conducted to compare all-girls’, coeducational girls, and boys on the dependent variables of interest (body image concern, disordered eating, dieting behaviour, bulimic behaviour, and oral control), while controlling for self-esteem, anxiety, and BMI. This MANCOVA was significant \( (F(8,310) = 7.24, p = .000) \), with univariate \( F \) values revealing significant differences on body image concern only \( (F(2,157) = 28.13, p = .000) \). Post-hoc analyses revealed both all-girls’ \( (p = .000) \) and coeducational girls \( (p = .000) \) to have significantly higher levels of body image concern than boys, while all-girls’ students also evidenced higher body image concern than coeducational girls. Means are presented in Table 7.8.

**CONCEPTUAL REPLICATION OF PAXTON ET AL. (1999) ANALYSIS**

The next step in the analysis of this data was a conceptual replication of Paxton and colleagues’ (1999) analysis. Again, these analyses were run using only those individuals assigned to cliques. Analyses were run separately for each gender and school type combination (i.e. all-girls’ female students; coeducational female students; and coeducational male students). In addition, as many variables were not normally distributed and could not be satisfactorily transformed, a set of parallel analyses were run using trichotomized variables. These analyses did not differ from those run using original values, and thus untransformed results are presented here.

As a first step, the likelihood that clique members were alike on measures of body mass index (BMI), depression, anxiety, and self-esteem was examined. Previous research has observed relationships between these variables and body image and eating behaviours (e.g. Presnell, et al., 2004), and hence the possibility of covariance was assessed using multivariate analyses of variance (MANOVAs) to compare the within- and between-group variance on these variables. These MANOVAs did not reveal significantly greater between- than within-group differences for any group (all-girls’ \( F(64,228) = .94, p = .604 \); coeducational girls \( F(72,188) = 1.01, p = .475 \); coeducational boys \( F(32,104) = 1.16, p = .288 \)), and thus no covariates of body image or eating behaviours were noted.
A second series of MANOVAs was then conducted to determine whether friendship clique members were similar to one another with regard to body image and disordered eating. This MANOVA was significant for all-girls’ students \( (F_{32,112} = 1.82, p = .012) \), with examination of the univariate \( F \) values revealing significantly greater between- than within-group variance on body image concern \( (F_{16,56} = 2.58, p = .005) \) but not disordered eating \( (F_{16,56} = 1.40, p = .177) \). No significant differences were obtained for coeducational girls \( (F_{36,96} = .90, p = .629) \) or boys \( (F_{16,52} = .77, p = .712) \). A further MANOVA comparing clique members on the various facets of disordered eating (dieting behaviour, bulimic behaviour, and oral control) was not significant for all-girls’ students \( (F_{48,186} = 1.08, p = .356) \), however examination of the univariate \( F \) values did reveal significantly greater between- than within-group variance on the EAT dieting subscale for all-girls’ students \( (F_{16,62} = 2.23, p = .013) \). No significant differences were found for coeducational girls \( (F_{54,171} = .85, p = .747) \) or boys \( (F_{24,81} = 1.37, p = .149) \). Hence it could be seen that, for all-girls’ students only, friendship groups could be distinguished by their level of body image concern and dieting behaviour. Coeducational students’ cliques did not appear to be able to be characterized on any measure of body image or eating concern. Descriptive statistics relating to all variables are presented in Table 7.10 (see over page).
Table 7.10

Range of Friendship Clique Means on Dependent Variables by School and Gender

<table>
<thead>
<tr>
<th>Variable</th>
<th>All-Girls’ (n=17)</th>
<th>Coed.Girls (n=18)</th>
<th>Coed. Boys (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>16.95-21.17</td>
<td>18.87-24.43</td>
<td>18.77-21.70</td>
</tr>
<tr>
<td>Depression (^a)</td>
<td>.03-.67</td>
<td>.00-.67</td>
<td>.00-.42</td>
</tr>
<tr>
<td>Anxiety (^a)</td>
<td>.44-1.54</td>
<td>.80-1.61</td>
<td>.39-1.08</td>
</tr>
<tr>
<td>Self-Esteem (^b)</td>
<td>2.60-3.52</td>
<td>2.21-3.18</td>
<td>2.98-3.53</td>
</tr>
<tr>
<td>Body Image Concern (^c)</td>
<td>1.53-3.98</td>
<td>1.74-4.07</td>
<td>1.18-1.88</td>
</tr>
<tr>
<td>Disordered Eating (^a)</td>
<td>.05-.63</td>
<td>.08-.55</td>
<td>.09-.28</td>
</tr>
<tr>
<td>Dieting Behaviour (^a)</td>
<td>.00-.92</td>
<td>.04-.65</td>
<td>.00-.31</td>
</tr>
<tr>
<td>Bulimia (^a)</td>
<td>.08-.44</td>
<td>.06-.89</td>
<td>.06-.56</td>
</tr>
<tr>
<td>Oral Control (^a)</td>
<td>.02-.43</td>
<td>.00-.67</td>
<td>.06-.43</td>
</tr>
</tbody>
</table>

\(^a\) Possible score ranged from 0 to 3; \(^b\) Possible score ranged from 1 to 4; \(^c\) Possible score ranged from 1 to 6

Correlational analyses were then carried out in order to examine the correlates of body image concern and dieting behaviour in all-girls’ cliques, following the preceding analysis whereby these cliques were found to be distinguished by these dependent variables. In order to characterize each group, mean clique scores for each variable were calculated, assuming equal contribution by all clique members. These mean scores were then used in the correlational analyses, with results shown in Table 7.11. As earlier MANOVAs did not find groups to be similar on general disordered eating, nor on the bulimia or oral control subscales, cliques could not be characterized with a group mean on these variables, and hence correlational analyses were not performed on these variables. In addition, as coeducational clique members were not found to be similar on any of these variables, correlational analyses were not conducted for these students.
Table 7.11

Correlates of Body Image Concern (BSQ) and Dieting Behaviour (EAT-Diet) for All-Girls’ Cliques

<table>
<thead>
<tr>
<th>Variable</th>
<th>BSQ</th>
<th>EAT-dieting subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Image Concern (BSQ)</td>
<td>-</td>
<td>.622**</td>
</tr>
<tr>
<td>Dieting (EAT)</td>
<td>.622**</td>
<td>-</td>
</tr>
<tr>
<td>Body Mass Index (BMI)</td>
<td>.205</td>
<td>-.296</td>
</tr>
<tr>
<td>Depression</td>
<td>.355</td>
<td>.198</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>-.771***</td>
<td>-.287</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.479</td>
<td>.196</td>
</tr>
<tr>
<td>Friend Support</td>
<td>-.442</td>
<td>-.280</td>
</tr>
<tr>
<td>Social Anxiety</td>
<td>-.144</td>
<td>-.067</td>
</tr>
<tr>
<td>Peer Acceptance</td>
<td>-.112</td>
<td>.217</td>
</tr>
<tr>
<td>Perceived Impact of Thinness on Friendships (PITOF)</td>
<td>-.233</td>
<td>-.097</td>
</tr>
<tr>
<td>Friends as Source of Influence</td>
<td>.187</td>
<td>.598*</td>
</tr>
<tr>
<td>Friends’ Concern with Thinness</td>
<td>.596*</td>
<td>.712**</td>
</tr>
<tr>
<td>Appearance Conversations</td>
<td>.607**</td>
<td>.717**</td>
</tr>
<tr>
<td>Peer ‘Fat’ Teasing</td>
<td>.348</td>
<td>.220</td>
</tr>
<tr>
<td>Peer ‘Thin’ Teasing</td>
<td>-.208</td>
<td>.320</td>
</tr>
<tr>
<td>Pressure to be Thin</td>
<td>.579*</td>
<td>.396</td>
</tr>
<tr>
<td>Peer Appearance Criticism</td>
<td>.427</td>
<td>.394</td>
</tr>
<tr>
<td>Social Comparison</td>
<td>.875***</td>
<td>.556*</td>
</tr>
</tbody>
</table>

Note. Number of cliques = 17.

* p<.05 **p<.01 ***p<.001

As can be seen in Table 7.11, significant correlations were found between mean clique scores on body image concern and appearance conversations, friends’ concern with thinness, pressure to be thin, and social comparison, as well as self-esteem. In addition, there were significant correlations between mean clique scores on dieting behaviour and friends as a source of influence, friends’ concern with thinness, appearance conversations, and social comparison. Neither peer appearance criticism nor peer teasing were found to be associated with body image concern or dieting behaviour.
Finally, in order to investigate the contribution of friend- and peer-related variables to the body image concerns and disordered eating behaviours of individuals, while taking into account individual, family, and media variables, hierarchical regression analyses were conducted with body image, disordered eating, dieting behaviour, bulimia, and oral control as dependent variables. Regression analyses were conducted for all-girls’ and coeducational girls separately; however, because of the small sample size, regression analyses were not conducted for boys. Following Paxton and colleagues (1999), all regression equations followed the same four steps. Specifically, BMI was entered in Step 1; psychological variables (depression, anxiety, and self-esteem) in Step 2; and family and media variables in Step 3, using the forced entry method. Each friend- and peer-related variables was then entered in Step 4 in order to clarify its contribution to the predicted variance. The adjusted clique mean on the dependent variable of interest was also entered at this step, as an approximation of clique attitudes and behaviours while accounting for the individual’s own score.

**Body image concern.** For all-girls’ students, as shown in Table 7.12, body image concern was predicted by BMI, self-esteem, media pressure, and pressure from peers. Each of these was in the expected direction, with the exception of peer pressure, whereby greater pressure predicted lower body image concern. In addition, the adjusted clique mean emerged as a significant predictor, indicating that the behaviour of other clique members significantly contributed to the variance in body image concern for all-girls’ students. All steps added significant variance, with 85% of the variance accounted for by the final step.

For coeducational girls, as shown in Table 7.13, only social comparison with peers was a significant predictor. Physiological, psychological, and peer variables all added significant variance, while family/media variables did not. The final model accounted for 74% of the variance.
Table 7.12  
Hierarchical Regression Predicting Individual Body Image Concern (BSQ) from Individual, Family/Media, and Peer Variables for All-Girls’ Students (n=80)

<table>
<thead>
<tr>
<th>Step and Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body mass index</td>
<td>.08</td>
<td>.03</td>
<td>.19</td>
<td>2.42*</td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>.53</td>
<td>.38</td>
<td>.16</td>
<td>1.42</td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-.97</td>
<td>.27</td>
<td>-.47</td>
<td>-3.62**</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.18</td>
<td>.23</td>
<td>-.08</td>
<td>-.78</td>
<td></td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family support</td>
<td>-.00</td>
<td>.08</td>
<td>-.00</td>
<td>-.02</td>
<td></td>
</tr>
<tr>
<td>Pressure from family to be thin</td>
<td>.11</td>
<td>.14</td>
<td>.07</td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td>Pressure from media to be thin</td>
<td>.39</td>
<td>.10</td>
<td>.40</td>
<td>3.73**</td>
<td></td>
</tr>
<tr>
<td>Step 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted clique mean</td>
<td>.28</td>
<td>.13</td>
<td>.19</td>
<td>2.26*</td>
<td></td>
</tr>
<tr>
<td>Friend support</td>
<td>.00</td>
<td>.13</td>
<td>.00</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Social anxiety</td>
<td>-.24</td>
<td>.18</td>
<td>-.12</td>
<td>-1.32</td>
<td></td>
</tr>
<tr>
<td>Peer acceptance</td>
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<tr>
<td>Friends’ concern with thinness</td>
<td>-.21</td>
<td>.24</td>
<td>-.09</td>
<td>-.85</td>
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</tbody>
</table>

$R^2 = .13, \Delta R^2 = .13, \Delta F (1,57) = 8.28^{**}$

$R^2 = .65, \Delta R^2 = .53, \Delta F (3,54) = 27.32^{***}$

$R^2 = .74, \Delta R^2 = .08, \Delta F (3,51) = 5.22^{**}$

$R^2 = .85, \Delta R^2 = .11, \Delta F (12,39) = 2.42^{*}$
<table>
<thead>
<tr>
<th></th>
<th>.03</th>
<th>.14</th>
<th>.02</th>
<th>.22</th>
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<tr>
<td>Appearance conversations</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Peer ‘fat’ teasing</td>
<td>.23</td>
<td>.19</td>
<td>.11</td>
<td>1.18</td>
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<tr>
<td>Pressure from peers to be thin</td>
<td>-.36</td>
<td>.16</td>
<td>-.22</td>
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<td>Peer appearance criticism</td>
<td>.16</td>
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<td>.08</td>
<td>.96</td>
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<tr>
<td>Social comparison with peers</td>
<td>.16</td>
<td>.12</td>
<td>.16</td>
<td>1.34</td>
</tr>
</tbody>
</table>
Table 7.13

*Hierarchical Regression Predicting Individual Body Image Concern (BSQ) from Individual, Family/Media, and Peer Variables for Coeducational Girls*

(n=76)

<table>
<thead>
<tr>
<th>Step and Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
<th>R²</th>
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<td><strong>Step 2</strong></td>
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<td>Depression</td>
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<td>-1.20</td>
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<td>Anxiety</td>
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<td>.07</td>
<td>.58</td>
<td>.49</td>
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<tr>
<td>Pressure from family to be thin</td>
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<td>.17</td>
<td>.31</td>
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<tr>
<td>Pressure from media to be thin</td>
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<td>.16</td>
<td>-.30</td>
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<td>Adjusted clique mean</td>
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<td>Social anxiety</td>
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<td>-.79</td>
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<td>Peer acceptance</td>
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<td>.31</td>
<td>.09</td>
<td>.51</td>
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<tr>
<td>Perceived impact of thinness on friendships</td>
<td>.06</td>
<td>.15</td>
<td>.05</td>
<td>.42</td>
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</tbody>
</table>

R² = .20, ∆R² = .20, ΔF (1,50) = 12.15**

R² = .44, ∆R² = .24, ΔF (3,47) = 6.78**

R² = .49, ∆R² = .06, ΔF (3,44) = 1.61

R² = .74, ∆R² = .25, ΔF (12,32) = 2.57*
<table>
<thead>
<tr>
<th>Factor</th>
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<th>.17</th>
<th>.16</th>
<th>1.00</th>
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<tbody>
<tr>
<td>Friends’ concern with thinness</td>
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<td>-.27</td>
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<td>Appearance conversations</td>
<td>.14</td>
<td>.18</td>
<td>.13</td>
<td>.74</td>
</tr>
<tr>
<td>Peer ‘fat’ teasing</td>
<td>-.02</td>
<td>.34</td>
<td>-.01</td>
<td>-.05</td>
</tr>
<tr>
<td>Pressure from peers to be thin</td>
<td>.21</td>
<td>.24</td>
<td>.17</td>
<td>.85</td>
</tr>
<tr>
<td>Peer appearance criticism</td>
<td>-.06</td>
<td>.20</td>
<td>-.04</td>
<td>-.31</td>
</tr>
<tr>
<td>Social comparison with peers</td>
<td>.51</td>
<td>.17</td>
<td>.55</td>
<td>2.95*</td>
</tr>
</tbody>
</table>
Disordered eating. Appearance conversations ($\beta = .40$, $t (78) = 2.77$, $p = .009$) and social comparison with peers ($\beta = -.38$, $t (78) = -2.06$, $p = .046$) were significant predictors of disordered eating for all-girls’ students. The influence of comparison with peers was not in the expected direction, with greater comparison tendency predicting less disordered eating.

Psychological ($\Delta R^2 = .21$, $F (3,54) = 4.77$, $p = .005$), family/media ($\Delta R^2 = .12$, $F (3,51) = 3.17$, $p = .032$), and peer variables ($\Delta R^2 = .33$, $F (12,39) = 3.23$, $p = .003$) added significant variance, although physiological variables ($\Delta R^2 = .00$, $F (1,57) = .05$, $p = .925$) did not. The final model accounted for 66% of the variance.

For coeducational girls, no significant predictors of disordered eating were observed, although both psychological ($\Delta R^2 = .29$, $F (3,49) = 6.80$, $p = .001$) and family/media variables ($\Delta R^2 = .12$, $F (3,46) = 3.10$, $p = .036$) added significant variance. Neither physiological ($\Delta R^2 = .01$, $F (1,52) = .50$, $p = .484$) nor peer variables ($\Delta R^2 = .11$, $F (12,34) = .68$, $p = .759$) added significant variance, and a total of 53% of the variance was accounted for.

Dieting behaviour. Peer appearance criticism ($\beta = .32$, $t (78) = 2.28$, $p = .028$) was the only significant predictor of dieting behaviour for all-girls’ students. Psychological ($\Delta R^2 = .15$, $F (3,54) = 3.34$, $p = .026$) and peer variables ($\Delta R^2 = .32$, $F (12,39) = 2.67$, $p = .010$) added significant variance, while physiological ($\Delta R^2 = .03$, $F (1,57) = 1.60$, $p = .212$) and family/media variables ($\Delta R^2 = .11$, $F (3,51) = 2.74$, $p = .053$) did not. A total of 61% of the variance was accounted for by the final step.

For coeducational girls, the only predictor of dieting behaviour was social comparison with peers ($\beta = .47$, $t (74) = 2.21$, $p = .034$). Psychological ($\Delta R^2 = .20$, $F (3,50) = 4.21$, $p = .010$) and family/media variables ($\Delta R^2 = .18$, $F (3,47) = 4.73$, $p = .006$) added significant variance, with 62% of the variance accounted for by the final step. Neither physiological ($\Delta R^2 = .03$, $F (1,53) = 1.70$, $p = .198$) nor peer variables ($\Delta R^2 = .21$, $F (12,35) = 1.58$, $p = .143$) added significant variance.

Bulimic behaviour. There were no significant predictors of bulimic behaviour for all-girls’ students, although 39% of the variance was accounted for by the final step. None of the steps – physiological ($\Delta R^2 = .02$, $F (1,54) = .85$, $p = .361$), psychological ($\Delta R^2 = .11$, $F (3,51) = ...
2.13, \( p = .107 \), family/media \((\Delta R^2 = .02, F (3,48) = .33, p = .805)\), or peer \((\Delta R^2 = .24, F (12,36) = 1.19, p = .324)\) – added significant variance.

There were also no significant predictors of bulimic behaviour for coeducational girls. No step – physiological \((\Delta R^2 = .02, F (1,53) = 1.31, p = .258)\), psychological \((\Delta R^2 = .09, F (3,50) = 1.59, p = .203)\), family/media \((\Delta R^2 = .03, F (3,47) = .61, p = .614)\) or peer \((\Delta R^2 = .26, F (12,35) = 1.27, p = .282)\) – added significant variance, although a total of 40% of the variance was accounted for by the final step.

**Oral control/Dietary restraint.** Appearance conversations \((\beta = .37, t (78) = 2.51, p = .016)\) and social comparison with peers \((\beta = -.48, t (78) = -2.57, p = .014)\) were significant predictors of oral control for all-girls’ students. The influence of social comparison was not in the expected direction, with greater social comparison tendency predicting lower levels of oral control or dietary restraint. Psychological \((\Delta R^2 = .14, F (3,54) = 3.11, p = .034)\) and peer variables \((\Delta R^2 = .35, F (12,39) = 2.86, p = .006)\) added significant variance, with 61% of the variance being accounted for by the final step. Neither physiological \((\Delta R^2 = .05, F (1,57) = 3.14, p = .082)\) nor family/media variables \((\Delta R^2 = .07, F (3,51) = 1.64, p = .191)\) added significant variance.

For coeducational girls, there were no significant predictors of oral control. Psychological variables added significant variance \((\Delta R^2 = .17, F (3,50) = 3.54, p = .021)\), with a total of 45% of the variance being accounted for by the final step. Neither physiological \((\Delta R^2 = .04, F (1,53) = 1.91, p = .173)\), family/media \((\Delta R^2 = .01, F (3,47) = .11, p = .957)\), nor peer variables \((\Delta R^2 = .24, F (12,35) = 1.24, p = .295)\) added significant variance.

**EXTENSION OF PAXTON ET AL (1999) ANALYSIS**

Following the conceptual replication of Paxton and colleagues’ (1999) analysis, an extension of this analysis was conducted, examining the role of variables such as thin-ideal internalization and the influence of teachers. The same analytic steps were followed where relevant, with the majority of analyses again being run separately for each gender and school-type combination.
Possible covariates of body image concern and eating behaviours were first examined. As earlier analyses had already ruled out body mass index, depression, anxiety, and self-esteem as covariates, a multivariate analysis of variance was conducted to determine whether clique members differed on thin-ideal internalization and competitiveness. These variables have previously been found to be related to body image concern and disordered eating (Huon & Walton, 2000; Littleton & Ollendick, 2003). This MANOVA did not reveal significantly greater between- than within-group variance for any group (all-girls’ $F_{(32,122)} = 1.20, p = .239$; coeducational girls $F_{(36,106)} = .74, p = .847$; coeducational boys $F_{(16,52)} = 1.76, p = .064$), indicating that cliques could not be characterized by either of these variables. Table 7.14 presents the range of clique scores on these variables.

Table 7.14

<table>
<thead>
<tr>
<th>Variable</th>
<th>All-Girls’ (n=17)</th>
<th>Coed.Girls (n=18)</th>
<th>Coed. Boys (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thin-ideal internalisation</td>
<td>2.45-3.80</td>
<td>2.50-3.88</td>
<td>3.04-3.84</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>.25-.63</td>
<td>.35-.75</td>
<td>.47-.77</td>
</tr>
</tbody>
</table>

a Possible score ranged from 1 to 5; Possible score ranged from 0 to 1

A second series of MANOVAs was then conducted to investigate group similarities on various sociocultural variables. These were conducted for girls only, as data for some variables were not available for boys. Firstly, a MANOVA was conducted with all family, teacher, and media variables as dependent variables. This MANOVA did not reveal significantly greater between- than within-group variance for all-girls’ students ($F_{(112,427)} = 1.06, p = .344$), although a significant result was obtained for coeducational girls ($F_{(126,343)} = 1.33, p = .022$). Examination of the univariate $F$ values, however, revealed no significant differences. Table 7.15 presents the range of clique means on these variables.
Table 7.15

*Range of Friendship Clique Means on Sociocultural Variables by School-Type*

<table>
<thead>
<tr>
<th>Variable</th>
<th>All-Girls’ (n=17)</th>
<th>Coeducational Girls (n=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family support a</td>
<td>4.50-6.50</td>
<td>4.17-6.75</td>
</tr>
<tr>
<td>Family as a source of influence b</td>
<td>1.44-3.87</td>
<td>1.60-3.45</td>
</tr>
<tr>
<td>Pressure from family to be thin b</td>
<td>0.67-2.33</td>
<td>1.00-2.67</td>
</tr>
<tr>
<td>Media as a source of influence b</td>
<td>2.00-4.20</td>
<td>1.80-4.68</td>
</tr>
<tr>
<td>Pressure from media to be thin b</td>
<td>1.50-3.88</td>
<td>1.83-3.50</td>
</tr>
<tr>
<td>Comparison with models b</td>
<td>1.50-3.83</td>
<td>1.71-4.00</td>
</tr>
<tr>
<td>Teachers as a source of influence b</td>
<td>1.46-2.42</td>
<td>1.00-2.58</td>
</tr>
<tr>
<td>Peer group identification b</td>
<td>3.56-4.82</td>
<td>3.36-4.58</td>
</tr>
<tr>
<td>Peer acceptance b</td>
<td>1.92-4.17</td>
<td>3.05-4.22</td>
</tr>
<tr>
<td>Friend support a</td>
<td>4.92-6.83</td>
<td>5.46-6.90</td>
</tr>
<tr>
<td>Friends as a source of influence b</td>
<td>1.40-3.13</td>
<td>1.33-3.13</td>
</tr>
<tr>
<td>Pressure from peers to be thin b</td>
<td>1.07-2.50</td>
<td>1.29-2.75</td>
</tr>
<tr>
<td>Comparison with peers b</td>
<td>1.83-4.00</td>
<td>2.33-4.33</td>
</tr>
<tr>
<td>Peer ‘fat’ teasing b</td>
<td>1.00-1.80</td>
<td>1.00-1.83</td>
</tr>
<tr>
<td>Peer ‘thin’ teasing b</td>
<td>1.00-2.67</td>
<td>1.00-1.71</td>
</tr>
<tr>
<td>Peer appearance criticism b</td>
<td>1.00-2.00</td>
<td>1.00-2.67</td>
</tr>
<tr>
<td>Friends’ concern with thinness b</td>
<td>1.73-2.88</td>
<td>1.82-3.30</td>
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<tr>
<td>Perceived impact of thinness on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>friendships c</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance conversations b</td>
<td>1.33-3.67</td>
<td>1.33-4.00</td>
</tr>
</tbody>
</table>

a Possible score ranged from 1 to 7; b Possible score ranged from 1 to 5; c Possible score ranged from 1 to 4

Following this, a MANOVA was then conducted with peer- and friend-related variables as dependent variables. This MANOVA was not significant for either all-girls’ ($F(192,648) = 1.17, p = .087$) or coeducational female students ($F(216,564) = 1.02, p = .425$). Thus, these MANOVAs indicated that cliques could not be characterized by their level of these sociocultural variables.
Correlational analyses were then conducted in order to determine further correlates of body image concern and dieting behaviour in all-girls’ cliques. All-girls’ cliques were focused on as earlier analyses had revealed these groups to be able to be distinguished by their level of body image concern and dieting behaviour, while coeducational students’ cliques did not appear to be able to be characterized on any measure of body image or eating concern. The current correlational analysis focused on those variables not previously analysed, with results presented in Table 7.16.

Table 7.16

Further Correlates of Body Image Concern (BSQ) and Dieting Behaviour (EAT-Diet) for All-Girls’ Cliques

<table>
<thead>
<tr>
<th>Variable</th>
<th>BSQ</th>
<th>EAT-dieting subscale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media as Source of Influence</td>
<td>.545*</td>
<td>.511*</td>
</tr>
<tr>
<td>Family as Source of Influence</td>
<td>.185</td>
<td>.675**</td>
</tr>
<tr>
<td>Teachers as Source of Influence</td>
<td>-.238</td>
<td>-.099</td>
</tr>
<tr>
<td>Identification with Peer Group</td>
<td>-.453</td>
<td>-.266</td>
</tr>
</tbody>
</table>

*Note. Number of cliques = 17.*

* p<.05 **p<.01

As can be seen in Table 7.16, significant positive correlations were found between mean clique scores on media influence and both body image concern and dieting behaviour, as well as between family influence and dieting behaviour. A significant positive correlation was also found between family and media influence (not presented in table; r = .58, p = .015).

Finally, in order to further investigate the contribution of friend- and peer-related variables to the body image concerns and eating behaviours of girls, while taking into account individual, family, and media variables, hierarchical regression analyses were conducted with body image, dieting behaviour, bulimic behaviour, and oral control as dependent variables. Regression analyses were conducted for all-girls’ and coeducational girls separately; however, because of the small sample size, regression analyses were not conducted for boys. All regression equations followed the same four steps as the earlier analysis, however
additional variables were also entered, including thin-ideal internalization and competitiveness in Step 2; media, family and teacher influence and comparison to models in Step 3; and peer group identification in Step 4.

Body image concern. As shown in Table 7.17, all-girls’ body image concern was predicted by BMI, self-esteem, media influence, and pressure from media. Friend influence and friends’ concern with thinness were also significant predictors. All predictors were in the expected direction, with the exception of friends’ concern with thinness and media influence, whereby greater perceived friends’ concern and influence from media predicted less body image concern. All steps added significant variance, with 91% of the variance being accounted for by the final step.

There were no significant predictors of coeducational girls’ body image concern.

Physiological ($\Delta R^2 = .18, F (1,48) = 10.79, p = .002$) and psychological variables ($\Delta R^2 = .40, F (5,43) = 8.28, p = .000$) added significant variance, with 79% of the variance accounted for by the final step. Neither family/media ($\Delta R^2 = .09, F (7,36) = 1.32, p = .271$) nor peer variables ($\Delta R^2 = .12, F (14,22) = .95, p = .532$) added significant variance.

Disordered eating. All-girls’ disordered eating was predicted by self-esteem, pressure from media to be thin, friend influence, appearance conversations, ‘thin’ teasing, and social comparison with peers, as shown in Table 7.18. All of these were in the expected direction, with the exception of social comparison with peers, whereby greater comparison tendency predicted lower disordered eating. Psychological and peer variables added significant variance, and 76% of the variance was accounted for by the final step.

There were no significant predictors of disordered eating for coeducational girls, although 66% of the variance was accounted for by the final step. Psychological variables added significant variance ($\Delta R^2 = .44, F (5,45) = 7.07, p = .000$), while physiological ($\Delta R^2 = .01, F (1,50) = .48, p = .490$), family/media ($\Delta R^2 = .15, F (7,38) = 1.92, p = .093$), and peer variables ($\Delta R^2 = .07, F (14,24) = .36, p = .974$) did not.
Table 7.17

Hierarchical Regression Predicting Individual Body Image Concern (BSQ) from Individual, Family/Media, and Peer Variables for All-Girls' Students (n=80)

<table>
<thead>
<tr>
<th>Step and Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
<th>( R^2 )</th>
</tr>
</thead>
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<td><strong>Step 1</strong></td>
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<td></td>
</tr>
<tr>
<td>Body mass index</td>
<td>.12</td>
<td>.04</td>
<td>.28</td>
<td>3.22**</td>
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<tr>
<td><strong>Step 2</strong></td>
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</tr>
<tr>
<td>Depression</td>
<td>.06</td>
<td>.37</td>
<td>.02</td>
<td>.16</td>
<td></td>
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<tr>
<td>Self-esteem</td>
<td>-1.00</td>
<td>.24</td>
<td>-.48</td>
<td>-4.08***</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.12</td>
<td>.21</td>
<td>-.06</td>
<td>-.58</td>
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<tr>
<td>Thin-ideal internalization</td>
<td>.24</td>
<td>.14</td>
<td>.15</td>
<td>1.65</td>
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</tr>
<tr>
<td>Competitiveness</td>
<td>-.30</td>
<td>.47</td>
<td>-.05</td>
<td>-.64</td>
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<tr>
<td><strong>Step 3</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Family support</td>
<td>-.06</td>
<td>.08</td>
<td>-.07</td>
<td>-.76</td>
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<tr>
<td>Pressure from family to be thin</td>
<td>.16</td>
<td>.13</td>
<td>.11</td>
<td>1.24</td>
<td></td>
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<tr>
<td>Family influence</td>
<td>.00</td>
<td>.07</td>
<td>.00</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Pressure from media to be thin</td>
<td>.51</td>
<td>.13</td>
<td>.53</td>
<td>4.10***</td>
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</tr>
<tr>
<td>Media influence</td>
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<td>.26</td>
<td>.14</td>
<td>.17</td>
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</tr>
</tbody>
</table>

\( R^2 = .13, \Delta R^2 = .13, \Delta F (1,57) = 8.28** \)

\( R^2 = .72, \Delta R^2 = .59, \Delta F (5,52) = 21.75*** \)

\( R^2 = .82, \Delta R^2 = .10, \Delta F (7,45) = 3.46** \)

\( R^2 = .91, \Delta R^2 = .09, \Delta F (14,31) = 2.22* \)
<table>
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<tr>
<th>Variable</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>Mean 3</th>
<th>Mean 4</th>
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<td>-.74</td>
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<td>.16</td>
<td>.04</td>
<td>.45</td>
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<tr>
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<td>.24</td>
<td>.10</td>
<td>.21</td>
<td>2.31*</td>
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<td>.26</td>
<td>-.26</td>
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<tr>
<td>Appearance conversations</td>
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<td>.13</td>
<td>.05</td>
<td>.54</td>
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<td>Peer ‘fat’ teasing</td>
<td>.28</td>
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<td>.13</td>
<td>1.41</td>
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<tr>
<td>Peer ‘thin’ teasing</td>
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<td>.09</td>
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Table 7.18

Hierarchical Regression Predicting Individual Disordered Eating (EAT) from Individual, Family/Media, and Peer Variables for All-Girls’ Students (n=80)

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<tr>
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<tr>
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<td></td>
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<td></td>
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<td>.08</td>
<td>.07</td>
<td>.45</td>
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<tr>
<td>Thin-ideal internalization</td>
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<td>.06</td>
<td>.20</td>
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<td><strong>Step 4</strong></td>
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<td>R² = .76, ΔR² = .38, ΔF (14,31) = 3.47**</td>
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157
<p>| | | | | |</p>
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<th></th>
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<td>-.88</td>
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<td>.069</td>
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<td>.24</td>
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<td>Peer appearance criticism</td>
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<td>-.52</td>
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<td>Peer group identification</td>
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</table>
Dieting behaviour. All-girls’ dieting behaviour was predicted by pressure from media to be thin ($\beta = .48, t (78) = 2.24, p = .032$) and appearance conversations ($\beta = .34, t (78) = 2.11, p = .043$). Psychological ($\Delta R^2 = .26, F (5,52) = 3.77, p = .005$) and peer variables ($\Delta R^2 = .34, F (14,31) = 2.52, p = .016$) added significant variance, with 70% of the variance being accounted for by the final step. Neither physiological ($\Delta R^2 = .03, F (1,57) = 1.60, p = .212$) nor family/media variables ($\Delta R^2 = .08, F (7,45) = .77, p = .615$) added significant variance. No significant predictors were observed for coeducational girls, although psychological ($\Delta R^2 = .37, F (5,46) = 5.84, p = .000$) and family/media variables ($\Delta R^2 = .18, F (7,39) = 2.42, p = .037$) added significant variance. Neither physiological ($\Delta R^2 = .04, F (1,51) = 2.07, p = .157$) nor peer variables ($\Delta R^2 = .12, F (14,25) = .73, p = .729$) added significant variance. A total of 71% of the variance was accounted for by the final step.

Bulimic behaviour. No significant predictors of bulimic behaviour were observed for all-girls’ students. None of the steps – physiological ($\Delta R^2 = .02, F (1,54) = .85, p = .361$), psychological ($\Delta R^2 = .13, F (5,49) = 1.48, p = .214$), family/media ($\Delta R^2 = .16, F (7,42) = 1.42, p = .221$), or peer ($\Delta R^2 = .19, F (14,28) = .74, p = .721$) – added significant variance, although 50% of the variance was accounted for by the final step.

For coeducational girls, there were again no significant predictors of bulimic behaviour. No steps - physiological ($\Delta R^2 = .02, F (1,51) = .98, p = .327$), psychological ($\Delta R^2 = .10, F (5,46) = 1.08, p = .386$), family/media ($\Delta R^2 = .18, F (7,39) = 1.40, p = .232$) or peer variables ($\Delta R^2 = .23, F (14,25) = .86, p = .606$) – added significant variance, although 53% of the variance was accounted for by the final step.

Oral control/Dietary restraint. For all-girls’ students, oral control was predicted by self-esteem, family support, influence from friends, appearance conversations, peer ‘thin’ teasing, pressure from peers to be thin, and social comparison with peers, as shown in Table 7.19. Each of these was in the expected direction with the exception of comparison with peers, with greater comparison tendency predicting less oral control, and family support, whereby greater family support predicted greater oral control. Only peer variables added significant variance, with 85% of the variance being accounted for by the final step.
Table 7.19

Hierarchical Regression Predicting Individual Oral Control (EAT-OC) from Individual, Family/Media, and Peer Variables for All-Girls’ Students (n=80)

<table>
<thead>
<tr>
<th>Step and Variable</th>
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<th>SE B</th>
<th>β</th>
<th>t</th>
<th>(R^2)</th>
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<td>.02</td>
<td>.22</td>
<td>1.98</td>
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<td>Depression</td>
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<td>.16</td>
<td>.01</td>
<td>.04</td>
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<tr>
<td>Self-esteem</td>
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<td>.11</td>
<td>-.38</td>
<td>-2.46*</td>
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<tr>
<td>Anxiety</td>
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<td>.09</td>
<td>.04</td>
<td>.38</td>
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<tr>
<td>Thin-ideal internalization</td>
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<td>.06</td>
<td>-.02</td>
<td>-.15</td>
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<td>Competitiveness</td>
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<td>.07</td>
<td>.75</td>
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<td><strong>Step 3</strong></td>
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<td>Family support</td>
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<td>.26</td>
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<tr>
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<td>.06</td>
<td>.05</td>
<td>.45</td>
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<td>Family influence</td>
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<td>-.14</td>
<td>-1.15</td>
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</tr>
<tr>
<td>Pressure from media to be thin</td>
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<td>.05</td>
<td>.28</td>
<td>1.88</td>
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<tr>
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<td>.04</td>
<td>-.01</td>
<td>-.06</td>
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<td>Comparison to models</td>
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<td><strong>Step 4</strong></td>
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\(R^2 = .05, \Delta R^2 = .05, \Delta F (1,57) = 3.14\)

\(R^2 = .19, \Delta R^2 = .14, \Delta F (5,52) = 1.84\)

\(R^2 = .32, \Delta R^2 = .12, \Delta F (7,45) = 1.13\)

\(R^2 = .85, \Delta R^2 = .54, \Delta F (14,31) = 8.13***\)
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<th>Variable</th>
<th>Beta 1</th>
<th>Beta 2</th>
<th>Beta 3</th>
<th>Beta 4</th>
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<tr>
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<td>-.14</td>
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<td>.12</td>
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<td>1.99</td>
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<td>Peer group identification</td>
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<td>.66</td>
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</table>
Coeducational girls’ oral control was predicted by depression, teacher influence, social anxiety, appearance conversations, thin teasing, and comparison with peers, as shown in Table 7.20. Each of these was in the expected direction, with the exception of appearance conversations and social comparison with peers, whereby greater frequency of conversations and tendency to compare predicted less oral control or dietary restraint. Only peer variables added significant variance, with 74% of the variance being accounted for by the final step.

**COMPARISON OF SCHOOL-TYPES**

As the regression equations produced different predictors for all-girls’ and coeducational female students (see Table 7.21 for a comparison), an additional series of hierarchical regression analyses was conducted in an attempt to further investigate the differences between school-types. These analyses included only those individuals who were assigned to cliques, and all regression equations followed the same steps. Specifically, individual, family, teacher and media variables, where relevant, were entered in Step 1, followed by friend- and peer-related variables in Step 2. School-type (dummy-coded as 0 for all-girls’; 1 for coeducational girls) was also entered at this step. In addition, interaction terms were created, whereby school-type was multiplied by various peer-related variables which had either earlier been established to differ between school-types (i.e. peer acceptance and friends’ concern with thinness), or that were theoretically expected to differ. These were entered at Step 3.
Table 7.20  
Hierarchical Regression Predicting Individual Oral Control (EAT-OC) from Individual, Family/Media, and Peer Variables for Coeducational Female Students (n=76)

<table>
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<tr>
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<td>.51</td>
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<td>.03</td>
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<td>.84</td>
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$R^2 = .04, \Delta R^2 = .04, \Delta F (1,51) = 2.17$

$R^2 = .21, \Delta R^2 = .17, \Delta F (5,46) = 2.02$

$R^2 = .30, \Delta R^2 = .09, \Delta F (7,39) = .72$
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<td></td>
<td>Friend influence</td>
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<tr>
<td></td>
<td>Friends’ concern with thinness (-)</td>
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<tr>
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<td>Self-esteem</td>
<td>No significant predictors</td>
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<td></td>
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<td>Friend influence</td>
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<tr>
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<td>‘Thin’ teasing</td>
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</tr>
<tr>
<td></td>
<td>Social comparison with peers (-)</td>
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<tr>
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*Body image concern.* Body image concern was predicted by BMI, self-esteem, pressure from media to be thin, comparison with models, and social anxiety, as shown in Table 7.22. In addition, the interaction of school-type and media pressure was significant, indicating that media pressure predicts body image concern differentially for all-girls’ and coeducational students. Steps 1 and 2 added significant variance, with 81% of the variance being accounted for by the final step.
Table 7.22

Hierarchical Regression Predicting Individual Body Image Concern (BSQ) from Individual, Family/Media, and Peer Variables for Clique-Assigned Girls (n=156)

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**Step 3**

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\[ R^2 = .81, \Delta R^2 = .05, \Delta F (12,72) = 1.47 \]
| School type X Peer group identification | .09 | .22 | .17 | .42 |
| School type X Friend influence         | .10 | .18 | .11 | .56 |
Disordered eating. Disordered eating was predicted by appearance conversations, appearance criticism, and social comparison with peers, as shown in Table 7.23. Each of these was in the expected direction, with the exception of peer comparison, whereby greater comparison tendency predicted less disordered eating. In addition, the interaction of school type and peer comparison was significant, indicating that comparison with peers predicts disordered eating differentially for all-girls’ and coeducational students. Only Step 1 added significant variance, and 61% of the variance was accounted for by the final step.

Dieting behaviour. Social anxiety, appearance conversations, and the interaction of school-type and social comparison with peers predicted dieting behaviour, as shown in Table 7.24. Step 1 and Step 2 both added significant variance, although Step 3 did not. A total of 60% of the variance was accounted for by the final step.

Bulimic behaviour. There were no significant predictors of bulimic behaviour, and no steps – Step 1 ($\Delta R^2 = .17$, $F$ (11,101) = 1.83, $p = .058$), Step 2 ($\Delta R^2 = .10$, $F$ (14,87) = .80, $p = .669$) or Step 3 ($\Delta R^2 = .10$, $F$ (12,75) = .97, $p = .482$) – added significant variance, although 36% of the variance was accounted for by the final step.

Oral control. Oral control was predicted by depression, peer acceptance, peer ‘thin’ teasing, and comparison with peers, as shown in Table 7.25. These were each in the expected direction, with the exception of peer acceptance, whereby greater acceptance predicted greater oral control, and peer comparison, with greater comparison tendency predicting less oral control. Additionally, the interactions between school-type and appearance conversations, and school-type and teacher influence were both significant, indicating that appearance conversations and teacher influence differentially predict oral control for all-girls’ and coeducational students. All steps added significant variance, with 61% of the variance accounted for by the final step.
Table 7.23

Hierarchical Regression Predicting Individual Disordered Eating (EAT) from Individual, Family/Media, and Peer Variables for Clique-Assigned Girls 
(n=156)

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$R^2 = .52, \Delta R^2 = .13, \Delta F (14,86) = 1.62$
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**Step 3**

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Table 7.24

Hierarchical Regression Predicting Individual Dieting Behaviour (EAT-Diet) from Individual, Family/Media, and Peer Variables for Clique-Assigned Girls (n=156)

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<th>β</th>
<th>t</th>
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<td>-.01</td>
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<td>.29</td>
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**Step 3**

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<td>-.26</td>
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$R^2 = .60, \Delta R^2 = .07, \Delta F (12, 75) = 1.04$
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Table 7.25

Hierarchical Regression Predicting Individual Oral Control (EAT-OC) from Individual, Family/Media, and Peer Variables for Clique-Assigned Girls
(n=156)

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R² = .18, ΔR² = .18, ΔF (11,101) = 2.02*

R² = .48, ΔR² = .30, ΔF (14,87) = 3.54***
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<tr>
<td>Appearance conversations</td>
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<td>.29</td>
<td>1.70</td>
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<td>-.05</td>
<td>-.36</td>
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<tr>
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<td>.05</td>
<td>.53</td>
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<td>.03</td>
<td>.23</td>
</tr>
<tr>
<td>Peer appearance criticism</td>
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<td>.09</td>
<td>.20</td>
<td>1.39</td>
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<td>-.47</td>
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Step 3

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<td>.08</td>
<td>.39</td>
<td>1.17</td>
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<td>.64</td>
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<tr>
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<td>-.66</td>
<td>-.91</td>
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<tr>
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<td>.11</td>
<td>-.96</td>
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<td>.08</td>
<td>-.13</td>
<td>-.44</td>
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<tr>
<td>School type X Teacher influence</td>
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<td>.12</td>
<td>.66</td>
<td>2.80**</td>
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$R^2 = .61, \Delta R^2 = .13, \Delta F (12,75) = 2.07*$
<table>
<thead>
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<td>.11</td>
</tr>
<tr>
<td></td>
<td>-.05</td>
<td>.09</td>
</tr>
</tbody>
</table>
Finally, in a further attempt to investigate differences between school-types, the expectations of girls concerning the school environment in other school-types were examined. That is, all-girls’ students were asked how they thought social pressures would operate at coeducational schools, including whether they thought there would be pressure from boys to be thin and whether boys would notice girls’ weight, while girls attending coeducational schools were asked about their perceptions of all-girls’ schools. Contrary to expectations, similar levels of pressure were expected at both schools (all-girls’ M = 3.42, SD = .62; coed M = 3.42, SD = .88; t (203) = -.06, p = .949). The level of pressure expected was also correlated with current perceived pressure from peers to be thin (r = .19, p = .005), perhaps indicating that students’ expectations were influenced by their current experience.

**THE INFLUENCE OF BOYS**

As an initial aim of this study was to investigate the influence boys exert upon girls’ body image concern and disordered eating, a final series of correlational and regression analyses were conducted in an attempt to further explore this potential influence. These analyses included only those female students who had nominated boys as friends, although these boys were not found to be part of their friendship cliques in the Social Network Analysis. Only reciprocated nominations were identified, as previous research has found that mutual or reciprocated friendship ties tend to be stronger (Jansson, 1997) and provide more opportunity for influence (Urberg, 1992). A total of 61 reciprocated cross-gender nominations were made, involving 30 female and 28 male students.

As a first step, the possibility that girls with male friends differed from those with only same-gender friends on a range of variables was considered via a series of MANOVAs. Firstly, a MANOVA was conducted comparing the two groups on the dependent variables of body image concern, disordered eating, dieting behaviour, bulimia, and oral control. This MANOVA was not significant (F (4,89) = .26, p = .900), indicating that girls with male friends did not differ from those with only female friends on body image concern or the various disordered eating behaviours. A second MANOVA was then conducted comparing
the two groups on a range of sociocultural variables. Again, this MANOVA was not significant ($F(4,93) = 1.15, p = .338$). Descriptive statistics relating to these variables are presented in Table 7.26.

**Table 7.26**

*Descriptive Statistics for Dependent and Sociocultural Variables by Friend-Type (Girls)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Girls with Male Friends</th>
<th>Girls without Male Friends</th>
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</thead>
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<td></td>
<td>($n=30$)</td>
<td>($n=78$)</td>
</tr>
<tr>
<td>Body image concern $^a$</td>
<td>2.76 (1.00)</td>
<td>2.77 (1.20)</td>
</tr>
<tr>
<td>Disordered eating $^b$</td>
<td>.28 (.21)</td>
<td>.29 (.32)</td>
</tr>
<tr>
<td>Dieting behaviour $^b$</td>
<td>.24 (.23)</td>
<td>.33 (.48)</td>
</tr>
<tr>
<td>Bulimic behaviour $^b$</td>
<td>.31 (.25)</td>
<td>.33 (.40)</td>
</tr>
<tr>
<td>Oral control $^b$</td>
<td>.30 (.44)</td>
<td>.26 (.37)</td>
</tr>
<tr>
<td>Thin-ideal internalisation $^c$</td>
<td>2.94 (.70)</td>
<td>3.20 (.65)</td>
</tr>
<tr>
<td>Pressure from peers $^c$</td>
<td>1.74 (.89)</td>
<td>1.95 (1.01)</td>
</tr>
<tr>
<td>Appearance criticism $^c$</td>
<td>1.45 (.87)</td>
<td>1.43 (.94)</td>
</tr>
<tr>
<td>Perceived impact of thinness on friends $^d$</td>
<td>.97 (.78)</td>
<td>1.11 (.84)</td>
</tr>
</tbody>
</table>

$^a$ Possible score ranged from 1 to 6; $^b$ Possible score ranged from 0 to 3; $^c$ Possible score ranged from 1 to 5; $^d$ Possible score ranged from 1 to 4

Variables were then created for each of the 30 girls in order to characterize the attitudes and behaviours of their male friends. Specifically, the mean scores of a girl’s male friends on a range of variables were calculated, assuming equal contribution by all friends. These mean scores were then used in the correlational and regression analyses which follow. First, a correlational analysis was conducted in order to determine the relationship, if any, between girls’ own body image concern and disordered eating behaviours, and the attitudes and behaviours of their male friends. This analysis included only those 30 girls who nominated male friends. Results of this correlational analysis are presented in Table 7.27.
Table 7.27

Correlates of Body Image Concern (BSQ) and Disordered Eating (EAT-Diet) for Girls Nominating Male Friends (n=30)

<table>
<thead>
<tr>
<th>Variable</th>
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<th>EAT-Diet</th>
<th>EAT-Bul</th>
<th>EAT-OC</th>
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<td>.763***</td>
<td>.008</td>
<td>.078</td>
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<tr>
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<td>.755***</td>
<td>.457*</td>
<td>.757***</td>
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<tr>
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<td>.457**</td>
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<td>.243</td>
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<td>Bulimia (EAT-Bul)</td>
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<td>Oral Control (EAT-OC)</td>
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<td></td>
<td>-.129</td>
<td>-.229</td>
<td>-.015</td>
</tr>
<tr>
<td>Male Friends’ Body Image Concern</td>
<td>.384*</td>
<td></td>
<td>.309</td>
<td>.223</td>
<td>.195</td>
</tr>
<tr>
<td>Male Friends’ Disordered Eating</td>
<td>-.094</td>
<td></td>
<td>.243</td>
<td>.129</td>
<td>.080</td>
</tr>
<tr>
<td>Male Friends’ Dieting Behaviour</td>
<td>.144</td>
<td></td>
<td>.141</td>
<td>.111</td>
<td>.148</td>
</tr>
<tr>
<td>Male Friends’ Bulimia</td>
<td>.025</td>
<td></td>
<td>-.068</td>
<td>-.297</td>
<td>-.308</td>
</tr>
<tr>
<td>Male Friends’ Oral Control</td>
<td>-.280</td>
<td></td>
<td>.027</td>
<td>.257</td>
<td>-.104</td>
</tr>
</tbody>
</table>

* p<.05 **p<.01 ***p<.001
As can be seen in Table 7.27, a girl’s male friends’ attention to weight was positively correlated with her body image concern, disordered eating, and oral control, while male friends’ appearance criticism was related to one’s own disordered eating and dieting behaviour. Correlations were also observed between a girl’s male friends’ body image concern and her own body image concern and disordered eating, and friends’ dieting behaviour and one’s own disordered eating.

Finally, a series of hierarchical multiple regressions were conducted in order to examine whether the attitudes and behaviours of one’s male friends predicted one’s own body image concern and disordered eating behaviours after other variables had been taken into account. All regression equations followed the same two steps, whereby psychological, family/media variables, and other peer variables were entered in Step 1, and variables relating to one’s male friends’ attitudes in Step 2. The variables entered in Step 1, namely BMI, self-esteem, pressure from the media, comparison with peers, and friends’ concern with thinness, had all been shown to be consistent predictors in the earlier regression analyses, while those entered in Step 2 were shown to correlate significantly with girls’ body image concern and disordered eating.

**Body image concern.** Body mass index was the only significant predictor of body image concern, as shown in Table 7.28. The addition of male friend variables did not add significant variance, indicating that girls’ body image concern is not predicted by the attitudes and behaviours of their male friends. A total of 54% of the variance was accounted for.

**Disordered eating.** Male friends’ mean attention to weight was the only significant predictor of disordered eating, as shown in Table 7.29. A total of 41% of the variance was accounted for.

**Dieting behaviour.** There were no significant predictors of girls’ dieting behaviour, and no steps added significant variance (Step 1 ΔR² = .38, F (5,19) = 2.33, p = .083; Step 2 ΔR² = .04, F (2,17) = .60, p = .560). A total of 42% of the variance was accounted for.
Table 7.28

*Hierarchical Regression Predicting Individual Body Image Concern from Individual, Family/Media, Peer, and Male Friend Variables (n=30)*

<table>
<thead>
<tr>
<th>Step and Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
<th>(R^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body mass index</td>
<td>.28</td>
<td>.09</td>
<td>.63</td>
<td>3.24**</td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>.02</td>
<td>.47</td>
<td>.01</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Pressure from media to be thin</td>
<td>.17</td>
<td>.20</td>
<td>.21</td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td>Friends’ concern with thinness</td>
<td>.08</td>
<td>.44</td>
<td>.09</td>
<td>.41</td>
<td></td>
</tr>
<tr>
<td>Comparison with peers</td>
<td>-.01</td>
<td>.23</td>
<td>-.01</td>
<td>-.05</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male friends’ attention to weight</td>
<td>.52</td>
<td>.65</td>
<td>.17</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>Male friends’ appearance criticism</td>
<td>-.81</td>
<td>.54</td>
<td>-.32</td>
<td>-1.50</td>
<td></td>
</tr>
</tbody>
</table>

\(R^2 = .48, \Delta R^2 = .48, \Delta F (5,19) = 3.50^*\)

\(R^2 = .54, \Delta R^2 = .06, \Delta F (2,17) = 1.15\)
Table 7.29

Hierarchical Regression Predicting Individual Disordered Eating from Individual, Family/Media, Peer, and Male Friend Variables (n=30)

<table>
<thead>
<tr>
<th>Step and Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>t</th>
<th>R²</th>
<th>∆R²</th>
<th>∆F (df)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body mass index</td>
<td>.01</td>
<td>.02</td>
<td>.07</td>
<td>.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>.06</td>
<td>.11</td>
<td>.13</td>
<td>.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure from media to be thin</td>
<td>.06</td>
<td>.05</td>
<td>.39</td>
<td>1.34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friends’ concern with thinness</td>
<td>-.19</td>
<td>.11</td>
<td>-.46</td>
<td>-1.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison with peers</td>
<td>.01</td>
<td>.05</td>
<td>.04</td>
<td>.13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male friends’ attention to weight</td>
<td>.34</td>
<td>.16</td>
<td>.54</td>
<td>2.16*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male friends’ appearance criticism</td>
<td>.05</td>
<td>.13</td>
<td>.10</td>
<td>.39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R² = .17, ∆R² = .17, ∆F (5,18) = .75

R² = .41, ∆R² = .24, ∆F (2,16) = 3.27
Bulimic behaviour. There were no significant predictors of bulimic behaviour, and no steps added significant variance (Step 1 Δ$R^2 = .41$, $F(5,19) = 2.67, p = .054$; Step 2 Δ$R^2 = .10$, $F(2,17) = 1.73, p = .206$). A total of 51% of the variance was accounted for by the final step.

Oral control/Dietary restraint. Oral control was predicted by friends’ concern with thinness and male friends’ attention to weight, as shown in Table 7.30. However, friends’ concern was not in the expected direction, with greater perceived concern predicting lower oral control. Step 2 added significant variance, although Step 1 did not. A total of 60% of the variance was accounted for by the final step.

DISCUSSION

This study attempted to expand on the existing literature looking at the role of social networks and peer factors in adolescents’ body image concern and disordered eating behaviours. Although many studies have investigated this question from an individual perspective (e.g. Gerner & Wilson, 2005; Lieberman, et al., 2001), others have begun to examine the body image concerns and eating behaviours of entire friendship groups or cliques (e.g. Basow, et al., 2007; Paxton, et al., 1999). The current study aimed to extend on this by first replicating and then expanding on the analysis undertaken by Paxton and colleagues (1999). Specifically, this study investigated the concerns and friendship group similarity of girls, as well as the effect of school gender composition on body image concern and disordered eating behaviours. In addition, the influence of both same- and cross-gender friendships was explored.

Overall, findings indicated that all-girls’ students exhibited more body image concern than coeducational girls, who in turn exhibited more concern than boys, while all-girls’ students obtained higher dieting behaviour scores than boys. The general pattern of these results is consistent with previous research (e.g. Dyer & Tiggemann, 1996; Patton, et al., 1997). Differences between school types were also found for girls’ peer acceptance and ‘thin’ teasing, whereby coeducational girls experienced greater acceptance and less ‘thin’ teasing than all-girls’ students. In addition, coeducational girls perceived their friends to be more
Table 7.30

*Hierarchical Regression Predicting Individual Oral Control/Dietary Restraint from Individual, Family/Media, Peer, and Male Friend Variables (n=30)*

<table>
<thead>
<tr>
<th>Step and Variable</th>
<th>$B$</th>
<th>$SE$</th>
<th>$β$</th>
<th>$t$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$R^2 = .13, ΔR^2 = .13, ΔF (5,19) = .56$</td>
</tr>
<tr>
<td>Body mass index</td>
<td>-.04</td>
<td>.04</td>
<td>-.18</td>
<td>-1.00</td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>.38</td>
<td>.20</td>
<td>.38</td>
<td>1.89</td>
<td></td>
</tr>
<tr>
<td>Pressure from media to be thin</td>
<td>.11</td>
<td>.09</td>
<td>.29</td>
<td>1.24</td>
<td></td>
</tr>
<tr>
<td>Friends’ concern with thinness</td>
<td>-.50</td>
<td>.19</td>
<td>-.56</td>
<td>-2.71*</td>
<td></td>
</tr>
<tr>
<td>Comparison with peers</td>
<td>-.05</td>
<td>.10</td>
<td>-.14</td>
<td>-.56</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$R^2 = .60, ΔR^2 = .47, ΔF (2,17) = 9.98**$</td>
</tr>
<tr>
<td>Male friends’ attention to weight</td>
<td>1.20</td>
<td>.28</td>
<td>.87</td>
<td>4.30***</td>
<td></td>
</tr>
<tr>
<td>Male friends’ appearance criticism</td>
<td>-.12</td>
<td>.23</td>
<td>-.10</td>
<td>-.51</td>
<td></td>
</tr>
</tbody>
</table>
concerned with thinness than all-girls’ students, despite experiencing lower body image concern.

The reasons for this pattern of results are unclear. One possibility is that friends’ problematic attitudes are less likely to be identified in a context where higher levels of concern are the ‘norm’. This may be specific to coeducational schools, however, with correlational analyses revealing that all-girls’ students with higher body image concern also perceived their friends to be more concerned with thinness, while this correlation was not significant for coeducational girls. Another possibility is that there may be a greater incidence of ‘fat talk’ (Nichter, 2000) in coeducational girls, which manifests in one’s perceptions of their friends’ concern with thinness. The term ‘fat talk’ refers to discussions about weight, and in particular self-derogation of one’s weight, which may be engaged in in an attempt to gain social acceptance (Tompkins, Martz, Rocheleau, & Bazzini, 2009), but is not necessarily linked to one’s actual body image concern (e.g. Smith & Ogle, 2006). Supporting this, appearance conversations were found to be slightly higher, although not significantly so, for coeducational girls.

Body image concern was also correlated with frequency of appearance conversations, pressure to be thin from peers, ‘fat’ teasing, appearance criticism, influence from friends, and peer comparison, in line with previous research (e.g. Jones, et al., 2004). In addition, for coeducational girls only, higher body image concern and dieting scores were related to lower peer acceptance. Although a causal relationship cannot be assessed here, it may be that girls who feel less accepted by their peers turn to dieting in an attempt to gain greater acceptance. This is consistent with previous research showing thinner or more attractive girls to be more accepted by their peers (e.g. Lieberman, et al., 2001), and is supported by the finding that coeducational girls’ body image concern and dieting behaviour were positively correlated with their perceptions of the importance of thinness in gaining and maintaining friendships. However, these correlations were not significant for all-girls’ students, perhaps indicating that thinness is not seen as of as much importance for peer acceptance in this school environment.
Friendship cliques in all-girls’ schools were, however, found to be able to be characterised by their level of body image concern and dieting behaviour, indicating that these attitudes and behaviours do have some impact on friendships in all-girls’ schools. That is, all-girls’ clique members were found to share similar levels of body image concern and dieting behaviour, in line with the results of Paxton and colleagues (1999), although coeducational cliques could not be characterised in this way. Various peer factors were important in predicting individual body image concern, with more of the variance being explained for all-girls’ than coeducational female students. It is possible that friends exhibit more influence on body image concern in all-girls’ schools, with the body image concern reported by friends (adjusted clique mean) emerging as a significant predictor for all-girls’ but not coeducational female students. However, greater pressure to be thin from peers predicted lower body image concern for all-girls’ students, indicating the complexity involved in predicting body image concern. The reasons for this are unclear, and thus this is a potential avenue for future research.

A total of 85% of the variance in all-girls’ and 74% of the variance in coeducational girls’ body image concern was accounted for, similar to the results obtained by Paxton and colleagues (1999). When the analysis of Paxton and colleagues was extended, however, more of the variance in body image concern was accounted for in all groups, with a total of 91% of the variance in all-girls’ and 79% of the variance in coeducational girls’ body image concern being explained by the final step. Media influence, not measured by Paxton and colleagues, emerged as an additional predictor of all-girls’ body image concern, along with friends’ concern with thinness, friend influence, media pressure, body mass index, and self-esteem. The impact of media influence was not in the expected direction, with greater media influence predicting less body image concern. This could be related to how adolescents are processing media messages (e.g. Botta, 1999), with recent attention moving towards media literacy in empowering adolescents to critically evaluate media messages (Wade, Davidson, & O’Dea, 2003). That is, although adolescents are perceiving influence from the media, they may not necessarily be internalising these messages, and may in fact be resisting them. However, media pressure was a significant positive predictor for all-girls’ students, although not for
coeducational girls, consistent with further analyses which revealed that the interaction of school-type and media pressure was a significant predictor of body image concern.

A total of 66% of the variance in all-girls’ and 53% of the variance in coeducational girls’ disordered eating was explained. When the analysis was extended, an additional 10% of the variance in all-girls’ and 13% of the variance in coeducational girls’ disordered eating was accounted for, with further analyses revealing the interaction of school-type and comparison with peers to be a significant predictor of disordered eating. This interaction was also significant for dieting behaviour, indicating that social comparison with peers predicts both disordered eating and dieting differently for all-girls’ and coeducational female students.

Further examination of earlier regression results revealed that comparison was a significant predictor of all-girls’ disordered eating, while not predicting coeducational girls’ disordered eating, whereas comparison significantly predicted coeducational girls’ but not all-girls’ dieting behaviour.

Social comparison with peers was also a significant predictor of all-girls’ dietary restraint or oral control, although not in the expected direction. That is, a greater tendency to compare with peers predicted lower levels of oral control. This was also observed for disordered eating in general, whereby greater tendency to compare with peers predicted less disordered eating in all-girls’ students. This may be a function of the peers with whom one is comparing, as if one compares favourably, as in a downward comparison, they are less likely to alter their behaviours and attitudes as a result (e.g. Waislenko, Kulik, & Wanic, 2007).

Social comparison with peers was also a negative predictor of both all-girls’ and coeducational girls’ oral control in the extended analysis. An additional 24% of the variance in all-girls’ and 29% of the variance in coeducational girls’ oral control was explained in this analysis. ‘Thin’ teasing emerged as an additional predictor of oral control for both school-types, while influence from friends and pressure from peers also predicted all-girls’ oral control. School-type appeared to have the most substantial influence on this variable, with the interactions between school-type and appearance conversations and school-type and teacher influence both emerging as significant predictors. Further examination of the regression
results revealed that appearance conversations positively predicted all-girls’ while negatively predicting coeducational girls’ oral control, while teacher influence was a significant predictor for coeducational female but not all-girls’ students.

Finally, as the previous analyses had focused predominantly on girls, an attempt was made to further investigate the possible influence of boys. Although girls with male friends were not found to differ from those with only female friends on measures of body image concern and disordered eating, the amount of attention that a girls’ male friends paid to weight was positively correlated with their body image concern, disordered eating, and oral control, while male friends’ level of appearance criticism was related to girls’ disordered eating and dieting behaviours. On the whole, however, the influence of male friends did not appear to be significantly associated with girls’ body image concerns and disordered eating behaviours, with the exception of oral control, which was predicted by one’s male friends’ attention to weight.

This is not to say that boys had no influence on girls, however, as it is possible that their influence was experienced in ways other than through friendship. For example, it may be that girls’ beliefs about their popularity with boys influences their body image concerns (e.g. Oliver & Thelen, 1996), or that romantic involvement with boys is a stronger predictor of body image concern and disordered eating (see e.g. Compian, et al., 2004). These are areas for further research as, given the differences observed here between all-girls’ and coeducational female students, it seems likely that boys play an important role in influencing girls’ body image and eating concerns.

This study has verified that there are friendship clique similarities in body image concern and dieting behaviour, particularly in all-girls’ schools, and that peer factors are important predictors of these behaviours, even after individual and other sociocultural variables are taken into account. These factors vary between school-types, indicating that the gender composition of a school plays an important role in the prediction of body image concern and disordered eating behaviours. This study has successfully replicated and extended upon the results of Paxton and colleagues’ (1999) study, adding further support to the argument that
Peer groups are important influences on weight- and eating-related attitudes and behaviours. However, further research is needed in this area, and this was the aim of the following analysis.
CHAPTER EIGHT

RESULTS FROM THE QUANTITATIVE ANALYSIS (2) – HIERARCHICAL LINEAR MODELLING

INTRODUCTION

Sociocultural influences, and peer factors in particular, are known to be particularly important contributors to the body image concerns and disordered eating of adolescent girls. This was demonstrated in the previous chapter, whereby peer factors were found to be significant predictors of these behaviours, even after taking into account individual and other sociocultural variables. Past research has suggested that one of the most significant ways in which these peer factors may have their influence is through the existence of appearance cultures in friendship cliques or peer groups (see e.g. Jones & Crawford, 2006), and indeed the findings presented in Chapter Seven show friendship clique similarities in body image concern and dieting behaviours, particularly in all-girls’ schools. That is, the peer group itself could be seen to contribute to body image concern and disordered eating, over and above factors stemming solely from the individual. However, the role of friendship cliques requires further investigation, and thus this was the aim of the current chapter.

The present analysis thus aims to further investigate the role of friendship cliques in the prediction of adolescent girls’ body image concern and disordered eating behaviours, using the technique of hierarchical linear modelling (HLM). As explained previously (see Chapter Six), HLM is a statistical procedure employed in the analysis of hierarchically-organised or nested data (Attar-Schwartz & Khoury-Kassabri, 2008). This technique allows one to investigate the capacity of group-level variables to explain individual-level variance, as well as enabling one to explore both main effects within and interactions between levels (Payne, 2008). In this case, HLM was used in an attempt to investigate the individual- and group-level predictors of body image concern and disordered eating behaviours, with students (individual-level) nested within friendship cliques (group-level). A two-level model was estimated, with student variables at Level 1 and clique variables at Level 2. Clique-level variables were
determined by calculating the mean individual-level score for each clique. These analyses therefore necessarily included only those students assigned to cliques. In addition, due to the small number of boys assigned to cliques, these analyses focused on adolescent girls alone.

**OVERVIEW OF ANALYSIS**

Model estimation followed the guidelines put forward by Bryk and Raudenbush (1992) and Peugh (2010), using HLM 6.08 (see Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2004). The restricted maximum likelihood estimation method was used in all analyses. In addition to this being the default method, Peugh (2010) notes that this method produces more accurate variance estimates in small samples. As the samples in the present analysis range between 75 and 80, it was determined that this was the most appropriate method. In all cases, separate models were estimated for body image concern and disordered eating, and for all-girls’ and coeducational students, due to observed differences in the outcome variables.

As a first step, a fully unconditional or null model was estimated. The null model provides a benchmark with which to compare models with Level 1 and/or Level 2 predictors, and is also used to determine between-group variation, or the intra-class correlation (ICC). The null model is also a key step in determining whether HLM is warranted. In cases where the ICC is low, resulting in a non-significant null model, the use of HLM is not justified.

Following the estimation of the null model, Level 1 random-intercepts (fixed slopes) models were estimated where appropriate. Those individual, peer and media factors which emerged as the most consistent predictors in earlier regression analyses were included as predictors in this model. All variables were group-mean centred. Lastly, Level 2 intercepts-as-outcomes models were specified, in which clique-level predictors were entered into the model along with individual-level (Level 1) predictors. Potential Level 2 predictors were determined using exploratory analysis, and those variables deemed to be theoretically important were then entered into the final equation. All Level 2 predictors were grand mean centred.

In all cases, fixed slopes models were estimated. Such models assume that the relationship between predictor and outcome variables is similar for each clique, but that the overall mean
level of the outcome variable differs from clique to clique (Kreft & de Leeuw, 1998). That is, the intercept is allowed to differ but slopes remain fixed. Differences in the deviances for the Level 1 and 2 models were compared to evaluate the improvement of fit between models (Kreft & de Leeuw, 1998), and the intra-class correlation was also calculated for each model.

**PREDICTING BODY IMAGE CONCERN**

A total of 80 all-girls’ students in 17 cliques, and 75 coeducational female students in 18 cliques, were included in these analyses. In order to determine whether HLM was warranted, a series of null models were estimated. The null model equation is:

\[
\text{Outcome} = \gamma_{00} + u_0 + r
\]

whereby \( \gamma_{00} \) = the overall grand mean intercept  
\( u_0 \) = the clique-level random deviate around the grand mean  
and  \( r \) = the student-level random deviate.

This null model was then used to calculate the intra-class correlation (ICC) in order to determine the amount of clique homogeneity and thus whether HLM was justified. The ICC equation is:

\[
\text{ICC} = \frac{\tau}{\sigma^2 + \tau}
\]

whereby  \( \tau \) = variance in outcome attributable to the between-groups effect  
and  \( \sigma^2 \) = level 1 (within-groups) variance in intercept.

For body image concern in all-girls’ students, the ICC indicated that 23.36% of the variance was attributable to between-clique effects. The null model as a whole was significant, \( \chi^2 (16) = 40.68, p < .01 \), indicating that HLM is warranted for this population. The deviance for this model was 242.35.

As the null model was found to be significant, body image concern as an outcome variable was then further explored using HLM. The first step involved specifying a Level 1 model, whereby BMI, self-esteem, pressure from media, and friends’ concern with thinness were entered as individual-level predictors. The Level 1 model equation was:
\[ Y (\text{Body image concern}) = \beta_0 + \beta_1 (\text{BMI}) + \beta_2 (\text{Self-esteem}) + \beta_3 (\text{Pressure from media}) + \beta_4 (\text{Friends’ concern with thinness}) + r \]

whereby \( \beta_0 \) = intercept, function of the grand mean of body image concern across Level 2 units (cliques) plus a random error term

\( \beta_1 \) through \( \beta_4 \) = grand mean of variable across cliques

The ICC indicated that 58.71% of the variance in body image concern was between groups, an increase of 35.35% from the null model. Deviance for this model was 175.04, representing a difference of 67.31 from the null model and therefore indicating a significant \( (p < .001) \) improvement of fit over the null model. Table 8.1 provides the fixed and random effects for the Level 1 and 2 models.

For the Level 1 model, as can be seen in Table 8.1, BMI, self-esteem, and pressure from media were significant predictors of body image concern in all-girls’ students, such that girls with higher BMI and perceived media pressure, and lower reported self-esteem, experienced greater body image concern. Friends’ concern with thinness was not a significant predictor in this model. Overall, this model was significant, indicating that there was still significant variation in the intercept to be explained, and therefore Level 2 predictors were entered.

The Level 2 intercepts-as-outcomes model included clique-level variables as predictors, in addition to the individual-level predictors investigated in Model 1. Exploratory analyses revealed comparison with models, comparison with peers, appearance conversations, media influence, and media pressure to be potential predictors. However, it was determined on a theoretical basis that media influence and pressure would encompass comparison with models at a group level, and thus this variable was not entered as a predictor. The Level 2 model equation was:

\[ \beta_0 = \gamma_{00} + \gamma_{01} \ast \text{(Mean media influence)} + \gamma_{02} \ast \text{(Mean pressure from media)} + \gamma_{03} \ast \text{(Mean appearance conversations)} + \gamma_{04} \ast \text{(Mean comparison with peers)} + U \]

whereby \( \gamma_{00} \) = Level 2 intercept

\( \gamma_{01} \) through \( \gamma_{04} \) = Level 2 slope (fixed)

\( U \) = residual intercept variance
Table 8.1

*Hierarchical Linear Modelling Results for Body Image Concern in All-Girls’ Students*

<table>
<thead>
<tr>
<th>Fixed Effects</th>
<th>Level 1</th>
<th></th>
<th></th>
<th>Level 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>SE</td>
<td></td>
<td>Coefficient</td>
<td>SE</td>
<td></td>
</tr>
<tr>
<td><strong>Within cliques</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>2.81***</td>
<td>.17</td>
<td></td>
<td>2.81***</td>
<td>.08</td>
<td></td>
</tr>
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<td>.02</td>
<td></td>
<td>.11***</td>
<td>.02</td>
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<tr>
<td>Self-esteem</td>
<td>-.86***</td>
<td>.14</td>
<td></td>
<td>-.86***</td>
<td>.14</td>
<td></td>
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<tr>
<td>Pressure from media</td>
<td>.42***</td>
<td>.06</td>
<td></td>
<td>.42***</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>Friends’ concern</td>
<td>-.13</td>
<td>.17</td>
<td></td>
<td>-.13</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td><strong>Between cliques</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Media influence</td>
<td></td>
<td></td>
<td></td>
<td>.44*</td>
<td>.18</td>
<td></td>
</tr>
<tr>
<td>Pressure from media</td>
<td></td>
<td></td>
<td></td>
<td>-.61*</td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>Appearance conversations</td>
<td></td>
<td></td>
<td></td>
<td>.13</td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td>Comparison with peers</td>
<td></td>
<td></td>
<td></td>
<td>1.09***</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td><strong>Random Effects</strong></td>
<td>Variance</td>
<td>$\chi^2$ (df)</td>
<td>Variance</td>
<td>$\chi^2$ (df)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\tau$ (Between cliques)</td>
<td>.44</td>
<td>134.94***</td>
<td>.03</td>
<td>18.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\sigma^2$ (Within cliques)</td>
<td>.31</td>
<td>(16)</td>
<td>.31</td>
<td>(12)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01; *** p < .001
This model was found to account for 86.75% of the variance between cliques in average body image concern. Deviance for this model was 152.73, representing a difference of 22.31 from the Level 1 model. This indicates a significant improvement of fit ($p < .001$) over the Level 1 model. Fixed and random effects for this model are presented in Table 8.1.

As can be seen in this table, media influence, media pressure, and comparison with peers were significant clique-level predictors of body image concern. Specifically, cliques characterized by greater media influence and comparison with peers, and less media pressure, were found to exhibit greater body image concern. Overall, this model was not significant, as seen in Table 8.1, and thus no additional variation in the intercept model remained to be explained. That is, it is likely that additional predictors would not further explain average body image concern at a clique level.

For coeducational female students, the null model predicting body image concern was not significant, $\chi^2 (17) = 12.33, p > .05$. Therefore, HLM was not found to be warranted in this instance. These results are consistent with the analysis presented in the previous chapter, whereby coeducational cliques were not found to be characterised by their level of body image concern.

PREDICTING DISORDERED EATING AND DIETING BEHAVIOUR

For all-girls’ disordered eating, the ICC indicated that 10.78% of the variance was attributable to between-clique effects. This null model was not significant, $\chi^2 (16) = 24.01, p > .05$, and therefore HLM was not appropriate here. However, as previous analyses had revealed all-girls’ clique members to be similar on dieting behaviour, a facet of disordered eating, the null model for this outcome variable was also investigated. This null model was significant, $\chi^2 (16) = 36.16, p < .01$, with the ICC indicating that 20.07% of the variance was attributable to between-clique effects. Deviance for this model was 100.76.

A Level 1 model with dieting behaviour as an outcome variable was therefore specified for all-girls’ students, with pressure from media, appearance conversations, comparison with peers, and body image concern entered as individual-level predictors. Although body image
concern had not been tested as a potential predictor in earlier analyses, it was considered to be a theoretically important predictor of dieting behaviour, and thus was included in the model. The Level 1 model equation was:

\[ Y (\text{Dieting}) = \beta_0 + \beta_1 \times (\text{Pressure from media}) + \beta_2 \times (\text{Appearance conversations}) + \beta_3 \times (\text{Comparison with peers}) + \beta_4 \times (\text{Body image concern}) + r \]

whereby \( \beta_0 \) = intercept, function of the grand mean of dieting behaviour across Level 2 units (cliques) plus a random error term
\( \beta_1 \) through \( \beta_4 \) = grand mean of variable across cliques

The ICC indicated that 33.22% of the variance in body image concern was between groups, an increase of 13.15% from the null model. Deviance for this model was 83.53, representing a difference of 17.23 from the null model and therefore indicating a significant \( p < .001 \) improvement of fit over the null model. Table 8.2 provides the fixed and random effects for the Level 1 and 2 models.

For the Level 1 model, as can be seen in Table 8.2, appearance conversations, comparison with peers, and body image concern were significant predictors of dieting behaviour in all-girls’ students, such that girls reporting more appearance conversations, less comparison with peers, and greater body image concern experienced higher levels of dieting behaviour. Overall, this model was significant, indicating that there was still significant variation in the intercept to be explained, and therefore Level 2 predictors were entered.

The Level 2 intercepts-as-outcomes model included clique-level variables as predictors, in addition to the individual-level predictors in Model 1. Exploratory analysis revealed influence from friends, appearance conversations, and appearance criticism to be potential predictors, and therefore these variables were entered at Level 2. The Level 2 model equation was:

\[ \beta_0 = \gamma_{00} + \gamma_{01} \times (\text{Mean friend influence}) + \gamma_{02} \times (\text{Mean appearance conversations}) + \gamma_{03} \times (\text{Mean appearance criticism}) + U \]

whereby \( \gamma_{00} \) = Level 2 intercept
\( \gamma_{01} \) through \( \gamma_{03} \) = Level 2 slope (fixed)
\( U \) = residual intercept variance
Table 8.2

Hierarchical Linear Modelling Results for Dieting Behaviour in All-Girls’ Students

<table>
<thead>
<tr>
<th>Fixed Effects</th>
<th>Level 1</th>
<th>Level 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>SE</td>
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<tr>
<td>Within cliques</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>.30**</td>
<td>.07</td>
</tr>
<tr>
<td>Pressure from media</td>
<td>.08</td>
<td>.05</td>
</tr>
<tr>
<td>Appearance conversations</td>
<td>.12*</td>
<td>.06</td>
</tr>
<tr>
<td>Comparison with peers</td>
<td>-.13*</td>
<td>.06</td>
</tr>
<tr>
<td>Body image concern</td>
<td>.25**</td>
<td>.07</td>
</tr>
<tr>
<td>Between cliques</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friend influence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance conversations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance criticism</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Random Effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>τ (Between cliques)</td>
<td>.05</td>
<td>57.45***</td>
</tr>
<tr>
<td>σ² (Within cliques)</td>
<td>.11</td>
<td>(16)</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01; *** p < .001
This final model was found to account for 90.57% of the variance between cliques in average dieting behaviour scores. Deviance for the Level 2 model was 75.69, representing a difference of 7.84 from the Level 1 model and thus indicating a significant improvement of fit \( (p < .05) \). Fixed and random effects for this model are presented in Table 8.2.

As can be seen in this table, friend influence and appearance conversations were significant clique-level predictors of dieting behaviour. Specifically, cliques characterized by higher levels of influence from friends and more appearance conversations were found to display higher dieting behaviour scores. Appearance criticism was not found to be a significant predictor at the clique-level. Overall, this model was not significant, as seen in Table 8.2, and thus no additional variation in the intercept remained to be explained. That is, it is unlikely that the addition of predictors would further explain average dieting behaviour scores at a clique level.

For coeducational female students, the null model predicting disordered eating was not significant, \( \chi^2 (17) = 16.37, p > .05 \), with the ICC indicating that 1.17% of the variance was attributable to between-clique effects. Therefore, HLM was not found to be warranted for the coeducational population.

**DISCUSSION**

As in the previous analysis, all-girls’ cliques were found to be able to be characterized by their level of body image concern and dieting behaviour. That is, significant between-clique variability was found on these variables for all-girls’ students. However, consistent with previous analyses, there was not found to be significant between-clique variability on these variables for coeducational girls, meaning that their cliques could not be characterized by their level of body image concern and disordered eating or dieting behaviour. Therefore, HLM analyses were conducted for all-girls’ students only.

When predicting all-girls’ body image concern, BMI, self-esteem, and media pressure were found to be significant Level 1, or individual-level, predictors, such that girls with a higher BMI and perceived media pressure, and lower reported self-esteem, experienced greater body
image concern. This is consistent both with the previous analysis and the bulk of the literature. For example, Ata and colleagues (2007) found that US adolescents who experienced lower self-esteem and higher levels of perceived pressure from the media exhibited lower body esteem, while Hutchinson and Rapee (2007) found body mass index and self-esteem, along with other peer and psychological variables, to predict body image concern in Australian all-girls’ school students.

At a clique level, media influence, media pressure, and comparison with peers were found to be significant predictors of all-girls’ body image concern. That is, cliques characterized by greater media influence and comparison with peers, and less media pressure, were found to exhibit greater body image concern. The findings that lower perceived media pressure predicted greater body image concern is interesting, given that a positive predictive relationship was found between the two at an individual level. Further, although media influence was found to be a positive predictor of body image concerns at a group level in this analysis, previous regression analyses found individual-level media influence to be a negative predictor of body image concern. Thus, there seems to be a reversal of media influence and pressure in a group as compared to an individual setting.

The reasons for this are unclear, but seem to point towards the fact that something distinctive is occurring in the group environment which does not manifest at an individual level. For example, in relation to the media influence finding, it could be that the group is picking up the media’s ideas in relation to diet and exercise in a way that the individual doesn’t, making these ideas more influential in a group setting. It could be, for instance, that individuals are able to employ media literacy skills at an individual level, but that when in a group environment, the influence of the group combines with that of the media, overriding one’s ability to employ these skills. In relation to the media pressure finding, it could be that naming something as ‘pressure’ makes it easier to resist in a group environment. That is, if the group sees the media as actively creating a need to conform to beauty and thinness ideals, rather than neutrally reflecting the natural state of things, it may be easier to resist that
pressure when one is in a group setting. However, these reasons are speculative, and further research is needed to investigate this area further.

All-girls’ cliques were not found to be able to be characterized by their level of disordered eating, however further analyses revealed significant between-clique variability on dieting behaviour, as a facet of disordered eating. At an individual level, all-girls’ dieting behaviour was predicted by appearance conversations, comparison with peers, and body image concern, while at a clique-level, influence from friends and appearance conversations were significant predictors. That is, girls reporting more appearance conversations, less comparison with peers, and greater body image concern, at an individual level, experienced higher levels of dieting behaviour, while cliques characterized by higher levels of appearance conversations and influence from friends were found to exhibit more dieting behaviour. These findings are as expected, with the exception of social comparison with peers, where one would expect a positive predictive relationship. However, this may be a function of the peers with whom one is comparing, such that if one compares favourably with their peers, as in a downward comparison, they may be less likely to experience body image concern (e.g. Wasilenko, et al., 2007).

Overall, this study has supported the findings of the previous analysis indicating that there are friendship clique similarities in body image concerns and dieting behaviour in all-girls’ students, while coeducational girls’ cliques can not be characterized by these variables. Peer factors were again found to be significant predictors of these behaviours, as well as media influences, although some questions regarding the impact of media in a group as compared to individual setting remain to be answered, providing a possibly interesting avenue for future research. On the whole, these findings support the notion that friendship cliques are important in leading to and maintaining the body image concerns and disordered eating behaviours of adolescent girls, and that these cliques are particularly influential in an all-girls’ as compared to coeducational school environment.
CHAPTER NINE

GENERAL DISCUSSION AND CONCLUSIONS

The primary aim of this thesis was to provide a more complete and comprehensive understanding of disordered eating and body image concerns in the adolescent population, and, more specifically, to elucidate the role of school and peer cultures in relation to these. That is, this thesis aimed to examine the role of the school environment in contributing to body image concerns and disordered eating in adolescents. In particular, the micro culture of the school peer group or friendship clique was investigated, guided by the hypothesis that peer cultures represent a manifestation of the wider culture within the high school peer environment. This was explored within the wider overarching proposition that culture plays a central role in the expression and experience of body image concerns and disordered eating symptoms.

Multiple theories of culture’s role in the area of eating behaviours and body and weight concerns have been postulated, many of which share the view that culture is one risk factor among many, a trigger that intensifies already existing vulnerabilities. This view generally ascribes responsibility for body image dissatisfaction to the individual, with societal pressures seen as external factors to be resisted (Blood, 2005). However, other research has viewed culture as central to the experience and manifestation of disordered eating and body image concerns, and as influencing the particular form these concerns subsequently take. That is, disordered eating and body image concerns are seen as crystallisations of the culture itself (Bordo, 1989, 1993). This latter view was the one taken in this thesis, whereby culture was viewed as playing a predominant and necessary role in the experience of disordered eating and body image concerns.

In this vein, the school environment was hypothesised to represent a microcosm of the wider culture, and thus to play a crucial role in the manifestation and experience of disordered eating and body and weight concerns. For this reason, the role of the high school environment and peer culture in contributing to body image concerns and disordered eating in adolescents,
particularly girls, was examined. The existence and contribution of peer appearance cultures was explored in various school environments, both all-girls’ and coeducational, and the importance of the school’s gender composition was also investigated, as it was expected that body image concerns and disordered eating, as well as peer cultures, would vary across school environments.

Overall, the findings indicated that the school environment, and the peer cultures embedded within, did play an important role in the development and maintenance of body image and weight concerns. That is, the notion that friendship cliques are influential in leading to and maintaining the body image concerns and disordered eating behaviours of adolescent girls was supported by the findings of this thesis. This was particularly so within all-girls’ compared to coeducational school environments, with body image concerns found to be highest within these environments. Therefore, it appeared that culture, manifested within peer appearance cultures, played a principal role in shaping the form that disordered eating and body image concerns took in the high school environment.

This was first demonstrated through the qualitative study, whereby a peer appearance and weight-conscious culture was clearly evident within the all-girls’ school studied, consistent with previous research which shows that adolescents create an appearance culture within their peer groups that both mirrors and influences their own eating behaviours and attitudes (Jones & Crawford, 2006). Students, parents, and staff members at the school all noted the role that the school, and peers within the school environment, played in fostering weight consciousness and influencing eating habits. As well as being aware of the behaviours that comprise appearance cultures, including weight teasing and appearance conversations, the students were also aware of the existence of the appearance culture itself. That is, the students were conscious of and alert to the appearance cultures around them, and the ways in which these cultures created pressure to conform, but also seemed to consider these pressures to be inevitable. School programs aiming to address these pressures were also seen, paradoxically, to contribute to the appearance culture, by overly emphasising disorder to the detriment of health.
These findings were then re-established in the quantitative and hierarchical linear modelling analyses. That is, the quantitative findings confirmed the contribution of the school, and particularly friendship groups within the school, to students’ body image and weight concerns, and demonstrated that cliques are especially influential in an all-girls’ as compared to a coeducational school environment. Specifically, the first quantitative analysis found friendship clique members in all-girls’ schools to share similar levels of body image concern and dieting behaviour, although coeducational cliques could not be characterized in this way. Thus, although peer factors were still found to be significant predictors of coeducational girls’ body image and disordered eating, it seems that peer cultures may be more influential in an all-girls’ as opposed to coeducational school environment. The hierarchical modelling analysis echoed these findings, with friendship cliques in all-girls’ schools found to be important contributors to the body image concerns and disordered eating behaviours of adolescent girls.

The lesser importance of peer cultures in coeducational as compared with all-girls’ schools did not, however, appear to arise as a result of including boys as part of the coeducational girls’ peer groups, as the majority of friendship groups were homogeneous with regard to gender composition. Additionally, analyses specifically investigating the influence of boys did not result in any significant findings to note. Therefore, although there does seem to be a clear difference between all-girls’ and coeducational schools, more investigation into the specific mechanisms by which the presence of boys influences the body image pressures experienced by girls is required.

This thesis has provided evidence for the view that culture is a necessary contributor to body image concerns and disordered eating in adolescent girls, actually shaping the form that these concerns take rather than being just one risk factor among many. This was apparent on both a macro level, whereby media influences were found to significantly impact upon these concerns and behaviours, and a micro level, with peer appearance cultures found to be both apparent and influential. The manifestation of the wider culture within the school environment, particularly as influenced by and embodied within school gender composition,
was also found to play a role, with peer appearance cultures seeming to be much more influential in an all-girls’ as compared to a coeducational school environment.

**IMPLICATIONS**

These findings have many important theoretical and clinical implications. Firstly, on a theoretical level, these findings have added significantly to the research literature, providing a greater understanding of how peers, and more broadly schools, contribute to disordered eating and body image concerns. Importantly, significant differences were found between coeducational and all-girls’ schools, suggesting that the gender composition of the school is central to the experience of disordered eating and body image concerns. In particular, friendship cliques were found to be characterised by these concerns in all-girls’ schools only, indicating that friends exhibit more influence on body image concerns and disordered eating in all-girls’ as compared to coeducational schools, and body image concerns were also higher in all-girls’ schools. The contribution of school gender composition to disordered eating and body image concerns is an understudied area, with few available findings, and thus the current study represents a valuable addition to the research literature.

Accordingly, the contribution of platonic friendships with boys to the body image concerns of girls has not received a great deal of previous research attention. This was addressed in the current study, with male friends within coeducational schools not appearing to influence girls’ body image concerns and disordered eating behaviours in any significant way. This could be seen to indicate that female friends are more important in this arena. However, boys may influence girls in ways other than through platonic friendships, such as through girls’ own beliefs about the determinants of their popularity with boys, as well as their romantic involvement with boys. Future research should investigate these spheres of influence, which were outside the scope of the current research project. In addition, future research should further investigate the contribution of school gender composition to body image concerns and disordered eating behaviours, particularly dieting.
On a clinical level, it is likely that these findings can be applied in the field of eating disorder and body image concern prevention and intervention. As the importance of peer cultures as an arena for the production and maintenance of body image concerns and disordered eating has been confirmed throughout this thesis, it may be argued that these cultures represent critical contexts at which prevention programs should be directed. That is, the results presented within this thesis suggest that prevention programs should focus on peer influences at a cultural rather than individual level. Current prevention programs generally encourage girls to ‘resist’ peer and wider cultural pressure, and thereby transform these cultural issues into an individual responsibility. However, the findings presented herein suggest that these cultural influences and pressures should be directly targeted.

Some preliminary attempts at directly intervening in social processes have been made in New Zealand and Canada. The Body-image Wellbeing in Schools Education (BWISE) whole-school approach in New Zealand is one example (Burns, et al., 2009). This program targets peers, staff, parents, school curriculum, school policy, and the community, and recognises that schools may be sites for the reproduction of body ideals. Another example is provided by Piran (1999), who introduced a program in a Canadian ballet school which attempted to create a school milieu wherein students felt comfortable with their changing bodies, through implementing systemic changes within the school. These programs represent an important first step in this regard, and, in line with the results of this thesis, could be extended to schools across Australia. For example, a nationwide policy advocating changes in school programs and curricula surrounding body image and weight could be actuated, as has been suggested by the National Body Image Advisory Group (see http://www.youth.gov.au/Documents/Proposed-National-Strategy-on-Body-Image.pdf). In addition, an educational program for students, staff, and parents, similar to the approaches taken in New Zealand and Canada, could also be implemented nationwide.

Specific arenas within the peer culture that should be targeted in prevention programs are also suggested by the results of this thesis. For example, the desire to ‘fit in’ and be accepted consistently emerged as a reason why adolescent girls engage in disordered eating behaviours.
Bearing this in mind, future prevention programs could aim to challenge peer norms and perceptions surrounding the importance of thinness for popularity. The desire to ‘fit in’ can also be seen to motivate talk around body image concern in the form of ‘fat talk’ (Nichter, 2000), in which girls self-derogate their bodies and appearance when in the company of other girls (Craig, et al., 2007). As ‘fat talk’ has been found to fulfil social motives, such as promoting group affiliation, prevention programs need to focus on replacing this with a more positive and constructive alternative, alongside challenging peer norms for ‘fat talk’.

These results also point to the need for the link between thinness and attractiveness to be addressed in prevention programs, as students in particular consistently recognized ‘being thin’ as a necessary prerequisite for ‘looking good’. Addressing this link, and thus challenging the perception that thin equals attractive, is an important step to be taken in any prevention program. Ultimately, this would also involve some form of media literacy or critical training, as this thinness-attractiveness link can be seen to be strongly influenced by the media thin-ideal. Adding to this, students may experience media pressures more intensely when they are reflected in their peer and family relationships, as they may become personalised, in line with previous research (e.g. Wertheim, et al., 1997). Evidence for this was shown here in the hierarchical linear modelling analysis, whereby the media was more influential at a group than individual level, arguably because of its increased strength when in combination with group pressures. Thus, any school-wide program also needs to directly target media pressures and influences in order to be successful.

School-wide prevention programs should, however, be careful to maintain a realistic outlook on the importance of appearance inherent in our culture. Programs currently in place in the first school studied here were seen by the students as unrealistic and in some cases even as counterproductive, normalising body image concern and reinforcing the appearance culture in the school. These programs, although well-intended and potentially helpful, were also criticised for being somewhat removed from the reality of the pressure experienced by girls to have ‘a good body.’ That is, they seemed to fail to acknowledge the ways in which appearance does matter in the lives of the girls they were addressing. In our current society, it
seems clear that programs that suggest that concerns with appearance be set aside in order to focus on more important ‘inner qualities’ are doomed to be considered as hopelessly naïve and out of touch.

It seems that a more successful approach may be to frankly acknowledge the importance of appearance, and then to work on breaking the nexus between concern about appearance and a necessary adherence to narrowly defined standards of beauty. For example, addressing appearance as a means of expressing oneself and of playing with one’s identity may provide a way in which girls can negotiate the reality of their appearance mattering in a less oppressive way. Getting girls to think creatively about how they want to look, rather than trying to convince them that appearance is not important, may be a first step towards a school culture that understands that although appearance matters, it is both more than a simple ‘score’ one achieves against a single ideal and less than an inescapable determinant of one’s worth. Indeed, the results of this thesis suggest that attempting to negate the importance of appearance may be met with some resistance, and thus an alternative way to challenge appearance and beauty ideals may be more welcome, and indeed successful.

Finally, the findings of this thesis may also have important implications for the treatment of and intervention into body image concerns and eating disordered behaviour. Current inpatient treatments for eating disorders are generally conducted in group settings, as are some outpatient services. The importance of the peer culture in maintaining disordered eating behaviours and body image concerns as demonstrated in the present thesis suggests that special attention should be paid to the possibility of contagion of and support for unhealthy thoughts and behaviours within these settings. Indeed, previous research has found patients within eating disorder units to report comparing their bodies with others in the unit, competing with each other to be the thinnest, and learning damaging new behaviours including self-harm (Colton & Pistrang, 2004). This is not to suggest, however, that group treatment for eating disorders should be discontinued, as many positive benefits have also been reported, including the experience of a safe and secure environment removed from outside stressors (Gowers, Weetman, Shore, Hossain, & Elvins, 2000), the receiving of
support and understanding from fellow patients, and the development of positive friendships (Colton & Pistrang, 2004). However, the risk of contagion and unhealthy support is something that needs to be addressed in these treatment programs.

LIMITATIONS

Despite its many positive contributions, there are nonetheless some methodological limitations to this study that need to be noted. Firstly, the focus in the qualitative phase was limited to a single all-girls’ school, meaning that the results of this phase of the study may conceivably be limited in applicability to this school only. However, these findings were confirmed and reinforced, at least to some extent, by the findings of the quantitative phase of this study, suggesting that the results are at least in some ways generalisable.

Likewise, only one all-girls’ school was studied in the quantitative phase, although all all-girls’ schools in metropolitan Perth were contacted and invited to participate. This reluctance of all-girls’ schools to participate in research projects, particularly those related to disordered eating, has been previously documented by Mensinger (2005) in a study whereby only four out of 24 schools contacted (a response rate of approximately 16%) agreed to participate. As there are only 11 all-girls’ schools in Perth, and one had already participated in the earlier phase, a successful response of one out of 10 (10%) is in line with the response received by Mensinger, albeit a little lower.

The inclusion of only one all-girls’ school in the quantitative phase means that results relating to the differences between all-girls’ and coeducational schools need to be interpreted with some caution. In addition, it is possible that various background factors including socioeconomic status and racial background may differ between the schools and be partially responsible for the pattern of results. These variables were not controlled in the current analysis, and therefore care must be taken in the interpretation of these results. Future research could investigate the importance of these variables as between all-girls’ and coeducational schools.
With regard to the data collection techniques and methodologies themselves, a few limitations are worth noting. First of all, the reliability and validity of some of the items and scales used here have not been previously demonstrated. All data collection methods used in the qualitative phase were designed specifically for this study, and a number of the items used in the quantitative phase were adapted from the scales used and developed by Paxton and colleagues (1999) in their original study. These have not been widely validated, meaning that data arising from the use of measures should be interpreted with care. A variety of measures used in this study have, however, been validated with adolescents, and all scales used herein demonstrated adequate reliability in the current study.

Secondly, body mass index was measured using self-report, rather than objectively. This was predominantly for ethical reasons, whereby students may feel uncomfortable having their height and weight measured by someone unfamiliar to them, especially in the context of a body image study, as well as the impracticality of measuring a large number of students within a short period of time. However, self-reported height, weight, and BMI values are commonly used in studies, and Abraham and colleagues (Abraham, Luscombe, Boyd, & Olesen, 2004) found that the mean BMI of adolescent girls was not significantly different using reported as against measured values, although some under-reporting was present. Similarly, Tehard and colleagues (Tehard, Liere, Nougue, & Clavel-Chapelon, 2002) found a correlation of .98 between self-reported and objectively measured weight in adult females.

Additionally, it is possible that participants were aware of the research agenda of this thesis and that this awareness led them to focus on particular things, especially in the qualitative phase. For example, a stated interest in eating and body image in recruitment and consent materials may have led the girls who were interviewed to talk about appearance cultures more in terms of dieting and body size concerns and less in terms of other things, such as make-up and fashion, than they otherwise might have. Likewise, those who had existing concerns, whether about their own body image or about the role of appearance and body image in school life, may have been particularly likely to participate. However, the consistency of the issues raised and the similarity of responses across data collection methods and stages allows
some confidence that the school environment did play an important role in the development and maintenance of body image and weight concerns in the schools studied.

Finally, with regard to the social network and friendship clique analyses, the degree to which observed group similarities on body image concern and dieting were attributable to influence from friends over selection of like friends can not be ascertained. Future research could attempt a longitudinal design to clarify this, rather than the cross-sectional design utilised here. Relatedly, the extent to which those similarities are associated with other covarying factors which were not assessed is unclear. While a number of possible factors that may account for group similarities were controlled for, there may be other factors, including family environment and sports participation, which may be important in this regard.

CONCLUSIONS

Overall, the findings of this thesis have provided evidence for the view that culture is a necessary contributor to body image concern and disordered eating in adolescent girls, playing a major role in shaping the form that these behaviours and concerns actually take, rather than being just one risk factor among many. In this vein, the high school environment was hypothesised, and found, to represent a manifestation of the wider culture on a local level. That is, culture was seen to be embodied within peer appearance cultures within the high school, embracing wider cultural features including the media, and these appearance cultures were, in turn, seen to play a crucial role in the manifestation and experience of disordered eating and body and weight concerns within the high school. The crucial role of culture as manifested within the school environment was exemplified by demonstrated differences across school gender composition, a key facet of the school environment, with body image concerns found to be greater, and peer cultures arguably more influential, in all-girls’ as compared to coeducational schools.

All in all, the findings of this thesis lead us to three major conclusions. Firstly, high schools, and the peer cultures within them, can be seen to represent an embodiment of the wider culture surrounding them. Secondly, these peer cultures, by both incorporating wider
cultural influences and negotiating their own realities, can be seen to fundamentally influence the lives of those adolescents taking part in them. In this instance, the important role of peer cultures was demonstrated through their influence, via the creation of appearance cultures, on adolescents’ body image concerns and disordered eating. Finally, the wider culture itself can be seen to play a central role in the manifestation and experience of these concerns and behaviours, removing some of the responsibility for body image concerns from the individual and placing it, rightly, on the culture surrounding each and every one of us.
REFERENCES


McCabe, M. P., Ricciardelli, L. A., & Finemore, J. (2002). The role of puberty, media and popularity with peers on strategies to increase weight, decrease weight and


APPENDIX A

FOCUS GROUP QUESTION SCHEDULE

Are there any questions before we begin?

(1) Let’s start with eating disordered thoughts and behaviours in general. What do you think some signs and symptoms of these are? What do these ‘look like’?

(2) What do you think are some of the important factors leading to these thoughts and behaviours?

(3) What about social or peer group factors?

If no factors arise spontaneously, prompt with:

(a) What about weight teasing. Do you think this is particularly important in adolescent girls? How does it ‘come about’ or happen?

(b) Okay, what about social contagion? This is basically the idea that disordered thoughts and behaviours are spread throughout the population as if they were infectious. Do you think this is important?

(c) And finally, what about sociotropy? This is a personality characteristic related to need for approval and affection, and an elevated sensitivity to interpersonal criticism. Do you think this factor is important in adolescent girls?

(5) What functions, if any, do you believe/feel these behaviours have in this age group?

(6) Do you have any ideas how these factors might be ameliorated or modified?

(7) How much of an issue do you think these problems are, firstly in general, and also in your school population?

(8) Does anyone have anything else to add?
APPENDIX B

TEACHER SURVEY

Following is a short survey aiming to collect your views on eating behaviours in general, and the range of issues surrounding these. There are a lot of issues surrounding eating, including obesity and healthy eating. However, there are also times when eating behaviour becomes problematic, as in clinical disorders such as anorexia and bulimia. We are interested here in the whole range of eating behaviours, and your views of them.

(1) Schools are places where a ‘culture’ concerning weight consciousness and body image issues is thought to exist. That is, the social environment of a school is thought to be especially important in leading to and maintaining these kinds of issues. Do you have any comments on this?

(2) Demographics:

What is your gender? □ Female  □ Male

What is your age range? □ Under 30  □ 40-44  □ 55-59
□ 30-34  □ 45-49  □ 60-64
□ 35-39  □ 50-54  □ Over 65

(3) What magazine/s do you read regularly?

(4) What television program/s do you watch regularly?

(5) How important do you believe appearance is in today’s society?

1  2  3  4  5  6  7
Not at all  Somewhat  Very

Please explain:
(6) How important do you believe thinness is in today’s society?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(7) How important do you believe appearance is to the students at this college?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(8) How important do you believe thinness is to the students at this college?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(9) How concerned are you with losing, or maintaining your, weight?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

If you have anything further to add, please contact me at r.carey@murdoch.edu.au
APPENDIX C

STUDENT SURVEY

Following is a short survey aiming to collect your views on eating behaviours in general, and the range of issues surrounding these. There are a lot of issues surrounding eating, including obesity and healthy eating. However, there are also times when eating behaviour becomes problematic, as in clinical disorders such as anorexia and bulimia. We are interested here in the whole range of eating behaviours, and your views of them.

(1) Schools are places where a ‘culture’ concerning weight consciousness and body image issues is thought to exist. That is, the social environment of a school is thought to be especially important in leading to and maintaining these kinds of issues. Do you have any comments on this?

(2) How old are you?

(3) What magazine/s do you read regularly?

(4) What television program/s do you watch regularly?

(5) What internet site/s do you visit regularly?

(6) Do you play any sports regularly (i.e. once a fortnight or more)? If yes, which sports?

(7) How important do you believe appearance is in today’s society?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>Somewhat</td>
<td>Very</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Please explain:
(8) How important do you believe thinness is in today’s society?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(9) How important do you believe appearance is in your school?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(10) How important do you believe thinness is in your school?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(11) How concerned are you with losing, or maintaining your, weight?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(12) How much attention do you believe should be directed at eating and weight issues in the school curriculum?

1 2 3 4 5 6 7
No attention at all Some attention A lot of attention

Please explain:

If you would like to be included in the draw to win one of ten $25 Garden City vouchers, please enter your email address here:

I would love to talk with you more about these issues. If you are interested in discussing these with me, please fill in the accompanying form.
Following is a short survey aiming to collect your views on eating behaviours in general, and the range of issues surrounding these. There are a lot of issues surrounding eating, including obesity and healthy eating. However, there are also times when eating behaviour becomes problematic, as in clinical disorders such as anorexia and bulimia. We are interested here in the whole range of eating behaviours, and your views of them.

(1) Schools are places where a ‘culture’ concerning weight consciousness and body image issues is thought to exist. That is, the social environment of a school is thought to be especially important in leading to and maintaining these kinds of issues. Do you have any comments on this?

(2) Demographics:

What is your gender? □ Female □ Male

What is your age range?

□ Under 30 □ 40-44 □ 55-59
□ 30-34 □ 45-49 □ 60-64
□ 35-39 □ 50-54 □ Over 65

(3) What magazine/s do you read regularly?

(4) What television program/s do you watch regularly?

(5) How often do you eat meals together as a family?

(6) Do you play any sports regularly (i.e. once a fortnight or more)? If so, which?
(7) How close would you say you are to your daughter?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(8) How close would you say your daughter is to her group of friends?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(9) How important do you believe appearance is in today’s society?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(10) How important do you believe thinness is in today’s society?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(11) How concerned are you with losing, or maintaining your, weight?

1 2 3 4 5 6 7
Not at all Somewhat Very

Please explain:

(12) How much attention do you believe should be directed at eating and weight issues in the school curriculum?

1 2 3 4 5 6 7
No attention at all Some attention A lot of attention

Please explain:

If you have anything further to add, please contact me at r.carey@murdoch.edu.au
APPENDIX E

STUDENT INTERVIEW QUESTION SCHEDULE

(1) Let’s start generally. What issues come to mind when you think of eating behaviours?

(2) What do you think are some of the factors that may lead to problematic eating behaviours?

(3) Can you think of any examples of social or peer group factors that may lead to problematic eating?

(a) If yes, allow respondent to answer. If no, prompt with:

(i) What about the idea that these behaviours and body image issues can be kind of ‘infectious’ or ‘catchy’? So, they might be more common within a particular group or school? Do you think these factors might be important in your school or peer group? How do you think these thoughts and behaviours might be spread in your school or peer group?

(ii) There’s also the notion of ‘weight teasing’. Can you think how this might be related to eating disorders? Do you think weight teasing is important in your school or peer group?

Then continue to (b).

(b) Can you think of any other social or peer group factors that might contribute?

(4) Do you think these social or peer group factors are important in the adolescent population?

(a) What about in your school?

(b) Are they as important as other factors?

(5) Do you have any ideas how any of these issues we’ve talked about today might be prevented or changed?

(6) Would you say your group of friends is similar? In what ways?

(7) Do you think the way you look is important to your friends or other people at school?

(8) Do you think these kinds of problems and concerns would be more of a problem in a coeducational school or an all-girls’ school?
APPENDIX F

COEDUCATIONAL GIRLS’ QUESTIONNAIRE

Girls’ Questionnaire

About You

Please find your name on the attached list and write the number that appears next to it here:

_____________________________

How old are you? ________________ years & ________________ months

What is your nationality? _______________________________________________

Please give your best estimate of:

Your height: ___________________

Your weight: ___________________
The Questionnaires

Following are a series of questions that ask about your own feelings and behaviours, your eating habits, and your body image. There are also questions that ask about your friends, family, teachers, and the media. There are 12 sets of questions in all. Please read the instructions before each set of questions carefully, and make sure to answer all questions in all sets. Thank you.

Set One

Please circle the number which indicates the extent to which each of the following statements is true of you, using the following scale:

1. Never
2. Rarely
3. Sometimes
4. Often
5. Very Often
6. Always

1. Have you been so worried about your shape that you have been feeling that you ought to diet?
   1  2  3  4  5  6

2. Have you noticed the shape of other girls and felt that your own shape compared unfavourably?
   1  2  3  4  5  6

3. Has being naked, such as when taking a bath, made you feel fat?
   1  2  3  4  5  6

4. Has eating sweets, cakes, or other high-calorie food made you feel fat?
   1  2  3  4  5  6

5. Have you felt excessively large and rounded?
   1  2  3  4  5  6

6. Have you felt ashamed of your body?
   1  2  3  4  5  6

7. Has seeing your reflection (e.g. in a mirror or a shop window) made you feel bad about your shape?
   1  2  3  4  5  6

8. Have you been particularly self-conscious about your shape when in the company of other people?
   1  2  3  4  5  6

9. Have you found yourself worrying excessively about your shape?
   1  2  3  4  5  6

10. Has seeing thin girls made you feel badly about your own shape?
    1  2  3  4  5  6
Set Two

Read each of these statements carefully and circle the number which indicates how you feel about each statement using the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
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<tr>
<td>Very Strongly Disagree</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>MILDLY DISAGREE</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEUTRAL</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MILDLY AGREE</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRONGLY AGREE</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VERY STRONGLY AGREE</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. My friends really try to help me.
   1 2 3 4 5 6 7

2. I can count on my friends when things go wrong.
   1 2 3 4 5 6 7

3. I have friends with whom I can share my joys and sorrows.
   1 2 3 4 5 6 7

4. I can talk about my problems with my friends.
   1 2 3 4 5 6 7

5. My family really tries to help me.
   1 2 3 4 5 6 7

6. I get the emotional help and support I need from my family.
   1 2 3 4 5 6 7

7. I can talk about my problems with my family.
   1 2 3 4 5 6 7

8. My family is willing to help me make decisions.
   1 2 3 4 5 6 7
Set Three

For each question, please circle a number to indicate the degree to which you agree with the statement or feel that it is true of you, using the following scale:

1. Not at all
2. A little bit
3. Somewhat
4. Very much
5. Extremely

1. I get nervous if I have to speak with someone in authority (teacher, boss).
   - 1
   - 2
   - 3
   - 4
   - 5

2. I have difficulty making eye contact with others.
   - 1
   - 2
   - 3
   - 4
   - 5

3. I become tense if I have to talk about myself or my feelings.
   - 1
   - 2
   - 3
   - 4
   - 5

4. I find it difficult mixing comfortably with the people I go to school with.
   - 1
   - 2
   - 3
   - 4
   - 5

5. I find it easy to make friends of my own age.
   - 1
   - 2
   - 3
   - 4
   - 5

6. I tense up if I meet an acquaintance in the street.
   - 1
   - 2
   - 3
   - 4
   - 5

7. When mixing socially, I am uncomfortable.
   - 1
   - 2
   - 3
   - 4
   - 5

8. I feel tense if I am alone with just one person.
   - 1
   - 2
   - 3
   - 4
   - 5

9. I am at ease meeting people at parties, etc.
   - 1
   - 2
   - 3
   - 4
   - 5

10. I have difficulty talking with other people.
    - 1
    - 2
    - 3
    - 4
    - 5

11. I find it easy to think of things to talk about.
    - 1
    - 2
    - 3
    - 4
    - 5

12. I worry about expressing myself in case I appear awkward.
    - 1
    - 2
    - 3
    - 4
    - 5

13. I find it difficult to disagree with another’s point of view.
    - 1
    - 2
    - 3
    - 4
    - 5

14. I have difficulty talking to attractive persons of the opposite sex.
    - 1
    - 2
    - 3
    - 4
    - 5

15. I find myself worrying that I won’t know what to say in social situations.
    - 1
    - 2
    - 3
    - 4
    - 5

16. I am nervous mixing with people I don’t know well.
    - 1
    - 2
    - 3
    - 4
    - 5
17. I feel I’ll say something embarrassing when talking.
   1 2 3 4 5

18. When mixing in a group, I find myself worrying I will be ignored.
   1 2 3 4 5

19. I am tense mixing in a group.
   1 2 3 4 5

20. I am unsure whether to greet someone I know only slightly.
   1 2 3 4 5

21. In general, how accepted and liked do you feel by your friends at school?
   1 2 3 4 5

22. In general, how accepted and liked do you feel by other girls at school?
   1 2 3 4 5

23. In general, how accepted and liked do you feel by boys at school?
   1 2 3 4 5

24. How important do you believe your friends are in influencing your ideas of:
   (a) The perfect body:
       1 2 3 4 5
   (b) The diet products you use:
       1 2 3 4 5
   (c) Exercises to tone up:
       1 2 3 4 5
   (d) How to get the perfect body:
       1 2 3 4 5
   (e) Diets to lose weight:
       1 2 3 4 5

25. How important do you believe the media is in influencing your ideas of:
   (a) The perfect body:
       1 2 3 4 5
   (b) The diet products you use:
       1 2 3 4 5
26. How important do you believe your family is in influencing your ideas of:
   (a) The perfect body:
       1 2 3 4 5
   (b) The diet products you use:
       1 2 3 4 5
   (c) Exercises to tone up:
       1 2 3 4 5
   (d) How to get the perfect body:
       1 2 3 4 5
   (e) Diets to lose weight:
       1 2 3 4 5

27. How important do you believe your teachers are in influencing your ideas of:
   (a) The perfect body:
       1 2 3 4 5
   (b) What is attractive:
       1 2 3 4 5
   (c) What clothes suit different body types:
       1 2 3 4 5

28. How important is it for you to belong to your school friendship group?
    1 2 3 4 5

29. Are you happy to be described as a member of your school friendship group?
    1 2 3 4 5

30. Do you like to do the kinds of things your school friends do?
    1 2 3 4 5

31. Are your school friends the kinds of people you’d like to be like yourself?
    1 2 3 4 5
32. How important are weight and shape to your friends?

1 Not at all 2 A little bit 3 Somewhat 4 Very much 5 Extremely

33. Compared to other things in their lives, how important do you think your friends’ body weight and shape are to them?

1 2 3 4 5

34. How important do you think it is to your friends that your weight stay the same as it is now?

1 2 3 4 5

35. How important do you think it is to other girls at school that your weight stay the same as it is now?

1 2 3 4 5

36. How important do you think it is to boys at school that your weight stay the same as it is now?

1 2 3 4 5
Set Four

Please circle the number which indicates how much you agree with each of these statements, according to the following scale:

<table>
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<tr>
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<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td></td>
</tr>
</tbody>
</table>

1. Slender girls are more attractive.

2. Girls who are in shape are more attractive.

3. Tall girls are more attractive.

4. Girls with toned (lean) bodies are more attractive.

5. Shapely girls are more attractive.

6. Girls with long legs are more attractive.

7. People should do what they can to be as attractive as possible.

8. People should do what they can to maintain a slim body.
Set Five

Please answer each of these questions by circling a number, according to the following scale:

1. How often do you and your friends talk about weight, weight loss, and dieting?
   - 1 = Never
   - 2 = Rarely
   - 3 = Sometimes
   - 4 = Often
   - 5 = Always

2. Have your friends ever teased you about being too fat?
   - 1 = Never
   - 2 = Rarely
   - 3 = Sometimes
   - 4 = Often
   - 5 = Always

3. Have your friends ever teased you about being too thin?
   - 1 = Never
   - 2 = Rarely
   - 3 = Sometimes
   - 4 = Often
   - 5 = Always

4. Have other girls at school ever teased you about being too fat?
   - 1 = Never
   - 2 = Rarely
   - 3 = Sometimes
   - 4 = Often
   - 5 = Always

5. Have other girls at school ever teased you about being too thin?
   - 1 = Never
   - 2 = Rarely
   - 3 = Sometimes
   - 4 = Often
   - 5 = Always

6. Have boys at school ever teased you about being too fat?
   - 1 = Never
   - 2 = Rarely
   - 3 = Sometimes
   - 4 = Often
   - 5 = Always

7. Have boys at school ever teased you about being too thin?
   - 1 = Never
   - 2 = Rarely
   - 3 = Sometimes
   - 4 = Often
   - 5 = Always

8. How often do your friends encourage you to lose weight?
   - 1 = Never
   - 2 = Rarely
   - 3 = Sometimes
   - 4 = Often
   - 5 = Always

9. How often do your friends comment on each other’s weight?
   - 1 = Never
   - 2 = Rarely
   - 3 = Sometimes
   - 4 = Often
   - 5 = Always

10. How often do your friends encourage each other to lose weight?
    - 1 = Never
    - 2 = Rarely
    - 3 = Sometimes
    - 4 = Often
    - 5 = Always

11. How often do your friends diet?
    - 1 = Never
    - 2 = Rarely
    - 3 = Sometimes
    - 4 = Often
    - 5 = Always

12. How often do your friends worry about their weight?
    - 1 = Never
    - 2 = Rarely
    - 3 = Sometimes
    - 4 = Often
    - 5 = Always

13. How often do your friends worry about what they eat?
    - 1 = Never
    - 2 = Rarely
    - 3 = Sometimes
    - 4 = Often
    - 5 = Always

14. How often do your friends skip meals?
    - 1 = Never
    - 2 = Rarely
    - 3 = Sometimes
    - 4 = Often
    - 5 = Always

15. How often do boys say that you would look better if you were thinner?
    - 1 = Never
    - 2 = Rarely
    - 3 = Sometimes
    - 4 = Often
    - 5 = Always

16. How often do girls say that you would look better if you were thinner?
    - 1 = Never
    - 2 = Rarely
    - 3 = Sometimes
    - 4 = Often
    - 5 = Always
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

17. How often do you compare your weight to that of models?

1 2 3 4 5

18. How often do you compare your shape to that of models?

1 2 3 4 5

19. How often do you compare your weight to that of other girls?

1 2 3 4 5

20. How often do you compare your shape to that of other girls?

1 2 3 4 5
Set Six

Please answer each of the following questions by circling a number, according to the following scale:

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>A little</th>
<th>Some</th>
<th>Quite a bit</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

1. How much pressure to be thin do you feel from your friends?

2. How much pressure to be thin do you feel from other girls at school?

3. How much pressure to be thin do you feel from boys at school?

4. How much pressure to be thin do you feel from your mother?

5. How much pressure to be thin do you feel from your father?

6. How much pressure to be thin do you feel from your brothers or sisters?

7. How much pressure to be thin do you feel from advertising?

8. How much pressure to be thin do you feel from magazines and TV?

9. Do you think that your friends take a lot of notice of each others’ weight and shape?

10. Do you think that boys at school take a lot of notice of girls’ weight and shape?
Set Seven

The following questions refer to the magazines you read, television shows you watch, and websites you visit. Please answer each of these questions as accurately as possible.

Magazines

Do you read magazines?
YES
NO

If yes,

1. What is your favourite magazine?: _____________________________________________
   (a) How often do you read this magazine?:
      Every day Several times a week Once or twice a week Once or twice a month Less often

2. What is your second favourite magazine?: __________________________
   (a) How often do you read this magazine?:
      Every day Several times a week Once or twice a week Once or twice a month Less often

3. What is your third favourite magazine?: _________________________________
   (a) How often do you read this magazine?:
      Every day Several times a week Once or twice a week Once or twice a month Less often

Television

Do you watch television?
YES
NO

If yes,

4. What is your favourite television show?: _________________________________
   (a) How often do you watch this television show?:
      Every day Several times a week Once or twice a week Once or twice a month Less often

5. What is your second favourite television show?: __________________________
   (a) How often do you watch this television show?:
      Every day Several times a week Once or twice a week Once or twice a month Less often

6. What is your third favourite television show?: ____________________________
(a) How often do you watch this television show?:

<table>
<thead>
<tr>
<th>Every day</th>
<th>Several times a week</th>
<th>Once or twice a week</th>
<th>Once or twice a month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less often</td>
<td>Websites</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. What is your favourite website?: __________________________________________________________

8. How often do you visit the following websites:

(a) MySpace

<table>
<thead>
<tr>
<th>Never</th>
<th>Occasionally</th>
<th>Most of the time</th>
<th>A lot</th>
</tr>
</thead>
</table>

(b) YouTube

<table>
<thead>
<tr>
<th>Never</th>
<th>Occasionally</th>
<th>Most of the time</th>
<th>A lot</th>
</tr>
</thead>
</table>

(c) Facebook

<table>
<thead>
<tr>
<th>Never</th>
<th>Occasionally</th>
<th>Most of the time</th>
<th>A lot</th>
</tr>
</thead>
</table>
Set Eight

Please circle either T (true) of F (false) in answering the items below:

\[ T = \text{true} \quad F = \text{false} \]

1. I get satisfaction from competing with others. \( T \quad F \)
2. It’s usually not important to me to be the best. \( T \quad F \)
3. Competition destroys friendships. \( T \quad F \)
4. Games with no clear cut winners are boring. \( T \quad F \)
5. I am a competitive individual. \( T \quad F \)
6. I will do almost anything to avoid an argument. \( T \quad F \)
7. I try to avoid competing with others. \( T \quad F \)
8. I would like to be on a debating team. \( T \quad F \)
9. I often remain quiet rather than risk hurting another person. \( T \quad F \)
10. I find competitive situations unpleasant. \( T \quad F \)
11. I try to avoid arguments. \( T \quad F \)
12. In general, I will go along with the group rather than create conflict. \( T \quad F \)
13. I don’t like competing against other people. \( T \quad F \)
14. I don’t like games that are winner-take-all. \( T \quad F \)
15. I dread competing against other people. \( T \quad F \)
16. I enjoy competing against an opponent. \( T \quad F \)
17. When I play a game I like to keep scores. \( T \quad F \)
18. I often try to outperform others. \( T \quad F \)
19. I like competition. \( T \quad F \)
20. I don’t enjoy challenging others even when I think they are wrong. \( T \quad F \)
**Set Nine**

*Please circle a response for each of the following statements, according to the following scale:*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Always</strong></td>
<td><strong>Usually</strong></td>
<td><strong>Often</strong></td>
<td><strong>Sometimes</strong></td>
<td><strong>Rarely</strong></td>
<td><strong>Never</strong></td>
<td></td>
</tr>
</tbody>
</table>

1. I am terrified about being overweight.
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6

2. I avoid eating when I am hungry.
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6

3. I find myself preoccupied with food.
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6

4. I have gone on eating binges where I feel I may not be able to stop.
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6

5. I cut my food into small pieces.
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6

6. I am aware of the calorie content of foods I eat.
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6

7. I particularly avoid food with a high carbohydrate content (bread, rice, potatoes, etc.).
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6

8. I feel that others would prefer if I ate more.
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6

9. I vomit after I have eaten.
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6

10. I feel extremely guilty after eating.
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6

11. I am preoccupied with a desire to be thinner.
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6

12. I think about burning up calories when I exercise.
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6

13. Other people think I’m too thin.
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6

14. I am preoccupied with the thought of having fat on my body.
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6

15. I take longer than others to eat my meals.
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6

16. I avoid foods with sugar in them.
    - 1
    - 2
    - 3
    - 4
    - 5
    - 6
<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Usually</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.</td>
<td>I eat diet foods.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18.</td>
<td>I feel that food controls my life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19.</td>
<td>I display self-control around food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20.</td>
<td>I feel that others pressure me to eat.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21.</td>
<td>I give too much time and thought to food.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>22.</td>
<td>I feel uncomfortable after eating sweets.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23.</td>
<td>I engage in dieting behaviour.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>24.</td>
<td>I like my stomach to be empty.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>25.</td>
<td>I have the impulse to vomit after meals.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>26.</td>
<td>I enjoy trying new rich foods.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Please respond to each of the following questions:

1. Have you gone on eating binges where you feel that you may not be able to stop? (Eating much more than most people would eat under the circumstances).  NO  YES
   If YES, on average, how many times per month in the last six months?   ................

2. Have you ever made yourself sick (vomited) to control your weight or shape?  NO  YES
   If YES, on average, how many times per month in the last six months?   ................

3. Have you ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?  NO  YES
   If YES, on average, how many times per month in the last six months?   .................
Set Ten

For each statement, please indicate the extent to which you agree with it by circling the appropriate response according to the following scale:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. On the whole, I am satisfied with myself.
   1  2  3  4

2. At times I think I am no good at all.
   1  2  3  4

3. I feel that I have a number of good qualities.
   1  2  3  4

4. I am able to do things as well as most other people.
   1  2  3  4

5. I feel I do not have much to be proud of.
   1  2  3  4

6. I certainly feel useless at times.
   1  2  3  4

7. I feel that I’m a person of worth, at least on an equal plane with others.
   1  2  3  4

8. I wish I could have more respect for myself.
   1  2  3  4

9. All in all, I am inclined to feel that I am a failure.
   1  2  3  4

10. I take a positive attitude toward myself.
    1  2  3  4

11. If I was thinner I would have better friends than I do now.
    1  2  3  4  or ‘Don’t know’
Set Eleven

For each question, please circle the response that best describes your current feelings.

1. I feel tense or ‘wound up’:

   1. Most of the time
   2. A lot of the time
   3. From time to time, occasionally
   4. Not at all

2. I still enjoy the things I used to enjoy:

   1. Definitely as much
   2. Not quite so much
   3. Only a little
   4. Hardly at all

3. I get a sort of frightened feeling as if something awful is about to happen:

   1. Very definitely and quite badly
   2. Yes, but not too badly
   3. A little, but it doesn’t worry me
   4. Not at all

4. I can laugh and see the funny side of things:

   1. As much as I always could
   2. Not quite so much now
   3. Definitely not so much now
   4. Not at all

5. Worrying thoughts go through my mind:

   1. A great deal of the time
   2. A lot of the time
   3. From time to time, but not too often
   4. Only occasionally

6. I feel cheerful:

   1. Most of the time
   2. Sometimes
   3. Not often
   4. Not at all

7. I can sit at ease and feel relaxed:

   1. Definitely
   2. Usually
   3. Not often
   4. Not at all

8. I feel as if I am slowed down:

   1. Nearly all the time
   2. Very often
   3. Sometimes
   4. Not at all

9. I get a sort of frightened feeling like ‘butterflies’ in the stomach:

   1. Very often
   2. Quite often
   3. Occasionally
   4. Not at all

10. I have lost interest in my appearance:

   1. I take just as much care as ever
   2. I may not take quite as much care
   3. I don’t take as much care as I should
   4. Definitely

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11. I feel restless as I have to be on the move:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very much indeed</td>
<td>Quite a lot</td>
<td>Not very much</td>
<td>Not at all</td>
</tr>
</tbody>
</table>

12. I look forward with enjoyment to things:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>As much as I ever did</td>
<td>Rather less than I used to</td>
<td>Definitely less than I used to</td>
<td>Hardly at all</td>
</tr>
</tbody>
</table>

13. I get sudden feelings of panic:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very often indeed</td>
<td>Quite often</td>
<td>Not very often</td>
<td>Not at all</td>
</tr>
</tbody>
</table>

14. I can enjoy a good book or radio or TV program:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Often</td>
<td>Sometimes</td>
<td>Not often</td>
<td>Very seldom</td>
</tr>
</tbody>
</table>
Set Twelve

For this final set of questions, I’d like you to imagine that you were at an all-girls’ rather than a coeducational school.

1. If you were in an all-girls’ school, how important do you think it would be to girls at school that your weight stay the same as it is now?

   1 Not at all  2 A little bit  3 Somewhat  4 Very much  5 Extremely

2. How much pressure to be thin do you think you would feel from girls at school?

   1 None  2 A little  3 Some  4 Quite a bit  5 A lot

3. Do you think that girls at school would take a lot of notice of each other’s weight and shape?

   1 Definitely Not  2 Probably Not  3 Not Sure  4 A little, yes  5 A lot, yes

4. Do you think body concerns would be different at an all-girls’ school than here? Please explain.

   I’d also like to give you the opportunity to share your thoughts on the ideal girl and boy.

5. Describe below what the ideal girl looks like:

6. Describe below what the ideal boy looks like:

   Finally, I’d like you to consider your own school environment again.

7. Is there anything about your school environment in particular that you think might increase people’s body image or weight concerns?

8. Is there anything about your school environment in particular that you think might decrease people’s body image or weight concerns?

Thank you for taking the time to complete these questionnaires. Your assistance is greatly appreciated.

Thanks, Renee
APPENDIX G
COEDUCATIONAL BOYS’ QUESTIONNAIRE

Boys' Questionnaire

About You

Please find your name on the attached list and write the number that appears next to it here:

_____________________________________

How old are you? _______________ years & _______________ months

What is your nationality? ____________________________________________

Please give your best estimate of:

Your height: _______________
Your weight: _______________
The Questionnaires

Following are a series of questions that ask about your own feelings and behaviours, your eating habits, and your body image. There are also questions that ask about your perceptions of your peers, family, and the media. There are 12 sets of questions in all. Please read the instructions before each set of questions carefully, and make sure to answer all questions in all sets. Thank you.

Set One

Please circle the number which indicates the extent to which each of the following statements is true of you, using the following scale:

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Very Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

1. Have you been so worried about your size that you have been feeling that you ought to diet?
   1  2  3  4  5  6

2. Have you noticed the size of other boys and felt that your own size compared unfavourably?
   1  2  3  4  5  6

3. Has being naked, such as when taking a bath, made you feel fat?
   1  2  3  4  5  6

4. Has eating sweets, cakes, or other high-calorie food made you feel fat?
   1  2  3  4  5  6

5. Have you felt excessively large and rounded?
   1  2  3  4  5  6

6. Have you felt ashamed of your body?
   1  2  3  4  5  6

7. Has seeing your reflection (e.g. in a mirror or a shop window) made you feel bad about your size?
   1  2  3  4  5  6

8. Have you been particularly self-conscious about your size when in the company of other people?
   1  2  3  4  5  6

9. Have you found yourself worrying excessively about your size?
   1  2  3  4  5  6

10. Has seeing thin or muscular boys made you feel badly about your own size?
    1  2  3  4  5  6
Set Two

Read each of these statements carefully and circle the number which indicates how you feel about each statement using the following scale:

<table>
<thead>
<tr>
<th></th>
<th>Very Strongly</th>
<th>Strongly Disagree</th>
<th>Mildly Disagree</th>
<th>Neutral</th>
<th>Mildly Agree</th>
<th>Strongly Agree</th>
<th>Very Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td>7</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

1. My friends really try to help me.
   1  2  3  4  5  6  7

2. I can count on my friends when things go wrong.
   1  2  3  4  5  6  7

3. I have friends with whom I can share my joys and sorrows.
   1  2  3  4  5  6  7

4. I can talk about my problems with my friends.
   1  2  3  4  5  6  7

5. My family really tries to help me.
   1  2  3  4  5  6  7

6. I get the emotional help and support I need from my family.
   1  2  3  4  5  6  7

7. I can talk about my problems with my family.
   1  2  3  4  5  6  7

8. My family is willing to help me make decisions.
   1  2  3  4  5  6  7
Set Three

For each question, please circle a number to indicate the degree to which you agree with the statement or feel that it is true of you, using the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>A little bit</td>
<td>Somewhat</td>
<td>Very much</td>
<td>Extremely</td>
<td></td>
</tr>
</tbody>
</table>

1. I get nervous if I have to speak with someone in authority (teacher, boss).
   1 2 3 4 5
2. I have difficulty making eye contact with others.
   1 2 3 4 5
3. I become tense if I have to talk about myself or my feelings.
   1 2 3 4 5
4. I find it difficult mixing comfortably with the people I go to school with.
   1 2 3 4 5
5. I find it easy to make friends of my own age.
   1 2 3 4 5
6. I tense up if I meet an acquaintance in the street.
   1 2 3 4 5
7. When mixing socially, I am uncomfortable.
   1 2 3 4 5
8. I feel tense if I am alone with just one person.
   1 2 3 4 5
9. I am at ease meeting people at parties, etc.
   1 2 3 4 5
10. I have difficulty talking with other people.
    1 2 3 4 5
11. I find it easy to think of things to talk about.
    1 2 3 4 5
12. I worry about expressing myself in case I appear awkward.
    1 2 3 4 5
13. I find it difficult to disagree with another’s point of view.
    1 2 3 4 5
14. I have difficulty talking to attractive persons of the opposite sex.
    1 2 3 4 5
15. I find myself worrying that I won’t know what to say in social situations.
    1 2 3 4 5
16. I am nervous mixing with people I don’t know well.
    1 2 3 4 5
17. I feel I’ll say something embarrassing when talking.
   
   1 2 3 4 5

18. When mixing in a group, I find myself worrying I will be ignored.
   
   1 2 3 4 5

19. I am tense mixing in a group.
   
   1 2 3 4 5

20. I am unsure whether to greet someone I know only slightly.
   
   1 2 3 4 5

21. In general, how accepted and liked do you feel by your friends at school?
   
   1 2 3 4 5

22. In general, how accepted and liked do you feel by other boys at school?
   
   1 2 3 4 5

23. In general, how accepted and liked do you feel by girls at school?
   
   1 2 3 4 5

24. How important is it for you to belong to your school friendship group?
   
   1 2 3 4 5

25. Are you happy to be described as a member of your school friendship group?
   
   1 2 3 4 5

26. Do you like to do the kinds of things your school friends do?
   
   1 2 3 4 5

27. Are your school friends the kinds of people you’d like to be like yourself?
   
   1 2 3 4 5

28. When choosing female friends, do your male friends pay attention to the girls’ weight and shape?
   
   1 2 3 4 5

29. When choosing female friends, do you pay attention to the girls’ weight and shape?
   
   1 2 3 4 5

30. When choosing girlfriends or dates, do your male friends pay attention to girls’ weight and shape?
   
   1 2 3 4 5

31. When choosing girlfriends or dates, do you pay attention to girls’ weight and shape?
   
   1 2 3 4 5
32. Compared to other things, how important do you think the body weight and shape of girls are to your male friends?

1           2           3           4           5
Not at all  A little bit  Somewhat  Very much  Extremely

33. Compared to other things, how important is the body weight and shape of girls to you?

1           2           3           4           5

34. Compared to other things in their lives, how important do you think your male friends’ own body weight and shape are to them?

1           2           3           4           5
Set Four

*Please circle the number which indicates how much you agree with each of these statements, according to the following scale:*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. Slender girls are more attractive.
   - 1 2 3 4 5

2. Girls who are in shape are more attractive.
   - 1 2 3 4 5

3. Tall girls are more attractive.
   - 1 2 3 4 5

4. Girls with toned (lean) bodies are more attractive.
   - 1 2 3 4 5

5. Shapely girls are more attractive.
   - 1 2 3 4 5

6. Girls with long legs are more attractive.
   - 1 2 3 4 5

7. People should do what they can to be as attractive as possible.
   - 1 2 3 4 5

8. People should do what they can to maintain a slim body.
   - 1 2 3 4 5
Please answer each of these questions by circling a number, according to the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

1. How often do you and your friends talk about the weight of girls?
   - 1
   - 2
   - 3
   - 4
   - 5

2. Have you ever teased girls about being too fat?
   - 1
   - 2
   - 3
   - 4
   - 5

3. Have you ever teased girls about being too thin?
   - 1
   - 2
   - 3
   - 4
   - 5

4. Have you ever been teased about being too fat?
   - 1
   - 2
   - 3
   - 4
   - 5

5. Have you ever been teased about being too thin?
   - 1
   - 2
   - 3
   - 4
   - 5

6. How often do you think girls talk about their weight, weight loss, or dieting?
   - 1
   - 2
   - 3
   - 4
   - 5

   (a) In your opinion, is this: Too much? Okay? Too little?

7. How often do you think girls comment on each other’s weight?
   - 1
   - 2
   - 3
   - 4
   - 5

   (a) In your opinion, is this: Too much? Okay? Too little?

8. How often do you think girls encourage each other to lose weight?
   - 1
   - 2
   - 3
   - 4
   - 5

   (a) In your opinion, is this: Too much? Okay? Too little?

9. How often do you think girls diet?
   - 1
   - 2
   - 3
   - 4
   - 5

   (a) In your opinion, is this: Too much? Okay? Too little?

10. How often do you think girls worry about their weight?
    - 1
    - 2
    - 3
    - 4
    - 5

    (a) In your opinion, is this: Too much? Okay? Too little?

11. How often do you think girls worry about what they eat?
    - 1
    - 2
    - 3
    - 4
    - 5

    (a) In your opinion, is this: Too much? Okay? Too little?

12. How often do you think girls skip meals?
    - 1
    - 2
    - 3
    - 4
    - 5

    (a) In your opinion, is this: Too much? Okay? Too little?
13. How often do you think girls compare their weight to that of models?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

(a) In your opinion, is this: Too much? Okay? Too little?

14. How often do you think girls compare their shape to that of models?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

(a) In your opinion, is this: Too much? Okay? Too little?

15. How often do you think girls compare their weight to that of other girls?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

(a) In your opinion, is this: Too much? Okay? Too little?

16. How often do you think girls compare their shape to that of other girls?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

(a) In your opinion, is this: Too much? Okay? Too little?
Set Six

Please answer each of the following questions by circling a number, according to the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>A little</td>
<td>Some</td>
<td>Quite a bit</td>
<td>A lot</td>
</tr>
</tbody>
</table>

1. How much pressure to be thin do you think girls feel from their friends?

   1 2 3 4 5
   (a) In your opinion, is this: Too much? Okay? Too little?

2. How much pressure to be thin do you think girls feel from other girls at school?

   1 2 3 4 5
   (a) In your opinion, is this: Too much? Okay? Too little?

3. How much pressure to be thin do you think girls feel from boys at school?

   1 2 3 4 5
   (a) In your opinion, is this: Too much? Okay? Too little?

4. How much pressure to be thin do you think girls feel from their family?

   1 2 3 4 5
   (a) In your opinion, is this: Too much? Okay? Too little?

5. How much pressure to be thin do you think girls feel from advertising?

   1 2 3 4 5
   (a) In your opinion, is this: Too much? Okay? Too little?

6. How much pressure to be thin do you think girls feel from magazines and TV?

   1 2 3 4 5
   (a) In your opinion, is this: Too much? Okay? Too little?

7. Do you think that girls take a lot of notice of each others’ weight and shape?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Definitely</td>
<td>Probably</td>
<td>Not Sure</td>
<td>A little,</td>
<td>A lot, yes</td>
</tr>
<tr>
<td></td>
<td>Not</td>
<td>Not</td>
<td>Not</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

   (a) In your opinion, is this: Too much? Okay? Too little?
Set Seven

The following questions refer to the magazines you read, television shows you watch, and websites you visit. Please answer each of these questions as accurately as possible.

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you read magazines?</td>
<td>YES</td>
<td>NO</td>
</tr>
</tbody>
</table>

1. What is your favourite magazine?: ________________________________
   (a) How often do you read this magazine?:
   
   - Every day
   - Several times a week
   - Once or twice a week
   - Once or twice a month
   - Less often

2. What is your second favourite magazine?: _____________________________
   (a) How often do you read this magazine?:
   
   - Every day
   - Several times a week
   - Once or twice a week
   - Once or twice a month
   - Less often

3. What is your third favourite magazine?: ______________________________
   (a) How often do you read this magazine?:
   
   - Every day
   - Several times a week
   - Once or twice a week
   - Once or twice a month
   - Less often

---

Television

Do you watch television? | YES | NO
---|-----|----|

4. What is your favourite television show?: ______________________________
   (a) How often do you watch this television show?:
   
   - Every day
   - Several times a week
   - Once or twice a week
   - Once or twice a month
   - Less often

5. What is your second favourite television show?: _________________________
   (a) How often do you watch this television show?:
   
   - Every day
   - Several times a week
   - Once or twice a week
   - Once or twice a month
   - Less often

6. What is your third favourite television show?: _________________________
   (a) How often do you watch this television show?:
   
   - Every day
   - Several times a week
   - Once or twice a week
   - Once or twice a month
   - Less often
Websites

7. What is your favourite website?: _____________________________________________________

8. How often do you visit the following websites:

(a) MySpace
Never  Occasionally  Most of the time  A lot
(b) YouTube
Never  Occasionally  Most of the time  A lot
(c) Facebook
Never  Occasionally  Most of the time  A lot
Set Eight

Please circle either T (true) or F (false) in answering the items below:

\[T = \text{true}\hspace{1cm}F = \text{false}\]

1. I get satisfaction from competing with others. \hspace{1cm} T \hspace{1cm} F
2. It’s usually not important to me to be the best. \hspace{1cm} T \hspace{1cm} F
3. Competition destroys friendships. \hspace{1cm} T \hspace{1cm} F
4. Games with no clear cut winners are boring. \hspace{1cm} T \hspace{1cm} F
5. I am a competitive individual. \hspace{1cm} T \hspace{1cm} F
6. I will do almost anything to avoid an argument. \hspace{1cm} T \hspace{1cm} F
7. I try to avoid competing with others. \hspace{1cm} T \hspace{1cm} F
8. I would like to be on a debating team. \hspace{1cm} T \hspace{1cm} F
9. I often remain quiet rather than risk hurting another person. \hspace{1cm} T \hspace{1cm} F
10. I find competitive situations unpleasant. \hspace{1cm} T \hspace{1cm} F
11. I try to avoid arguments. \hspace{1cm} T \hspace{1cm} F
12. In general, I will go along with the group rather than create conflict. \hspace{1cm} T \hspace{1cm} F
13. I don’t like competing against other people. \hspace{1cm} T \hspace{1cm} F
14. I don’t like games that are winner-take-all. \hspace{1cm} T \hspace{1cm} F
15. I dread competing against other people. \hspace{1cm} T \hspace{1cm} F
16. I enjoy competing against an opponent. \hspace{1cm} T \hspace{1cm} F
17. When I play a game I like to keep scores. \hspace{1cm} T \hspace{1cm} F
18. I often try to outperform others. \hspace{1cm} T \hspace{1cm} F
19. I like competition. \hspace{1cm} T \hspace{1cm} F
20. I don’t enjoy challenging others even when I think they are wrong. \hspace{1cm} T \hspace{1cm} F
Please circle a response for each of the following statements, according to the following scale:

<table>
<thead>
<tr>
<th>Always</th>
<th>Usually</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
</table>

1. I am terrified about being overweight.
   1 2 3 4 5 6

2. I avoid eating when I am hungry.
   1 2 3 4 5 6

3. I find myself preoccupied with food.
   1 2 3 4 5 6

4. I have gone on eating binges where I feel I may not be able to stop.
   1 2 3 4 5 6

5. I cut my food into small pieces.
   1 2 3 4 5 6

6. I am aware of the calorie content of foods I eat.
   1 2 3 4 5 6

7. I particularly avoid food with a high carbohydrate content (bread, rice, potatoes, etc.).
   1 2 3 4 5 6

8. I feel that others would prefer if I ate more.
   1 2 3 4 5 6

9. I vomit after I have eaten.
   1 2 3 4 5 6

10. I feel extremely guilty after eating.
    1 2 3 4 5 6

11. I am preoccupied with a desire to be thinner.
    1 2 3 4 5 6

12. I think about burning up calories when I exercise.
    1 2 3 4 5 6

13. Other people think I’m too thin.
    1 2 3 4 5 6

14. I am preoccupied with the thought of having fat on my body.
    1 2 3 4 5 6

15. I take longer than others to eat my meals.
    1 2 3 4 5 6

16. I avoid foods with sugar in them.
    1 2 3 4 5 6
17. I eat diet foods.
   1 Always  2 Usually  3 Often  4 Sometimes  5 Rarely  6 Never

18. I feel that food controls my life.
   1 Always  2 Usually  3 Often  4 Sometimes  5 Rarely  6 Never

19. I display self-control around food.
   1 Always  2 Usually  3 Often  4 Sometimes  5 Rarely  6 Never

20. I feel that others pressure me to eat.
   1 Always  2 Usually  3 Often  4 Sometimes  5 Rarely  6 Never

21. I give too much time and thought to food.
   1 Always  2 Usually  3 Often  4 Sometimes  5 Rarely  6 Never

22. I feel uncomfortable after eating sweets.
   1 Always  2 Usually  3 Often  4 Sometimes  5 Rarely  6 Never

23. I engage in dieting behaviour.
   1 Always  2 Usually  3 Often  4 Sometimes  5 Rarely  6 Never

24. I like my stomach to be empty.
   1 Always  2 Usually  3 Often  4 Sometimes  5 Rarely  6 Never

25. I have the impulse to vomit after meals.
   1 Always  2 Usually  3 Often  4 Sometimes  5 Rarely  6 Never

26. I enjoy trying new rich foods.
   1 Always  2 Usually  3 Often  4 Sometimes  5 Rarely  6 Never

Please respond to each of the following questions:

1. Have you gone on eating binges where you feel that you may not be able to stop? (Eating much more than most people would eat under the circumstances).  
   NO YES
   If YES, on average, how many times per month in the last six months? …………………….

2. Have you ever made yourself sick (vomited) to control your weight or shape?
   NO YES
   If YES, on average, how many times per month in the last six months? …………………….

3. Have you ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?
   NO YES
   If YES, on average, how many times per month in the last six months? …………………….


Set Ten

For each statement, please indicate the extent to which you agree with it by circling the appropriate response according to the following scale:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

1. On the whole, I am satisfied with myself.
   1  2  3  4

2. At times I think I am no good at all.
   1  2  3  4

3. I feel that I have a number of good qualities.
   1  2  3  4

4. I am able to do things as well as most other people.
   1  2  3  4

5. I feel I do not have much to be proud of.
   1  2  3  4

6. I certainly feel useless at times.
   1  2  3  4

7. I feel that I’m a person of worth, at least on an equal plane with others.
   1  2  3  4

8. I wish I could have more respect for myself.
   1  2  3  4

9. All in all, I am inclined to feel that I am a failure.
   1  2  3  4

10. I take a positive attitude toward myself.
    1  2  3  4

11. Better looking girls have more friends.
    1  2  3  4 or ‘Don’t know’

12. Better looking boys have more friends.
    1  2  3  4 or ‘Don’t know’

13. Better looking girls have more boyfriends.
    1  2  3  4 or ‘Don’t know’

14. Better looking boys have more girlfriends.
    1  2  3  4 or ‘Don’t know’
Set Eleven

For each question, please circle the response that best describes your current feelings.

1. I feel tense or ‘wound up’:
   1. Most of the time
   2. A lot of the time
   3. From time to time, occasionally
   4. Not at all

2. I still enjoy the things I used to enjoy:
   1. Definitely as much
   2. Not quite so much
   3. Only a little
   4. Hardly at all

3. I get a sort of frightened feeling as if something awful is about to happen:
   1. Very definitely and quite badly
   2. Yes, but not too badly
   3. A little, but it doesn’t worry me
   4. Not at all

4. I can laugh and see the funny side of things:
   1. As much as I always could
   2. Not quite so much now
   3. Definitely not so much now
   4. Not at all

5. Worrying thoughts go through my mind:
   1. A great deal of the time
   2. A lot of the time
   3. From time to time, but not too often
   4. Only occasionally

6. I feel cheerful:
   1. Most of the time
   2. Sometimes
   3. Not often
   4. Not at all

7. I can sit at ease and feel relaxed:
   1. Definitely
   2. Usually
   3. Not often
   4. Not at all

8. I feel as if I am slowed down:
   1. Nearly all the time
   2. Very often
   3. Sometimes
   4. Not at all

9. I get a sort of frightened feeling like ‘butterflies’ in the stomach:
   1. Very often
   2. Quite often
   3. Occasionally
   4. Not at all

10. I have lost interest in my appearance:
    1. I take just as much care as ever
    2. I may not take quite as much care
    3. I don’t take as much care as I should
    4. Definitely
11. I feel restless as I have to be on the move:


12. I look forward with enjoyment to things:

1. As much as I ever did  2. Rather less than I used to  3. Definitely less than I used to  4. Hardly at all

13. I get sudden feelings of panic:

1. Very often indeed  2. Quite often  3. Not very often  4. Not at all

14. I can enjoy a good book or radio or TV program:

Set Twelve

I’d like to give you the opportunity to share your thoughts on the ideal boy and girl.

1. Describe below what the ideal boy looks like:

2. Describe below what the ideal girl looks like:

Finally, I’d like you to consider your own school environment.

3. Is there anything about your school environment in particular that you think might increase people’s body image or weight concerns?

4. Is there anything about your school environment in particular that you think might decrease people’s body image or weight concerns?

---

Thank you for taking the time to complete these questionnaires. Your assistance is greatly appreciated.

Thanks, Renee
APPENDIX H

ALL-GIRLS’ QUESTIONNAIRE

About You

Please find your name on the attached list and write the number that appears next to it here:


How old are you?  ________________ years & ________________ months

What is your nationality? ____________________________________________

Please give your best estimate of:

Your height:  __________________

Your weight:  __________________
The Questionnaires

Following are a series of questions that ask about your own feelings and behaviours, your eating habits, and your body image. There are also questions that ask about your friends, family, teachers, and the media. There are 12 sets of questions in all. Please read the instructions before each set of questions carefully, and make sure to answer all questions in all sets. Thank you.

Set One

Please circle the number which indicates the extent to which each of the following statements is true of you, using the following scale:

1. Have you been so worried about your shape that you have been feeling that you ought to diet?

2. Have you noticed the shape of other girls and felt that your own shape compared unfavourably?

3. Has being naked, such as when taking a bath, made you feel fat?

4. Has eating sweets, cakes, or other high-calorie food made you feel fat?

5. Have you felt excessively large and rounded?

6. Have you felt ashamed of your body?

7. Has seeing your reflection (e.g. in a mirror or a shop window) made you feel bad about your shape?

8. Have you been particularly self-conscious about your shape when in the company of other people?

9. Have you found yourself worrying excessively about your shape?

10. Has seeing thin girls made you feel badly about your own shape?
Set Two

Read each of these statements carefully and circle the number which indicates how you feel about each statement using the following scale:

<table>
<thead>
<tr>
<th></th>
<th>Very Strongly</th>
<th>Strongly Disagree</th>
<th>Mildly Disagree</th>
<th>Neutral</th>
<th>Mildly Agree</th>
<th>Strongly Agree</th>
<th>Very Strongly Agree</th>
</tr>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

1. My friends really try to help me.

2. I can count on my friends when things go wrong.

3. I have friends with whom I can share my joys and sorrows.

4. I can talk about my problems with my friends.

5. My family really tries to help me.

6. I get the emotional help and support I need from my family.

7. I can talk about my problems with my family.

8. My family is willing to help me make decisions.
**Set Three**

*For each question, please circle a number to indicate the degree to which you agree with the statement or feel that it is true of you, using the following scale:*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not at all</td>
<td>A little bit</td>
<td>Somewhat</td>
<td>Very much</td>
<td>Extremely</td>
</tr>
</tbody>
</table>

1. I get nervous if I have to speak with someone in authority (teacher, boss).
   - 1
   - 2
   - 3
   - 4
   - 5

2. I have difficulty making eye contact with others.
   - 1
   - 2
   - 3
   - 4
   - 5

3. I become tense if I have to talk about myself or my feelings.
   - 1
   - 2
   - 3
   - 4
   - 5

4. I find it difficult mixing comfortably with the people I go to school with.
   - 1
   - 2
   - 3
   - 4
   - 5

5. I find it easy to make friends of my own age.
   - 1
   - 2
   - 3
   - 4
   - 5

6. I tense up if I meet an acquaintance in the street.
   - 1
   - 2
   - 3
   - 4
   - 5

7. When mixing socially, I am uncomfortable.
   - 1
   - 2
   - 3
   - 4
   - 5

8. I feel tense if I am alone with just one person.
   - 1
   - 2
   - 3
   - 4
   - 5

9. I am at ease meeting people at parties, etc.
   - 1
   - 2
   - 3
   - 4
   - 5

10. I have difficulty talking with other people.
    - 1
    - 2
    - 3
    - 4
    - 5

11. I find it easy to think of things to talk about.
    - 1
    - 2
    - 3
    - 4
    - 5

12. I worry about expressing myself in case I appear awkward.
    - 1
    - 2
    - 3
    - 4
    - 5

13. I find it difficult to disagree with another’s point of view.
    - 1
    - 2
    - 3
    - 4
    - 5

14. I have difficulty talking to attractive persons of the opposite sex.
    - 1
    - 2
    - 3
    - 4
    - 5

15. I find myself worrying that I won’t know what to say in social situations.
    - 1
    - 2
    - 3
    - 4
    - 5

16. I am nervous mixing with people I don’t know well.
    - 1
    - 2
    - 3
    - 4
    - 5
17. I feel I’ll say something embarrassing when talking.
   1 2 3 4 5

18. When mixing in a group, I find myself worrying I will be ignored.
   1 2 3 4 5

19. I am tense mixing in a group.
   1 2 3 4 5

20. I am unsure whether to greet someone I know only slightly.
   1 2 3 4 5

21. In general, how accepted and liked do you feel by your friends at school?
   1 2 3 4 5

22. In general, how accepted and liked do you feel by other girls at school?
   1 2 3 4 5

23. How important do you believe your friends are in influencing your ideas of:
   (a) The perfect body:
       1 2 3 4 5
   (b) The diet products you use:
       1 2 3 4 5
   (c) Exercises to tone up:
       1 2 3 4 5
   (d) How to get the perfect body:
       1 2 3 4 5
   (e) Diets to lose weight:
       1 2 3 4 5

24. How important do you believe the media is in influencing your ideas of:
   (a) The perfect body:
       1 2 3 4 5
   (b) The diet products you use:
       1 2 3 4 5
   (c) Exercises to tone up:
       1 2 3 4 5
   (d) How to get the perfect body:
       1 2 3 4 5
25. How important do you believe your family is in influencing your ideas of:
   (a) The perfect body:
       1  2  3  4  5
   (b) The diet products you use:
       1  2  3  4  5
   (c) Exercises to tone up:
       1  2  3  4  5
   (d) How to get the perfect body:
       1  2  3  4  5
   (e) Diets to lose weight:
       1  2  3  4  5

26. How important do you believe your teachers are in influencing your ideas of:
   (a) The perfect body:
       1  2  3  4  5
   (b) What is attractive:
       1  2  3  4  5
   (c) What clothes suit different body types:
       1  2  3  4  5

27. How important is it for you to belong to your school friendship group?
    1  2  3  4  5

28. Are you happy to be described as a member of your school friendship group?
    1  2  3  4  5

29. Do you like to do the kinds of things your school friends do?
    1  2  3  4  5

30. Are your school friends the kinds of people you’d like to be like yourself?
    1  2  3  4  5

31. How important are weight and shape to your friends?
    1  2  3  4  5

32. Compared to other things in their lives, how important do you think your friends’ body weight and shape are to them?
    1  2  3  4  5
33. How important do you think it is to your friends that your weight stay the same as it is now?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
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</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>A little bit</td>
<td>Somewhat</td>
<td>Very much</td>
<td>Extremely</td>
</tr>
</tbody>
</table>

34. How important do you think it is to other girls at school that your weight stay the same as it is now?

<table>
<thead>
<tr>
<th>1</th>
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</thead>
</table>
Set Four

*Please circle the number which indicates how much you agree with each of these statements, according to the following scale:*

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Slender women are more attractive.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Women who are in shape are more attractive.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Tall women are more attractive.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Women with toned (lean) bodies are more attractive.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Shapely women are more attractive.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Women with long legs are more attractive.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>People should do what they can to be as attractive as possible.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>People should do what they can to maintain a slim body.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Set Five

Please answer each of these questions by circling a number, according to the following scale:


1. How often do you and your friends talk about weight, weight loss, and dieting?
   1  2  3  4  5

2. Have your friends ever teased you about being too fat?
   1  2  3  4  5

3. Have your friends ever teased you about being too thin?
   1  2  3  4  5

4. Have other girls at school ever teased you about being too fat?
   1  2  3  4  5

5. Have other girls at school ever teased you about being too thin?
   1  2  3  4  5

6. How often do your friends encourage you to lose weight?
   1  2  3  4  5

7. How often do your friends comment on each other’s weight?
   1  2  3  4  5

8. How often do your friends encourage each other to lose weight?
   1  2  3  4  5

9. How often do your friends diet?
   1  2  3  4  5

10. How often do your friends worry about their weight?
    1  2  3  4  5

11. How often do your friends worry about what they eat?
    1  2  3  4  5

12. How often do your friends skip meals?
    1  2  3  4  5

13. How often do boys say that you would look better if you were thinner?
    1  2  3  4  5

14. How often do girls say that you would look better if you were thinner?
    1  2  3  4  5

15. How often do you compare your weight to that of models?
    1  2  3  4  5

16. How often do you compare your shape to that of models?
    1  2  3  4  5
<table>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
<td>Rarely</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

17. How often do you compare your weight to that of other girls?

18. How often do you compare your shape to that of other girls?
**Set Six**

*Please answer each of the following questions by circling a number, according to the following scale:*

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<tr>
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<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>A little</td>
<td>Some</td>
<td>Quite a bit</td>
<td>A lot</td>
<td></td>
</tr>
</tbody>
</table>

1. How much pressure to be thin do you feel from *your friends*?

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<td>3</td>
<td>4</td>
<td>5</td>
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</tr>
</tbody>
</table>

2. How much pressure to be thin do you feel from *other girls* at school?

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<td>3</td>
<td>4</td>
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</table>

3. How much pressure to be thin do you feel from *your mother*?

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<th>4</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

4. How much pressure to be thin do you feel from *your father*?

<table>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

5. How much pressure to be thin do you feel from *your brothers or sisters*?

<table>
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<th>4</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

6. How much pressure to be thin do you feel from *advertising*?

<table>
<thead>
<tr>
<th></th>
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<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

7. How much pressure to be thin do you feel from *magazines and TV*?

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</tbody>
</table>

8. Do you think that your friends take a lot of notice of each others’ weight and shape?

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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely Not</td>
<td>Probably Not</td>
<td>Not Sure</td>
<td>A little, yes</td>
<td>A lot, yes</td>
<td></td>
</tr>
</tbody>
</table>
Set Seven

The following questions refer to the magazines you read, television shows you watch, and websites you visit. Please answer each of these questions as accurately as possible.

**Magazines**

Do you read magazines?  
**YES**  **NO**

If yes,

1. What is your favourite magazine?: _____________________________________________

   (a) How often do you read this magazine?:

   *Every day*  
   *Several times a week*  
   *Once or twice a week*  
   *Once or twice a month*  
   *Less often*

2. What is your second favourite magazine?: _______________________________________

   (a) How often do you read this magazine?:

   *Every day*  
   *Several times a week*  
   *Once or twice a week*  
   *Once or twice a month*  
   *Less often*

3. What is your third favourite magazine?: _________________________________________

   (a) How often do you read this magazine?:

   *Every day*  
   *Several times a week*  
   *Once or twice a week*  
   *Once or twice a month*  
   *Less often*

**Television**

Do you watch television?  
**YES**  **NO**

If yes,

4. What is your favourite television show?: ________________________________________

   (a) How often do you watch this television show?:

   *Every day*  
   *Several times a week*  
   *Once or twice a week*  
   *Once or twice a month*  
   *Less often*

5. What is your second favourite television show?: _________________________________

   (a) How often do you watch this television show?:

   *Every day*  
   *Several times a week*  
   *Once or twice a week*  
   *Once or twice a month*  
   *Less often*

6. What is your third favourite television show?: _________________________________

   (a) How often do you watch this television show?:

   *Every day*  
   *Several times a week*  
   *Once or twice a week*  
   *Once or twice a month*  
   *Less often*
7. What is your favourite website?: __________________________________________

8. How often do you visit the following websites:

   (a) MySpace
   Never          Occasionally       Most of the time      A lot

   (b) YouTube
   Never          Occasionally       Most of the time      A lot

   (c) Facebook
   Never          Occasionally       Most of the time      A lot
**Set Eight**

*Please circle either T (true) of F (false) in answering the items below:*

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>F</td>
</tr>
</tbody>
</table>

1. I get satisfaction from competing with others. T F
2. It's usually not important to me to be the best. T F
3. Competition destroys friendships. T F
4. Games with no clear cut winners are boring. T F
5. I am a competitive individual. T F
6. I will do almost anything to avoid an argument. T F
7. I try to avoid competing with others. T F
8. I would like to be on a debating team. T F
9. I often remain quiet rather than risk hurting another person. T F
10. I find competitive situations unpleasant. T F
11. I try to avoid arguments. T F
12. In general, I will go along with the group rather than create conflict. T F
13. I don’t like competing against other people. T F
14. I don’t like games that are winner-take-all. T F
15. I dread competing against other people. T F
16. I enjoy competing against an opponent. T F
17. When I play a game I like to keep scores. T F
18. I often try to outperform others. T F
19. I like competition. T F
20. I don’t enjoy challenging others even when I think they are wrong. T F
**Set Nine**

*Please circle a response for each of the following statements, according to the following scale:*

<table>
<thead>
<tr>
<th>Always</th>
<th>Usually</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

1. I am terrified about being overweight.
   - 1 2 3 4 5 6

2. I avoid eating when I am hungry.
   - 1 2 3 4 5 6

3. I find myself preoccupied with food.
   - 1 2 3 4 5 6

4. I have gone on eating binges where I feel I may not be able to stop.
   - 1 2 3 4 5 6

5. I cut my food into small pieces.
   - 1 2 3 4 5 6

6. I am aware of the calorie content of foods I eat.
   - 1 2 3 4 5 6

7. I particularly avoid food with a high carbohydrate content (bread, rice, potatoes, etc.).
   - 1 2 3 4 5 6

8. I feel that others would prefer if I ate more.
   - 1 2 3 4 5 6

9. I vomit after I have eaten.
   - 1 2 3 4 5 6

10. I feel extremely guilty after eating.
    - 1 2 3 4 5 6

11. I am preoccupied with a desire to be thinner.
    - 1 2 3 4 5 6

12. I think about burning up calories when I exercise.
    - 1 2 3 4 5 6

13. Other people think I’m too thin.
    - 1 2 3 4 5 6

14. I am preoccupied with the thought of having fat on my body.
    - 1 2 3 4 5 6

15. I take longer than others to eat my meals.
    - 1 2 3 4 5 6

16. I avoid foods with sugar in them.
    - 1 2 3 4 5 6
17. I eat diet foods.  
1 2 3 4 5 6

18. I feel that food controls my life.  
1 2 3 4 5 6

19. I display self-control around food.  
1 2 3 4 5 6

20. I feel that others pressure me to eat.  
1 2 3 4 5 6

21. I give too much time and thought to food.  
1 2 3 4 5 6

22. I feel uncomfortable after eating sweets.  
1 2 3 4 5 6

23. I engage in dieting behaviour.  
1 2 3 4 5 6

24. I like my stomach to be empty.  
1 2 3 4 5 6

25. I have the impulse to vomit after meals.  
1 2 3 4 5 6

26. I enjoy trying new rich foods.  
1 2 3 4 5 6

Please respond to each of the following questions:

1. Have you gone on eating binges where you feel that you may not be able to stop? (Eating much more than most people would eat under the circumstances).  
   NO  YES
   If YES, on average, how many times per month in the last six months?  

2. Have you ever made yourself sick (vomited) to control your weight or shape?  
   NO  YES
   If YES, on average, how many times per month in the last six months?  

3. Have you ever used laxatives, diet pills or diuretics (water pills) to control your weight or shape?  
   NO  YES
   If YES, on average, how many times per month in the last six months?  


Set Ten

For each statement, please indicate the extent to which you agree with it by circling the appropriate response according to the following scale:


1. On the whole, I am satisfied with myself.
   1   2   3   4

2. At times I think I am no good at all.
   1   2   3   4

3. I feel that I have a number of good qualities.
   1   2   3   4

4. I am able to do things as well as most other people.
   1   2   3   4

5. I feel I do not have much to be proud of.
   1   2   3   4

6. I certainly feel useless at times.
   1   2   3   4

7. I feel that I’m a person of worth, at least on an equal plane with others.
   1   2   3   4

8. I wish I could have more respect for myself.
   1   2   3   4

9. All in all, I am inclined to feel that I am a failure.
   1   2   3   4

10. I take a positive attitude toward myself.
    1   2   3   4

11. If I was thinner I would have better friends than I do now.
    1   2   3   4 or ‘Don’t know’
Set Eleven

For each question, please circle the response that best describes your current feelings.

1. I feel tense or ‘wound up’:
   - 1 Most of the time
   - 2 A lot of the time
   - 3 From time to time, occasionally
   - 4 Not at all

2. I still enjoy the things I used to enjoy:
   - 1 Definitely as much
   - 2 Not quite so much
   - 3 Only a little
   - 4 Hardly at all

3. I get a sort of frightened feeling as if something awful is about to happen:
   - 1 Very definitely and quite badly
   - 2 Yes, but not too badly
   - 3 A little, but it doesn’t worry me
   - 4 Not at all

4. I can laugh and see the funny side of things:
   - 1 As much as I always could
   - 2 Not quite so much now
   - 3 Definitely not so much now
   - 4 Not at all

5. Worrying thoughts go through my mind:
   - 1 A great deal of the time
   - 2 A lot of the time
   - 3 From time to time, but not too often
   - 4 Only occasionally

6. I feel cheerful:
   - 1 Most of the time
   - 2 Sometimes
   - 3 Not often
   - 4 Not at all

7. I can sit at ease and feel relaxed:
   - 1 Definitely
   - 2 Usually
   - 3 Not often
   - 4 Not at all

8. I feel as if I am slowed down:
   - 1 Nearly all the time
   - 2 Very often
   - 3 Sometimes
   - 4 Not at all

9. I get a sort of frightened feeling like ‘butterflies’ in the stomach:
   - 1 Very often
   - 2 Quite often
   - 3 Occasionally
   - 4 Not at all

10. I have lost interest in my appearance:
    - 1 I take just as much care as ever
    - 2 I may not take quite as much care
    - 3 I don’t take as much care as I should
    - 4 Definitely
11. I feel restless as I have to be on the move:

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<th>4</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Very much indeed</td>
<td>Quite a lot</td>
<td>Not very much</td>
<td>Not at all</td>
</tr>
</tbody>
</table>

12. I look forward with enjoyment to things:

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<th>4</th>
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<tbody>
<tr>
<td></td>
<td>As much as I ever did</td>
<td>Rather less than I used to</td>
<td>Definitely less than I used to</td>
<td>Hardly at all</td>
</tr>
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</table>

13. I get sudden feelings of panic:

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<tbody>
<tr>
<td></td>
<td>Very often indeed</td>
<td>Quite often</td>
<td>Not very often</td>
<td>Not at all</td>
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</table>

14. I can enjoy a good book or radio or TV program:

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<tbody>
<tr>
<td></td>
<td>Often</td>
<td>Sometimes</td>
<td>Not often</td>
<td>Very seldom</td>
</tr>
</tbody>
</table>
Set Twelve

For this final set of questions, I’d like you to imagine that you were in a coeducational rather than an all-girls’ school.

1. If you were at a coeducational school, how accepted and liked do you think you would feel by boys at school?
   

2. How important do you think it would be to boys at school that your weight stay the same as it is now?
   

3. How much pressure to be thin do you think you would feel from boys at school?
   

4. Do you think that boys at school would take a lot of notice of girls’ weight and shape?
   

   I’d also like to give you the opportunity to share your thoughts on the ideal girl and boy.

5. Describe below what the ideal girl looks like:

6. Describe below what the ideal boy looks like:

   Finally, I’d like you to consider your own school environment again.

7. Is there anything about your school environment in particular that you think might increase people’s body image or weight concerns?

8. Is there anything about your school environment in particular that you think might decrease people’s body image or weight concerns?

   Thank you for taking the time to complete these questionnaires. Your assistance is greatly appreciated.

   Thanks, Renee