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**The Influence of Sociocultural and Interpersonal Factors
on Body Image Disturbance and Unhealthy Dieting
in Female Adolescents**

A thesis
submitted in partial fulfilment
of the requirements for the
Degree of Doctor of Philosophy
at the
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by
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Abstract

Body image disturbance and unhealthy dieting in adolescent females are areas of particular concern for mental health professionals, teachers, and parents. Many theories have been developed to explain body image disturbance and unhealthy dieting, in which sociocultural pressure and interpersonal influences are prominent. However, there is still no clear understanding of how these influences interrelate or how they impact upon body image disturbance and unhealthy dieting. In addition, very little research has been conducted in New Zealand examining the role of such pressures, or investigating body image or dieting.

This thesis explores the role of social evaluation, incorporating both sociocultural and interpersonal variables, in the development of body image disturbance and unhealthy dieting in New Zealand adolescent females. The research programme incorporated three studies, firstly focus group discussions, followed by a survey study, and finally an experimental paradigm.

Focus group discussions were conducted with female teenagers to explore their conceptualisations of dieting, and to identify areas of social evaluation that were of particular import to New Zealand teenagers. Need for approval, appraisal sensitivity, media influence, appearance evaluation, and peer comparison emerged as dominant themes in the teenagers discussions.

The second study extended the focus group data through a survey with 190 female high school students about the social evaluation themes identified in the focus group discussions as well as body image disturbance, unhealthy dieting, and low mood. Structural equation modelling was utilised to test a model of interrelationships between these variables. The survey study established that there were indirect and direct relationships between the variables of social evaluation,

body image disturbance, unhealthy dieting, and low mood. Specifically appearance-related feedback and appearance-related comparison emerged as having pivotal roles in the model of interrelationships.

The final stage of the research programme further extended the findings of the focus group discussions and the survey study by using an experimental paradigm. A pilot study was conducted with 33 high school students to ensure that the methodology of a mood induction procedure intended to reflect negative appearance-related feedback and negative appearance-related comparison was powerful enough to elicit changes in body image and negative affect. For the final study, a further 33 female high school students participated in the imaginal mood induction procedure and completed questionnaires assessing appraisal sensitivity and sociocultural ideals. Repeated measures analyses demonstrated that participants' body image disturbance increased after exposure to the imagined social situations. Negative affect also increased after the imaginal mood induction procedure. Peer feedback had a stronger influence on levels of anger, happiness, and inferiority/'stinkness'. Unexpectedly, dispositional levels of appraisal sensitivity and internalisation of the thin-ideal did not moderate the effects of the mood induction procedure on participants ratings of body image disturbance.

This research programme demonstrated that social evaluation has an important and influential role in the development of body image disturbance and unhealthy dieting in female adolescents. This thesis highlights the importance of considering how the interrelationships between sociocultural and interpersonal variables affect body image disturbance. The research programme also provides many opportunities for future research and clinical investigations in the areas of models of interrelationships, body image disturbance, and unhealthy dieting.

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CHAPTER ONE

General Introduction

*Everyday I fight a war against the mirror.
Can't take the person staring back at me.*

...

*Tired of being compared to damn Britney Spears
She's so pretty, that just ain't me!*

Pink

*I am beautiful no matter what they say.
Words can't bring me down.*

Christina Aguilera

Some people say that songs reach the music charts because the lyrics reflect the way society is thinking and feeling. The above lyrics are from two songs that reached number 1 in the New Zealand pop music charts during the course of this research programme, and effectively portray some of the themes raised throughout this thesis; namely, the importance of body image disturbance in young females, and the societal and interpersonal pressures that cause such difficulties.

The majority of research examining the interpersonal and sociocultural pressures on body image and disordered eating has come from American-European research. Very little research has been carried out within Aotearoa/New Zealand examining the roles of such pressures, or investigating body image and dieting behaviour. Although it is commonly accepted that both societal and interpersonal influences have a role in the development of eating disturbances, a limited number of studies have taken an integrative approach to conceptualising the development of such difficulties. Therefore, the purpose of this research was to explore sociocultural and interpersonal influences that underlie the concept of

social evaluation in the development of body image and unhealthy dieting disturbances in a New Zealand sample of adolescent females.

Before social evaluation is delineated into its various components it is important that body image disturbance and unhealthy dieting are explained and that the various aetiological models in current literature are explored. As female adolescents represent the intended population to whom this research programme is aimed, it is also important to recognise why this developmental period can be challenging. In this first chapter, I will present information on dieting disorders and body image disturbance, as well as the tumultuous period of adolescence, with the intention of creating a context within which the current research programme can be placed.

Descriptions of Body Image Disturbance and Unhealthy Dieting

As this research programme is primarily interested in dieting behaviours and body image disturbance, which are both inherent in the psychiatric ‘eating disorders’ anorexia nervosa and bulimia nervosa, I will begin with a brief definition and description of these clinical disorders.

Psychological perspectives conceptualise ‘eating disorders’ as patterns of behaviour in which fears of being overweight, fears of weight gain, and dislike of one’s body are manifested as restrictive eating, bingeing, and purging. Within psychiatric nomenclature, however, these behaviours are classed as symptoms that fall into three main diagnostic syndromes: anorexia nervosa, bulimia nervosa, and eating disorder – not otherwise specified. Anorexia nervosa is characterised by excessive dieting and refusal to maintain a normal body weight. Accompanying this is a fear of gaining weight and severe body dissatisfaction (American

Psychiatric Association, 2001). The primary features of bulimia nervosa are binge-eating and the use of inappropriate compensatory behaviours (e.g., purging and excessive exercise) to prevent weight gain. Body image disturbance also plays a central role in bulimia nervosa (American Psychiatric Association, 2001). The eating disorder – not otherwise specified diagnosis covers a range of disturbances in eating behaviours, including binge-eating disorder, which has not yet met the American Psychiatric Association standards for diagnostic criteria. The primary characteristics of binge-eating disorder include recurrent bingeing, without the compensatory behaviours that usually characterise bulimia (American Psychiatric Association, 2001).

Body image is a person's internal representation of his/her outer appearance (Cash, 1990; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). A working definition of body image disturbance for the purposes of this thesis is when the internal representation has negative emotional, cognitive, or behavioural consequences. Although body image is a uniquely individual experience it is also a “dynamic person-situation interaction” (Cash, 2002a, p. 164), which can increase or decrease depending on the context in which a person is. Body image disturbance exists on a continuum ranging from some people experiencing no body image disturbance to others experiencing extreme body dissatisfaction which can often impair social and/or occupational functioning (Thompson, Heinberg et al., 1999). Most women experience mild body image disturbance, and thus Rodin, Silberstein, and Striegel-Moore (1985) coined the term “normative discontent”.

Like body image disturbance, dieting behaviours also exist on a continuum ranging from healthy monitoring of food intake to unhealthy patterns of food

restriction. Dieting, by definition, is a method of weight-control or weight-loss, involving reducing one's food intake below a level that would maintain an even weight (Brownell & Rodin, 1994). For the purposes of this research, the focus is on unhealthy dieting behaviour, where the intention of the weight loss is to improve one's appearance.

Epidemiology of Body Image Disturbance and Unhealthy Dieting

When people think about body image disturbance and unhealthy dieting it is the distressing and extreme aspects of anorexia nervosa and bulimia nervosa that come to mind. What many people do not realise is that dieting behaviours and body image disturbances are alarmingly common, with up to 85% of adolescent females partaking in dieting and having a distorted body image (Emans, 2000). This is in comparison to a rate of between 1 and 5% of adolescent females with bulimia nervosa (American Psychiatric Association, 2001; Emans, 2000) and between 0.2 and 1.3% for anorexia nervosa in females (American Psychiatric Association, 2001; Emans, 2000). For eating disorders – not otherwise specified, the prevalence rate is estimated to be between 3 and 5% for females aged 15 to 30 years (Emans, 2000). The prevalence of eating disorders in males is much lower than for females, with estimated rates of 10% of all cases for anorexia nervosa, and between 10 and 15% of all cases for bulimia nervosa (Carlat & Camargo, 1991). One possible reason for the gender difference in prevalence rates is that males may be less likely to seek treatment for eating disorders (Carlat & Camargo, 1991), although this is reported to have increased over the years (Braun, Sunday, Huang, & Halmi, 1999).

Dieting behaviour and body image disturbances have been reported to be occurring earlier, with children as young as six expressing dislike of their body, fear of weight gain, and making changes to their diet (Smolak & Levine, 1994). In comparison, the average age of onset for anorexia nervosa and bulimia nervosa is the adolescent period, although cases are reported both in early childhood and later life (Stice, Agras, & Hammer, 1999). Males are more likely to develop an eating disorder at a later stage than females, often not presenting until a male is in his twenties (Braun et al., 1999; Carlat & Camargo, 1991). A suggested reason for this is that males begin puberty 1½ to 2 years later than their female counterparts, and puberty has been recognised as a high risk period for the development of an eating disorder because of the social and personal changes that occur during this period (Carlat & Camargo, 1991).

As the majority of research into eating and body image disturbance has occurred in industrialised countries or Western societies, eating disorders are posited to be Western-culture-bound syndromes (Simpson, 2002). It has been suggested that people who identify with white middle-class mores are more vulnerable for eating disturbances, which implies that acculturation may play an important role in the development and maintenance of eating disturbances (Bulik, 1994; Lee, 1996). Local research in New Zealand has found no differences in rates of eating, dieting, or body image disturbances between Māori (indigenous people of New Zealand) and Pākehā (European New Zealander) females (McClintock & Evans, 2001; McClintock, Evans, & Williams, 2002; Turangi-Joseph, 1998). This suggests that Māori women are as susceptible as Pākehā women to influences that lead to dieting behaviour and body image disturbance.

However, it does need to be acknowledged that these studies primarily assessed university student samples.

Aetiological Theories of Body Image Disturbance and Unhealthy Dieting

What we know about disturbances in body image and dieting is that they are multifaceted and very complex. Many theories are proposed for how body image disturbance and dieting behaviours develop, including sociocultural, interpersonal, and individual explanations. As the aetiological theories for the development of body image disturbance and unhealthy dieting are numerous, only brief overviews will be given of these three widely cited accounts of the development of body image disturbance and unhealthy dieting behaviours (Cash & Pruzinsky, 2002; Thompson, Heinberg et al., 1999).

Sociocultural theories. Sociocultural theories of the development and maintenance of body image disturbance, dieting, and eating disorders have received the strongest research support (Thompson, Heinberg et al., 1999). These theories suggest that body image and eating difficulties are the result of influences such as a ‘thin-ideal’ body image, and the importance of appearance for both the female gender-role and a woman’s success in society (Heinberg, 1996; Stice, 1994; Striegel-Moore & Franko, 2002; Thompson, Heinberg et al., 1999). However, the sociocultural explanations of disordered eating are based primarily on research within Western cultures and should not be assumed to be appropriate for non-Western societies.

The ‘thin-ideal’ refers to the association of thinness with beauty and success (Thompson & Stice, 2001). The existence of a ‘thin-ideal’ that women strive for is supported by research showing a decrease in the weight of the ideal

body for women portrayed in the media; an increase in the promotion of diet and weight loss products; an increase in the number of women being referred for eating disorder treatment; and the disproportional ratio of eating difficulties in men and women (Heinberg, 1996; Stice, 1994).

Research supports the importance of appearance for the female gender-role and societal success as risk factors in the development of body image disturbance and disordered eating. Stice, Schupak-Neuberg, Shaw, and Stein (1994) reported a significant relationship between endorsement of the female gender-role and heightened internalisation of the thin-ideal, and that the thin-ideal mediated the relationship between gender-role endorsement and body dissatisfaction. With reference to women's societal success, research has found that physically attractive people are perceived to have more socially desirable traits such as being intelligent, sociable, healthy, and more socially skilled (Feingold, 1992; Heinberg, 1996; Stice, 1994).

Interpersonal theories. Interpersonal aetiological theories of body image disturbance and dieting primarily focus on the role of peers and family members. Particular attention is given to appearance-related teasing, encouragement to diet, and modelling of unhealthy behaviours. Research into the effects of teasing and criticism on a person's body image and dieting behaviour revealed that appearance-related feedback plays an important role in the body image disturbance. Fabian and Thompson (1989) reported a strong association between teasing, body image dissatisfaction, and eating disturbances in female adolescents both premenarcheal and postmenarcheal. In a covariance structural modelling analysis and longitudinal study, Thompson, Coover, Richards, Johnson, and Cattarin (1995) demonstrated that a history of teasing was significantly associated

with body dissatisfaction, and mediated the relationship between a person's body mass index and body image. This study has been replicated in an Australian sample (van den Berg, Wertheim, Thompson, & Paxton, 2002) where Thompson et al.'s results were supported.

Jackson, Grilo, and Masheb (2002) used a cross-sectional design to look at teasing history in relation to bulimia nervosa and binge-eating disorder. In contrast to Thompson et al.'s (1995) and van den Berg et al.'s (2002) results, weight/size-related teasing and appearance-related teasing were not associated with body dissatisfaction or eating disorder symptoms in females with bulimia nervosa. However, both weight/size-related and appearance-related teasing were associated with general psychological functioning. For the women with binge-eating disorder, weight/size-related teasing was only associated with general psychological functioning, and not body image disturbance or disordered eating behaviours; however, appearance-related teasing was associated with dietary restraint and depression. Jackson et al. suggested that the non-significant results could be due to the sample size (there were 32 women in each group), and that the sample was restricted to women with either bulimia nervosa or binge-eating disorder, rather than sub-clinical levels of body image and dieting concerns.

Two other interpersonal variables proposed to influence body image disturbance and dieting behaviour are peer and family encouragement to diet, and modelling of body image dissatisfaction and dieting behaviour. Taylor et al. (1998) found that for 10-year-olds and 13-year-olds, the importance that peers place on weight and eating was the strongest predictor of excessive weight concerns. Peer importance accounted for 34% and 33% of the variance respectively for the two age groups. In cross-sectional studies, parental

encouragement to diet has also been associated with body dissatisfaction in adolescent girls (Paxton et al., 1991). However, girls who were encouraged to diet by their parents also had higher body mass indices, suggesting that parents encourage their daughters who are overweight or of average weight to diet rather than those who are below average in weight.

The indirect influence of peers and parents on dieting and body image disturbance usually occurs via modelling. In a study by Striegel-Moore, Silberstein, and Rodin (1986), teenagers whose peers and parents exalted the thin-ideal and dieted themselves, were more likely to engage in dieting and have higher body dissatisfaction. Similarly, Paxton et al. (1991) found that female teenagers who reported having a parent who dieted were more likely themselves to engage in dieting.

Individual theories. Aetiological theories of body image disturbance and unhealthy dieting that focus on individual factors, have mainly concentrated on personality, behaviour, and biological influences. Three personality variables that have been implicated in the development of body image disturbance and dieting behaviour are low self-esteem, negative affect, and perfectionism traits. Research has suggested that there are relationships between these variables (Button, Loan, Davies, & Sonuga-Barke, 1997; Cooley & Toray, 1996, 2001; Stice, 1994), although it is unclear as to whether these variables are independent of the disturbance, or whether they are manifestations of the body image or eating disturbance. Theorists have proposed that these personality variables interact with other variables such as appearance-related feedback to cause eating and body image disturbances (Thompson, Heinberg et al., 1999).

Dysfunctional cognitions are proposed to be a core component of disordered eating, and are required for an eating disorder diagnosis (American Psychiatric Association, 2001; Fairburn, 1981; Fairburn, Shafran, & Cooper, 1999; Garner & Bemis, 1982). The cognitive distortions involved in eating disturbances include general negative views of the self, thoughts about the meaning of body weight and eating, and overvalued ideas of the importance of body shape and weight in determining self-worth (Fairburn, 1981; Fairburn et al., 1999; Garner & Bemis, 1982). Vitousek and Hollon (1990) have termed these dysfunctional cognitions general self-schemata, weight-related schemata, and weight-related self-schemata.

With specific reference to body image, Cash (1994; 2002b) proposed that there are two fundamental body image schema: body image evaluation and body image investment. Body image evaluation refers to a person's positive and negative beliefs about appearance. Body image investment is the importance that a person places on his/her appearance for self-evaluation. Such schema are thought to have developed from the sociocultural and interpersonal pressures that were mentioned earlier (Cash, 1994; 2002b).

Biological factors implicated in the development and maintenance of body image disturbance and dieting behaviours include genetics, maturational timing, and weight. The most significant biological factor identified for bulimia nervosa is genetics as demonstrated by twin studies (Bulik, Sullivan, Wade, & Kendler, 2000). Due to the paucity of twin research for anorexia nervosa, no firm conclusions can be drawn about a genetic contribution to this disorder (Bulik et al., 2000). Longitudinal studies that have included body mass index and age of menarche support the theory that being overweight and having an early

maturation age puts a person at an increased risk for developing body image disturbance and eating difficulties (Stice, Shaw, & Nemeroff, 1998; Thompson et al., 1995; Thompson, Coover, & Stormer, 1999). It is likely that these variables interact with interpersonal and sociocultural variables such as negative appearance-related or weight-related feedback, and perceived pressure from other sources to lose weight.

Adolescent Development

If we accept the demographic data mentioned previously, it is apparent that body image and eating disturbances are extensive during the adolescent years. This in turn raises the question what is it about this developmental period that increases a young woman's susceptibility to mental health difficulties? What we know about the developmental phase of adolescence is that it brings many challenges and tasks, including developing mature relationships, preparing for the future (family/career), achieving emotional independence, forming a set of values, and developing a sense of self or identity (Heaven, 1994).

Identity formation. The task of developing a sense of identity has been the focus of much theory and research dating back to Erikson (1968), who proposed that identity formation involved interactions between both internal (biological and psychological) and external (social) factors, and begins in early childhood. It is in the period of adolescence that an individual focuses more on the self, thus developing a sense of personal identity.

An important component of identity formation is that of self-concept. Self-concept refers to "the totality of the thoughts and feelings that have reference to the self" (Deaux & Wrightsman, 1988, p. 90), which develops from childhood

through to adulthood. Internal processes and the context in which the person exists influence his/her self-concept. A person's self-concept also results from his/her perceptions of what other people think about him/her and personal judgements of his/her behaviour, abilities, and personality (Deaux & Wrightsman, 1988). This highlights the importance of social evaluation as a component of developing self-concept.

Adolescents in particular are concerned with what other people think of them, and are continually conscious of people watching them (Vartanian, 1997). Regardless of whether people are watching them or not, adolescents have a heightened sensitivity to social evaluation. A reason for social evaluation being such a significant issue for adolescents is that their social environment changes in two ways during this developmental phase (Vartanian & Powlishta, 2001). The evaluative nature of peer groups increases and the peer group takes on a much greater importance to the adolescent, thus making the adolescents' perceptions of other people's opinions an important aspect of adolescent development (Vartanian & Powlishta, 2001).

As has been highlighted, the social context is paramount for adolescents. Two processes which occur within the social context, by which adolescents determine their own self-acceptance, are social comparisons and reflected appraisals. Social comparison is the act of comparing oneself to others (Festinger, 1954), and reflected appraisals are how people perceive others to view them (Cash & Fleming, 2002; Deaux & Wrightsman, 1988; Mead, 1934). If the comparison is unfavourable and if a person believes others think negatively of him/her, these processes can have detrimental effects on an adolescent's self-concept and self-

acceptance. In addition, the more important the social group is to the adolescent the more powerful the effect (Tesser, 1991).

Cultural and gender differences in adolescence. As with any stage of development, there are both cultural and individual differences in adolescent development. Cultural identity has been proposed as an important factor in the development of self-concept. With reference to Māoridom, Durie (2001) posited that ethnic identity involves describing oneself as Māori, and as being a component of cultural identity which incorporates markers of “personal attitudes, cultural knowledge, and participation in Māori society” (p. 57). Durie also proposed that the development of cultural identity depends on access to cultural resources such as land, language, whānau, and marae.

Phinney (1990) applied Erikson’s theory of identity formation to the development of ethnic identity by taking into account developmental factors and examining ethnic identity at an individual level. Phinney proposed that there is a three-stage process in developing one’s ethnic identity. Firstly, having an unexamined ethnic identity, secondly, an exploration period and finally, to a stage of achieved ethnic identity. Phinney suggested that young people may not be aware of, interested in, or exposed to ethnic identity issues and will thus be in an unexamined stage of ethnic identity. The exploration period often involves immersion into the practices of one’s own ethnicity or the rejection of the dominant culture. Through doing this, an adolescent is able to gain a better understanding of their ethnicity and develop an ethnic identity. This process can be cyclical with continual exploration of ethnic practices and beliefs. Therefore, differences between individuals of varying cultures could be apparent, especially if the culture promotes certain values of social attainment.

The differences between the way males and females cope with the adolescent period has been the focus of much research, with the consensus being that females face greater challenges in reaching puberty than males. Females reach puberty before males and thus may not be mature enough on both a cognitive and emotional level to cope with such changes (Benjet & Hernandez-Guzman, 1998). Also, girls often have to deal with the demands or pressures of adolescence at the same time or in quick succession, such as the physical changes of puberty, changing schools, and dating (Levine & Smolak, 2002).

The role of parenting practices in differences between males and females is also important. It is commonly accepted that parents exercise different means of controlling and supervising their children, with sons often being given more autonomy and independence than daughters (Moretti & Wiebe, 1999). Females are also encouraged to “attend to others’ needs, to conform to expectations, and to judge their success or failure in terms of acceptance by others” (Moretti & Wiebe, 1999, p. 629). These factors suggest that females are faced with more of a challenge in adolescence and have to resolve more personal and more importantly more social issues than their male counterparts.

Summary

In summary, the alarmingly high rates of dieting and body image disturbances in female adolescents support the need for further research to gain a better understanding of both causal and maintaining factors involved in these difficulties. Adolescence is a turbulent period with many changes occurring on a social and interpersonal level. Coinciding with this, various aetiological models of disordered eating include these social and interpersonal influences. Therefore, the

intention of this research programme was to delineate the concept of social evaluation and to develop a model of interrelationships between elements of social evaluation, body image, and dieting behaviour, with the aim of identifying pivotal variables.

To accomplish this aim, the research programme consisted of three main components. The first study involved focus group discussions, which allowed me to obtain New Zealand teenager views on social evaluation, their conceptualisations of body image disturbance, and the different pressures that influence their decisions to diet. The second stage of the research programme was a survey study. This provided an opportunity to test a model of interrelationships between elements of social evaluation that had emerged from the focus group discussions and a review of the literature. The third stage of the research was informed by the findings of the survey study, and consisted of an experimental research design where appearance feedback and peer comparison were experimentally manipulated to determine their respective effects on body image disturbance and various facets of negative affect. I conclude by outlining a model of interrelationships between sociocultural and interpersonal variables and their role in the development of body image disturbance in New Zealand female adolescents, discuss the importance of taking an integrative approach to the development of body image disturbance and unhealthy dieting, and present clinical and research implications of this research programme.

CHAPTER TWO

Focus Group Discussions

Aims of Study

The demographic data mentioned in the previous chapter revealed the high rates of body image disturbance and dieting behaviour in adolescent females. As was discussed, most of the research investigating social and interpersonal pressures on body image and dieting have used American-European populations, whereas limited research has been carried out within New Zealand. Therefore, an important first step of this research programme was to give New Zealand adolescents a voice, and allow them to express their views and opinions about the social and interpersonal pressures related to body image and dieting.

Specifically, I wanted to ascertain what aspects of social evaluation were particularly important to New Zealand teenage females with the intention of developing a model of interrelationships between variables of social evaluation, body image disturbance, and unhealthy dieting that could be investigated in a survey study. Morgan (1997) stated that focus groups can contribute to surveys by ensuring that domains that need to be assessed are included in survey studies. Focus groups also ensure that “the researcher has a complete picture of participants’ thinking” (p. 25). Therefore, the use of focus group studies was one way in which New Zealand teenagers could offer insight into the importance of social evaluation in relation to body image and unhealthy dieting for them. The use of hypothetical situations also allowed teenagers to freely discuss issues of personal importance without disclosing personal information.

Method

Participant Recruitment

Staff from two high schools in the Hamilton area invited female students to participate in the focus group discussions. Hamilton is the largest inland city in New Zealand, with a population of approximately 115 000 (Statistics New Zealand, n.d.). One of the schools that participated was co-educational and the other was all-female.

Socio-economic status was derived from the decile ratings of the schools, as issued by the New Zealand Ministry of Education (1997). Statistics New Zealand has divided New Zealand into mesh blocks, and aggregated census data is collected for each mesh block to calculate the socio-economic status of the local school. Decile ratings were developed on six dimensions: equivalent household income, parent's occupation, household crowding, parent's educational qualifications, income support payments received by parents, and Māori or Pacific ethnicity. Schools are rated on a scale from 1 to 10, with lower numbers indicating less affluent areas. Ratings are divided into three categories, where schools in low socio-economic catchment areas have a rating between 1 and 3, a rating between 4 and 7 indicates the school is from a medium socio-economic area, and schools with a rating between 8 and 10 are classified as being in a high socio-economic area. The two schools involved in the focus group discussions had decile ratings of 3 and 7, which indicated that one school was in a low socio-economic catchment area and one was in a medium catchment area (Ministry of Education, 1997).

Potential participants were given an information sheet and consent form (see Appendix A) which they were asked to read and sign before they

participated. The information sheet informed the participant that the focus group was voluntary and confidential, and also provided my contact details if they had any questions.

Participant Characteristics

Twenty-three female participants took part in the focus groups. There were 12 participants in one group and 11 participants in the other. Fourteen of the students were 17 years old and 9 of the teenagers were 16 years old. The majority of the participants identified as Pākehā ($n = 17$, 73.9%), 4 participants identified as either Māori or part-Māori (17.4%), and 2 participants identified with two of the other minority cultures in New Zealand (8.7%).

Procedure

Ethical approval was obtained from the Psychology Human Research and Ethics Committee, University of Waikato before the focus group discussions. To ensure the principles of the Treaty of Waitangi were upheld, a Māori researcher within the Psychology Department of the University of Waikato was consulted prior to the research commencing. Regular meetings for cultural supervision and consultation were also arranged to ensure the appropriateness of the research programme.

The focus groups were facilitated by a female Māori clinical psychology trainee and myself. The groups were held at the school that the student attended. The groups lasted for approximately one hour in length and were relatively informal.

The participants were informed at the beginning of the discussion that the purpose of the focus group was to explore female teenagers' emotions, feelings they have about themselves and other people, how these feelings can affect eating behaviour, and personal feelings about their body shape. The participants were informed that their comments would remain confidential and anonymous outside the group. The participants were also told that they could leave the focus group at anytime and did not have to answer questions if they did not want to. The focus groups were audio-tape recorded to ensure that no information was missed.

Each group followed a similar format, and involved three techniques: direct questioning, imagining scenarios, and storytelling as suggested by Krueger (1998b). Direct questioning was used to ask about eating disturbances; the imagining scenarios and storytelling techniques were used to elicit participants' social evaluative and appearance evaluative responses to particular social scenarios.

Initially, participants were asked via direct questioning what they thought contributed to young girls and teenagers like themselves starting dieting, what they thought prevented people from dieting, and how serious an issue did they think eating disorders, dieting, and feeling bad about one's body was for teenage girls today.

Following that, participants were asked to imagine the following scenario, which introduced general issues of social appraisal.

Tania (a girl the same age as you), goes to this party, there are heaps of people there, some she knows, some she doesn't. She has been there about an hour, then she slips over really badly, falls backwards on her bum and her drink goes up in the air.

Participants were asked how they thought Tania might be feeling, what she might be thinking about, and what they thought she might do after the incident. Following this participants were asked to keep imagining the situation with the following added information.

Everyone is now looking at Tania, some people are laughing at her, some people are pointing at her, and lots of people are whispering to other people.

Participants were asked what they thought Tania might be thinking and feeling now, and if they thought Tania might act differently than before. Participants were asked to keep the story going, and come up with the worst and then the best thing that could happen to Tania.

Using the storytelling technique participants were asked to think of a situation that would be really embarrassing, a situation that would make a person squirm in their seat and check to see what other people were doing. This person would be worrying about what other people were thinking and would just want to leave the situation. As the facilitator I started the scenario with:

Amanda is in the car on the way to a party, which she has been invited to by this guy she likes, she is going on her own and is going to meet some friends there...

Participants were asked to continue the story and were intermittently probed with the questions of how might Amanda be feeling if that happened? What do you think she might be thinking now?

At the conclusion of the segment the groups were asked if they were comfortable with the process and if they would like to continue with another

scenario. At this stage, the third area of investigation, appearance evaluation, was introduced. Participants were asked to imagine the following scenario:

There is a girl called Susan (the same age as you), she and a group of her friends, both guys and girls are going to the beach for the day. It was a quick decision so everyone has 10 minutes to get their gear and get in the car. Susan throws her stuff in a bag, everyone gets to the beach, and all the girls go to the changing room to get into their togs. There are no cubicles, only a big changing room with a mirror along one wall. Susan is slightly uncomfortable about getting changed but she does and wraps her towel around her. She notices that everyone else has a new bikini or one piece whereas hers is from last year.

Participants were asked how they think Susan might be feeling and what she might be thinking if someone commented on her togs or how she looked. Following this participants were asked to keep imagining the situation with the following added information.

Susan has now gone down to the beach where everyone else is, she still has her towel around her whereas most of the other girls don't. A smaller group have gone down to the water, both boys and girls, they turn around look towards Susan, who has removed the towel, and laugh.

Participants were asked to share what they thought Susan might be thinking now, and how she might be feeling. The groups were also asked how they thought Susan might act. Participants were then asked to keep the story going, and come up with the worst thing that could happen to Susan and then the best thing that could happen to Susan.

Using the storytelling technique participants were asked to create a situation that described the worst thing that could happen when a person thought people were commenting or thinking about what the person looked like and was wearing. The scenario was started by myself as follows:

Allison is in the car on the way to a party. It has taken her ages to work out what to wear; she has rung her best girlfriends to find out what they are wearing because she wants to make sure she fits in and is wearing clothes suitable for the occasion. She is going on her own and meeting her friends there...

Participants were asked to continue the story and were intermittently probed with the questions of how might Allison be feeling if that happened? What do you think she might be thinking now?

To conclude the focus group discussion, participants were informed that the information obtained from the focus groups would contribute toward an understanding of issues that are important for teenagers. Participants were also advised that if any of the information had made them feel uncomfortable or if they would like to discuss any of the issues they could either contact myself or their school counsellor.

Results

Analysis of the focus groups was based on field notes taken by myself and my research assistant from the two focus groups. The audio-tapes were used to clarify statements when required. As suggested by Krueger (1998a), I looked for themes within each question and then across questions to obtain an overall picture of social evaluation issues important to the participants.

Perceptions of Dieting and Body Image

Responses to the question regarding what makes people diet could be grouped into two main categories: 'wanting to fit in' and 'the influence of the media'. With reference to the first category, the teenagers reported that girls diet due to peer pressure, as it is important to "have a certain image and look a certain way." In addition, if a person's friend was dieting then they may think that they should also be dieting, especially if the friend was a smaller size. The teenagers in the two groups were unanimous in their opinion that television and models are one of the main reasons that females start dieting. As one participant commented, "You never see a fat chick with a handsome guy on TV".

All teenagers reported that dieting and body image disturbance are serious issues for teenagers today. Responses indicated that being aware of how you look and what you eat is "what everyone does" and is "just the norm". The teenagers reported that dieting is "such common knowledge", that they did not think it was as topical as it had been in the past.

Another issue that the participants stated to be relevant to dieting and body image was the difficulty of finding clothes in the right style and size in what they considered to be the fashionable shops. Participants stated that "if you did not have 'in-clothes' you were looked down on". Some participants said that if you cannot find your clothes size in shops you feel as if you "do not belong" and are different from everybody else. Many of the participants reported that what you wear and how you look is dependent on other people in the situation and what they are wearing. If you look like other people then it is alright, and to see if you fit in you compare yourself to the people around you.

Information about Social Appraisal

Participants were given a scenario and asked what they thought the person in the scenario might be thinking and feeling. Responses were largely suggestive of embarrassment and shame, as indicated by statements like “I am such a loser” and “Oh my goodness, look what I have done”. Many of the teenagers also said that the person would want to run out of the room and hide.

The majority of participants wanted more information about the scenario, saying that if the person had been drinking alcohol it would not be as embarrassing and that it would be easier to laugh off because the person could blame it on the alcohol. When asked what might be the worst thing that could happen in the scenario many of the participants said that if her underwear had been exposed it would have been much more embarrassing, and that people whispering about the situation would also make you feel much worse because you would not know what they were saying about you.

With reference to the storytelling situation, the participants stated that it would be very rare for a person their age to turn up at a party on their own; they would be more likely to take a friend even if only one of them had been invited. Examples of situations that would elicit feelings of shame and embarrassment included finding out that the invitation was a practical joke, being ignored by the guy who had invited her, and seeing the guy who had invited her talking to another girl. The teenagers said that situations like this would make you feel like a “reject”, and you may go on to avoid the people at the party in future situations, and would be wary of going to parties.

Information about Appearance Evaluation

Participants were given a scenario intended to elicit feelings of appearance evaluation. The teenagers stated that the girl would have felt embarrassed and worried about what she looked like, but that if her real friends had not “made a big deal out of it” then she would not feel so bad. Other teenagers said that she would have felt “real shame” and probably would have lied, saying that she could not find her new togs, or she would put her clothes back on over her togs. When further information about being pointed at and laughed at was provided, the participants responses became more intense, with participants saying that the girl would have felt really out of place, thinking that they were talking about her and thinking that the people she was with were not her friends.

In the storytelling scenario, participants stated that the girl would feel like the “odd one out” and would be disappointed in both herself and her friends. They said that she would also be embarrassed and feel awkward, thinking that people were looking at her and talking about her even if they were not. Participants suggested that she would want to leave the beach.

Summary

The purpose of the focus groups was two-fold. Firstly to establish female teenagers’ perceptions of body image and dieting, and secondly to obtain adolescents’ views on issues of social evaluation that pertained to the development of body image and dieting, with the intention of developing a model of interrelationships between variables of social evaluation, body image disturbance, and unhealthy dieting.

It was apparent from the discussions held with the teenagers that dieting and disturbances in body image are important issues for New Zealand female teenagers in today's society. The majority of participants emphasised that dieting is inherent in adolescence, and it would be atypical if a teenager did not think about her body size or diet. Participants stressed that society and the media had an influence on the way a person thinks about their body and appearance. For example, not being able to find something to wear in the 'right' clothes shop makes a person think they need to change how they look. From this discussion, it was interesting that participants said if a person looked like their friends then they 'belonged', but if they made unfavourable comparisons then this was a personal deficit.

With reference to the second aim of the focus groups, the importance of both general social evaluation and appearance-related evaluation to New Zealand teenagers was emphasised. Specific themes that arose during the group discussions were the importance of close peers opinions, the desire to fit in, and to gain approval from peers. If close peers make personal negative comments then this will have more of an impact than people on the periphery of their social circle. Moreover, a way in which teenagers ascertain whether or not they will be accepted is to check for differences between themselves and their friends. If there are few differences then they 'fit-in'. However, if the comparison is not in their favour then they feel rejected and not part of the group and they need to change themselves to remedy this.

To summarise, several major themes under the rubric of social evaluation emerged from the focus group discussions with the female teenagers. These were the need to gain approval and fit in, the influence of societal pressures to look and

act a certain way, the effects of negative appraisal, both in general and with specific reference to appearance, and the use of comparison to determine if you will be accepted. The identification of these social evaluation dimensions provides a basis for examining the interrelationships between these variables and body image disturbance and unhealthy dieting in New Zealand female teenagers.

CHAPTER THREE

Introduction to the Survey of Social Evaluation, Body Image Disturbance, and Unhealthy Dieting

What appears clear from the literature is that female adolescents use other people and their social environment to help define themselves (Striegel-Moore, Silberstein, & Rodin, 1986). The focus groups emphasised this pattern as reality for New Zealand teenagers. Young females think about how other people perceive them and are conscious of the social demands placed upon them; therefore, it is understandable that issues of social evaluation are relevant in a discussion of body image disturbance and unhealthy dieting in female adolescents.

An initial step in identifying what it is about social evaluation that is important in body image and dieting disturbances is to break the concept into smaller components. The focus group discussions (see Chapter 2) provided insight into what aspects of social evaluation are significant for young female adolescents in relation to body image. For the purposes of this research programme social evaluation has been delineated into *appraisal sensitivity*, *need for approval*, *internalisation of thin-ideal*, *appearance evaluation*, and *comparison of self to others*. In this chapter I will present each of these components and provide justification for their incorporation into a model of body image disturbance and unhealthy dieting behaviour.

Appraisal Sensitivity

Appraisal sensitivity is a broad term and is often associated with social anxiety. Appraisal sensitivity refers to an individual's sensitivity to being

evaluated in some way, and incorporates issues of self-consciousness and apprehension of others' evaluations. When discussing self-consciousness in reference to appraisal sensitivity, public self-consciousness is usually being referred to. Self-consciousness refers to self-focussed attention, when attention is being focussed on one's thoughts, feelings, and behaviours (Fenigstein, Scheier, & Buss, 1975). More specifically, public self-consciousness is thoughts about aspects of the self which are open for public scrutiny. Public self-consciousness implies an awareness of the self as a social stimulus (Fenigstein et al., 1975) and thus is relevant to a discussion of people's sensitivity to appraisal.

Public self-consciousness refers to the habitual attentiveness to overt aspects of the self that others can observe and evaluate (Monfries & Kafer, 1994). This has been closely related to Mead's (1934) theory where consciousness of the self occurs when a person becomes aware of another's perspective. People who are high in public self-consciousness are reported to conform to societal standards, appear co-operative, be hypervigilant to other people's evaluations of themselves, be more sensitive to rejection, and are more likely to accept responsibility for rejection (Buss, 1980; Leary, 1995; Monfries & Kafer, 1994; Schlenker & Leary, 1982; Schlenker & Weigold, 1990).

Much of the research into public self-consciousness has focussed on social anxiety, and public self-consciousness has been identified as a necessary, although not sufficient, element for a person to experience social anxiety in both adult and adolescent samples (Fenigstein et al., 1975; Jostes, Pook, & Florin, 1999; Mallet & Rodriguez-Tome, 1999; Saboonchi, Lundh, & Ost, 1999; Schlenker & Leary, 1982). Fenigstein et al. proposed that a person becomes aware of themselves as a social object which results in public self-consciousness. Given this, they may then

evaluate themselves and become apprehensive in social situations. Schlenker and Leary suggested that people who are high in public self-consciousness are likely to doubt their self-presentation skills across many situations. Furthermore, self-attention makes self-presentation difficulties more salient, thus increasing the negative affective component of social anxiety (Schlenker & Leary, 1982).

As well as public self-consciousness, fear of negative evaluation is inherent in appraisal sensitivity. Fear of negative evaluation is defined as “apprehension about others’ evaluations, distress over their negative evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively” (Watson & Friend, 1969, p. 449). Fear of negative evaluation can occur in any social and evaluative situation (Monfries & Kafer, 1994).

People who are high in fear of negative evaluation are thought to be defensive, not autonomous, and self-effacing (Watson & Friend, 1969). Although fear of negative evaluation has long been recognised as an important psychological construct in social and clinical psychology, the majority of research has focussed on social anxiety (American Psychiatric Association, 2001; Turner, McCanna, & Beidel, 1987; Watson & Friend, 1969; Winton, Clark, & Edelmann, 1995), with positive and significant correlations being reported between the two variables. In previous research (McClintock & Evans, 2001), I found fear of negative evaluation to have a direct effect on social phobia, as well as having an indirect effect mediated by self-acceptance.

Appraisal sensitivity is often classed as a ‘typical adolescent experience’, because of the multiple changes that occur during this developmental period both internally to the person and within their social environment. Adolescents are more cognisant of peer acceptance, and because being accepted by peers is an important

part of adolescence, teenagers are more sensitive to peer comments and remarks (Mallet & Rodriguez-Tome, 1999). Studies have also reported higher fear of negative evaluation in female pre-adolescents and adolescents than males (La Greca & Lopez, 1998; Mallet & Rodriguez-Tome, 1999). The focus groups also highlighted the importance of appraisal sensitivity for New Zealand female teenagers, as participants commented that when in social situations they are constantly wondering what other people think of them.

As appraisal sensitivity incorporates issues of social examination and one's outward presentation, it follows that body image disturbance and disordered eating are highly correlated with appraisal sensitivity (Pike, 1995; Striegel-Moore, Silberstein, & Rodin, 1993; Thornton & Maurice, 1997; Wegner, Hartmann, & Geist, 2000). More specifically, studies of bulimia nervosa have found significant positive correlations with public self-consciousness (Jostes et al., 1999; Striegel-Moore et al., 1993). In studies by Thornton and Maurice, and Wegner et al. female college students who were presented with photographs of thin models had elevated scores on measures of both self-consciousness and body consciousness compared to control groups. Heatherton (1993) examined self-focussed attention and body dissatisfaction in women who were classified as dieters and non-dieters. Results indicated that women who dieted were more negatively self-focussed, and that dieting was more related to public self-consciousness than private self-consciousness.

With reference to body dissatisfaction and dieting, fear of negative evaluation has been reconceptualised by Bulik (1995), who proposed that a fear of gaining weight, and body shape and weight having a disproportional influence on self-evaluation can be viewed as a fear of negative evaluation by the self and

others. My previous work in this area (McClintock & Evans, 2001), demonstrated that fear of negative evaluation is an important factor in disordered eating behaviour. Results also indicated that effects of fear of negative evaluation on poor body esteem are mediated by low self-acceptance, whereas for disordered eating behaviours the effect of fear of negative evaluation was both direct and indirect, with the indirect relationship being mediated by a low self-acceptance.

From what has been presented thus far, it is apparent that appraisal sensitivity involves some important issues that have relevance to body image disturbance and unhealthy dieting behaviour, and therefore is included in the current model of development. It is important to acknowledge that many adolescents today have some level of sensitivity to appraisal, and that this is a typical developmental process (Mallet & Rodriguez-Tome, 1999). However, when this sensitivity manifests itself as extreme body image disturbance and unhealthy dieting behaviour it becomes a concern.

Need for Approval

Closely related to appraisal sensitivity is the construct of need for approval, and in Schlenker and Leary's (1982) self-presentational model of social anxiety, public self-consciousness was classified as a component of the antecedent "motivation to impress others" (p. 646). Moreover, Watson and Friend (1969) proposed that people who are high in fear of negative evaluation may try to gain social approval as a way of avoiding any disapproval, and are highly affected by the possibility of disapproval. The need for approval has been seen as a significant factor in social behaviour, and humans as a species are continually seeking favourable evaluations from other people (Martin, 1984). The focus group

discussions also emphasised the importance of “fitting in” which is similar to the need to obtain approval from other people.

The need for approval has often been subsumed under the concept of social desirability (Martin, 1984). Social desirability is commonly assessed by the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960), and it is often assumed that that this scale also assesses approval motivation, although its primary aim was to measure socially desirable response tendencies in self-report measures. Researchers have contested the validity of the Marlowe-Crowne Social Desirability Scale as an assessment measure of approval motivation and because of this Larsen, Martin, Ettinger, and Nelson (1976) developed a measure designed to take a direct approach to approval motivation. The Martin Larsen Approval Motivation Scale looked specifically at the desire to receive positive evaluations and the desire to avoid punishment in social settings, and assessed the “behavioural self-description of reactions to approval and disapproval in social settings” (Martin, 1984, p. 509), rather than general attitudes towards receiving approval which is more in line with social desirability. A variety of elements are thought to be components of the need for social approval, including being appreciated by others, being liked, avoiding rejection and criticism, and receiving encouragement (Martin, 1984).

Although the role of approval seeking in eating behaviours has been discussed in the literature for at least three decades (Bruch, 1973; Garner & Bemis, 1982), few empirical studies have investigated the relationship between approval seeking and eating behaviours. In a recent study, Mukai (1998) compared Japanese and American university women on measures of need for social approval, eating disturbances, and body dissatisfaction. Mukai hypothesised

that Japanese women would have a higher need for social approval than American women, due to cultural pressures to conform to social norms. For the Japanese women, the need for social approval was found to be a significant predictor of disturbed eating behaviour independent of the amount of body fat or body dissatisfaction, whereas for the American women the desire for social approval was not a predictor of eating disturbances (Mukai, 1998).

Although the research literature is limited on the role of need for approval in body image disturbance and unhealthy dieting, the idea has been around for many years (Bruch, 1973). Investigation of the current literature suggests that need for approval is often subsumed under the concept of social desirability, sensitivity to other people's evaluation, or conformity to social norms. This study extracts the concept from these and focuses specifically on the need for approval and avoidance of disapproval from others within a social setting. In my model of interrelationships I propose that approval seeking is an important variable in the development of body image disturbance and dieting in adolescent females. However, it is proposed that the relationship is mediated by other variables, such as the extent to which a person internalises the thin-ideal and worries about any negative appearance-based feedback they receive from other people.

Internalisation of Thin-Ideal

Societal norms are commonly passed on through significant others; such as parents, peers, teachers, and mentors. Societal norms are also transmitted through the mass media, where the media is a reflection of the way society is thinking and acting. A very strong social norm within contemporary Western culture that has a significant influence on an adolescent female's body image is

the 'thin-ideal'. The thin-ideal refers to Western societies' association of thin with attractiveness, beauty, and success, as well as with femininity and 'goodness and virtue' (Garner & Bemis, 1982; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999; Thompson & Stice, 2001). This concept plays a very large role in the sociocultural explanation for the development of eating difficulties presented in Chapter 1.

The majority of research looking at the thin-ideal, body image disturbance, and eating difficulties has focussed on the effects of media exposure, because of the media's ability to transmit across many media to all strata of society. The effects of media exposure on disordered eating and body image disturbance have been studied through correlational and experimental design. Results from the correlational studies suggest that those individuals who are exposed to media portraying the thin-ideal are more likely to display body image disturbance and unhealthy eating practices (Cusumano & Thompson, 1997; Harrison & Cantor, 1997; Stice, Schupak-Neuberg, Shaw, & Stein, 1994). Groesz, Levine, and Murnen (2002) conducted a meta-analytic review of the experimental studies that examined the effect on females' body image disturbance of the presentation of thin media images. The findings of this review indicate that exposure to thin media images has a negative effect on body image disturbance. Other interesting findings were that the effects were more prominent in females under 19 years of age and for those females who had elevated scores on body image measures prior to the experimental manipulation (Groesz et al., 2002).

Although these results imply a direct relationship between media exposure and body dissatisfaction and/or dieting behaviour, it stands to reason that the relationship is not so clear cut, if for no other reason than because everybody is

exposed to similar media influences, yet only some people react in these ways. Variables hypothesised to mediate this relationship include a person's susceptibility to negative evaluation, the extent to which they internalise the thin-ideal, and an individual's tendency to compare themselves to others (Rubonis et al., 2001; Thompson, Heinberg et al., 1999).

For the purposes of this study, rather than investigating the transmission of the societal norm, a more interesting concept is the internalisation of the social norm: how much one believes that to be thin implies being successful and beautiful (Thompson & Stice, 2001). Studies that have looked at the internalisation of the thin-ideal report that subscription to this societal norm is positively related to eating disordered symptomatology, including body image dissatisfaction and unhealthy dieting (Cusumano & Thompson, 1997; Heinberg, Thompson, & Stormer, 1995; Stice et al., 1994). Cusumano and Thompson looked at media exposure, awareness of ideals, and the internalisation of social ideals in relation to body image disturbance, eating disordered behaviours, and self-esteem in university-aged female students. Their results demonstrated that the internalisation of the thin-ideal was a more powerful predictor of body dissatisfaction than either exposure to the thin-ideal or awareness of such societal norms. In a recent longitudinal study with adolescent girls aged 11 to 15 years, Stice and Whitenton (2002) examined risk factors for body dissatisfaction including internalisation of the thin-ideal. Results showed that thin-ideal internalisation had a prospective effect on body dissatisfaction. This is one of very few prospective studies, therefore providing strong evidence that thin-ideal internalisation is an important developmental factor in body dissatisfaction.

Further evidence for internalisation of the thin-ideal as a causal risk factor for body dissatisfaction comes from intervention studies where a dissonance-based approach was employed (Stice, Chase, Stormer, & Appel, 2001; Stice, Mazotti, Weibel, & Agras, 2000). Participants were induced to act and think in a way contrary to their previously held beliefs through role-play and essay writing. Decreases in internalisation, body dissatisfaction, dieting, negative affect, and symptoms of bulimia nervosa following the intervention were found, and these reductions were still evident one month following the intervention (Stice et al., 2001; Stice, Mazotti et al., 2000).

Even though New Zealand is not inundated with the 'thin is beautiful' media compared with larger regions such as the United States and United Kingdom, the New Zealand female teenagers in the focus groups discussed how the thin-ideal affects them. Specifically, they mentioned how not being able to purchase clothes in the 'fashionable' shops makes a person think she is fat. This in turn makes her think she needs to change so she can purchase clothes in such shops and then fit in.

I acknowledge that internalisation of the thin-ideal is an important precursor to body dissatisfaction and unhealthy dieting in adolescent females, however the relationship is proposed not to be direct; rather, the internalisation is mediated by appearance feedback and the extent to which a person compares her appearance and body to her peer group. If these are negative experiences, then this reinforces the thin-ideal and results in body dissatisfaction and dieting behaviour.

Appearance-Related Feedback

A variable hypothesised to mediate the relationship between the internalisation of the thin-ideal and body image disturbance is appearance-related feedback. What other people say about a person's appearance can have a significant effect on his/her feelings (Thompson, Heinberg et al., 1999). The process of reflected appraisals also plays a role, where other people's opinions (and an individual's perception of these) affect an individual's self-evaluation (Cash & Fleming, 2002; Milkie, 1999; Tantleff-Dunn & Gokee, 2002). Research into this area of appearance-related feedback has focussed mainly on teasing from peers as well as criticisms from family members and mentors such as teachers and coaches, as mentioned previously in the discussion on the models of aetiology (see Chapter 1).

As a way of assessing a component of appearance-related feedback Lundgren, Thompson, and Anderson (2001) developed a measure based on Leary's Brief Fear of Negative Evaluation Scale to assess the effects of fear of negative appearance evaluation on body image and eating disturbances. Lundgren et al. posited that worrying about what other people thought of one's appearance would have a stronger negative impact on one's body image and eating behaviour than would a more general negative evaluation. This theory was tested through regression analyses, where fear of negative appearance evaluation contributed unique variance over and above other variables to the prediction of a range of disturbance variables, including body image, cognitive restraint and restraint. Therefore, although closely related to a general fear of negative evaluation, apprehension about other people evaluating one's appearance was a more significant contributor to eating behaviour disturbance. Spangler (2002)

investigated the cognitive model of eating disorders using longitudinal data, looking specifically at beliefs about appearance. Within this cognitive model, beliefs about appearance predicted dieting, body dissatisfaction, self-esteem, and thin-ideal internalisation, providing support for the role of appearance-related beliefs in the development of body dissatisfaction and eating disordered behaviour.

The teenagers in the focus group discussions described in Chapter 2 were quite emphatic about the role of appearance evaluation in body dissatisfaction; the consensus was that if a friend teased someone about her weight or appearance this makes her question whether she is accepted, and directly affects how she feels about her appearance and weight/size.

I recognise that appearance-related feedback and beliefs are an important developmental component of body image disturbance and unhealthy dieting, and thus need to be incorporated into a model of interrelationships. Appearance evaluation beliefs are proposed to result from underlying appraisal sensitivity, and the influence of subscribing to the thin-ideal which promotes the belief that appearance is one of the most important aspects of both social and self-acceptance.

Social Comparison

Another variable proposed to mediate the relationship between internalisation of the thin-ideal and body image disturbance is social comparison (Rubonis et al., 2001; Thompson, Coover, & Stormer, 1999). In a theory of social comparison, Festinger (1954) proposed that people often compare themselves and their behaviour to others as a gauge of their own performance, and with the

absence of any comparison, personal evaluations of performance are unstable. Festinger suggested that if there are discrepancies between the self and the comparison group, efforts are made to reduce the discrepancies that exist. With specific reference to adolescence, as stated in Chapter 1, developing one's self-concept during adolescence is often dependent upon the social group membership and the social comparisons that a teenager undertakes when constructing his/her identity (Fitzgerald, 2002; Heaven, 1994).

Applying social comparison theory to dieting, body image, and the thin-ideal, adolescent females comparing themselves to people who are thinner and viewed as more attractive are more likely to dislike their own body and partake in dieting practices that will help them achieve the thin-ideal and bring them closer to the group to which they are comparing themselves.

An interesting component of social comparison research is who people choose as comparison targets, with close targets or a person having a shared attribute being known as a particularistic target, while a universalistic target refers to generic groups (Miller, Turnbull, & McFarland, 1988). Heinberg and Thompson (1992) examined the relative importance of different groups as comparison targets for appearance and non-appearance attributes. On appearance attributes for females, the order of target comparisons was friends, classmates, university students, celebrities, family, followed by United States citizens. Friends were significantly higher than all other groups. The appearance attributes were also significantly correlated with measures of body image dissatisfaction and eating disturbances.

The role of social comparison in body image disturbance was further examined by Thompson, Coover et al. (1999) who used covariance structural

modelling to study the relationships between developmental factors, appearance comparison with others, body dissatisfaction, and eating disturbance in females attending university. Results supported the hypothesis that appearance-related social comparison was an important variable in understanding the development of body image dissatisfaction and dieting practices. Appearance comparison was found to mediate the effect of appearance-related teasing on both body image and eating disturbance.

Few studies have investigated the role of appearance comparison with peers in adolescent samples, which is interesting considering that the role of peers in adolescent development is paramount. Research has also shown that adolescent females use peers to help determine their own self-acceptance, and often report feeling pressure to conform to appearance expectations (Moretti & Wiebe, 1999; Paxton, Schutz, Wertheim, & Muir, 1999; Striegel-Moore et al., 1986). Following this, appearance comparison processes are likely to play a considerable role in female adolescent development. It was clear from the focus groups that peer comparison was an important variable in determining how a person 'fits in' with the group to which she belongs or wants to belong. As was stated, "if you look like the people you are with then it is okay because you fit in".

A recent study that examined social comparison in adolescence was by Carlson-Jones (2002), who investigated comparisons with same-sex peers and models in the media. Teenage boys and girls were asked to rate how frequently they compared themselves to their peers and models in the media on physical, personal, and social attributes. For the attributes of height, weight, personality, intelligence, and popularity, peers were the most frequently used comparison target. On the attributes of style, shape, face, and weight, both peers and the

models in the media were identified as important comparison targets. With reference to body image disturbance, the weight and shape attributes had the most significant relationship for females. This study therefore demonstrated that peers are important targets for social comparison in adolescence.

Appearance and peer comparisons have been highlighted as important issues for teenagers, however, there are likely to be some individual differences, therefore an assessment instrument of some kind would be valuable. One such instrument was developed by Huon, Piira, Hayne, and Strong (2002) to assess peer comparisons of appearance and eating behaviours in female adolescents. Three validation samples were used, females aged 12-13, 14-15, and 16-17. The results of the analyses carried out on the Dieting Peer Competitiveness Scale revealed that comparisons with peers on appearance and dieting behaviour occur across all three age groups, with those females aged 14-15 participating in more comparison than the other age groups. The Dieting Peer Competitiveness Scale also differentiated between participants who were serious about dieting and those who were not, implying that comparison with peers continues even when dieting has become very serious (Huon et al., 2002).

Theory and research suggest that social comparison is an important and necessary task that occurs during adolescence and can account for body dissatisfaction and dieting behaviour in young females. In my model of interrelationships, I propose that social comparison plays an important mediating role between thin-ideal internalisation, appearance-related evaluation, and body image disturbance.

Negative Affect

Another variable that I have included in my model of interrelationships that does not fall under the rubric of social evaluation is negative affect. Research has supported the role of negative affect in body image disturbance, unhealthy dieting, and bulimia nervosa. For example, Stice, Nemeroff, and Shaw (1996) proposed a dual pathway model of bulimia nervosa, involving dietary restraint and affect regulation pathways. Using structural equation modelling, body dissatisfaction and dietary restraint contributed significantly to negative affect in adolescent females (Stice et al., 1996). In a four year longitudinal study, Stice, Hayward, Cameron, Killen, and Barr-Taylor (2000) reported that body dissatisfaction, dietary restraint, and symptoms of bulimia predicted the onset of depression in previously non-depressed young females. Therefore, low mood has been included in my proposed model of interrelationships as resulting from both body image disturbance and unhealthy dieting.

Summary

What has been highlighted so far from both the literature and the previously held focus group discussions is that there is considerable evidence that factors of social evaluation bear importantly on body image disturbance and unhealthy dieting practices. However, clarity is still required for understanding the exact role that these different factors of social evaluation play in this development.

Within behaviour theory and therapy there has been a trend to move away from looking at clinical difficulties as isolated, single responses or behaviours (Evans & Litz, 1987), to that of considering the dynamic interrelationships

between the elements of each disorder to examine organisational patterns (Scotti, Evans, Meyer, & DiBenedetto, 1991). Although there are still unanswered questions as to how to develop complex models of such interrelationships this trend has allowed for a significant advancement in identifying target behaviours for intervention.

With reference to the current research, the relationships between the various social evaluation variables have not been portrayed within one framework with the exception of a few studies (Stice, Shaw, & Nemeroff, 1998; Thompson, Coover, Richards, Johnson, & Cattarin, 1995; Thompson, Coover et al., 1999), which have investigated groups of these variables. Many research studies have looked at issues of appraisal sensitivity, need for approval, internalisation of thin-ideal, appearance evaluation, and peer comparison in relation to body image disturbance and unhealthy dieting independently, whilst disregarding the complex response interrelationships that occur within a behavioural repertoire. The present study therefore proposes a model of interrelationships (see Figure 3.1) between social evaluative variables and their impact upon body image disturbance and unhealthy dieting, which can be tested within one conceptual framework.

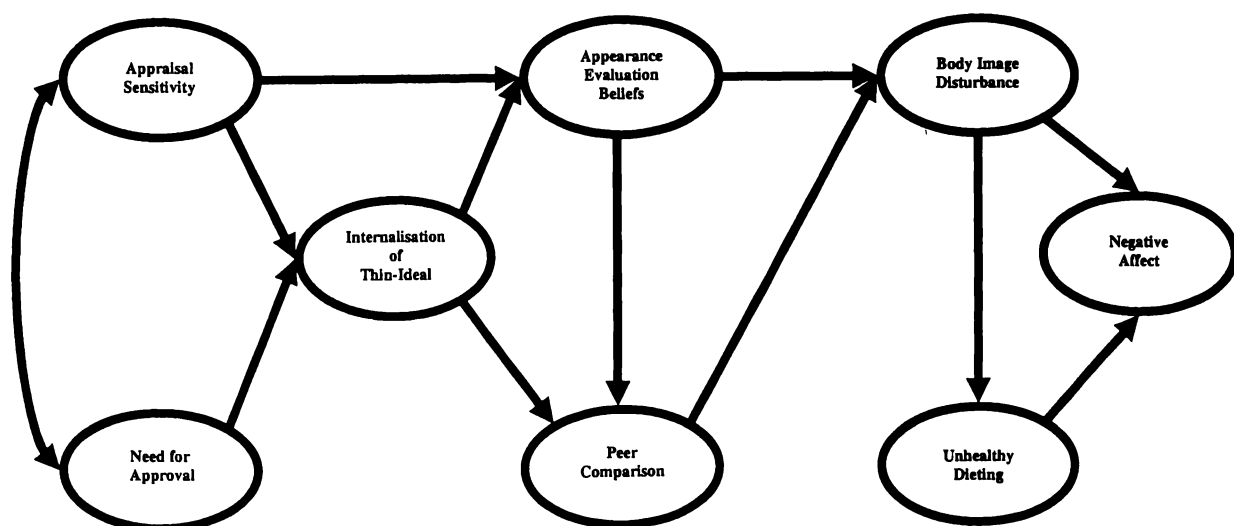


Figure 3.1. Hypothesised model of interrelationships between variables.

The model proposes that common female adolescent behaviours such as appraisal sensitivity and need for approval lead to an internalisation of the thin-ideal. The thin-ideal is so heavily promoted within our society that it is seen as a way of overcoming any negative evaluation and a way of attaining the 'approval' that female adolescents seek. The internalisation of a thin-ideal also promotes the idea that an adolescent's body is never 'good enough', because she can seldom achieve a body shape and appearance that is positively endorsed within our society. To ascertain whether her body is 'good enough', the adolescent female will compare herself to her peers to determine if she will be accepted. If she thinks she is not similar to her peers and makes unfavourable comparisons this leads to body image disturbance and a desire to do something about it. The internalisation of thin-ideal also promotes fears and anxieties about what other people will think of her body and appearance. These fears of appearance evaluation also motivate the teenager to compare herself to her peers. These unfavourable comparisons and worries about other people's opinions all lead to a general feeling of dissatisfaction with one's body. Adolescent females then engage in unhealthy dieting practices to overcome this body dissatisfaction. Dissatisfaction with one's body and unhealthy eating practices also creates a general feeling of dysphoria or low mood.

CHAPTER FOUR

Survey Study

Aims of Study

The focus group discussions and the literature suggested that social evaluation is an important contributing factor to body image disturbance and unhealthy dieting practices, and that social evaluation is a complex phenomenon consisting of multiple elements. The purpose of this study therefore was to examine the interrelationships between the components of social evaluation (namely appraisal sensitivity, need for social approval, internalisation of the thin-ideal, appearance-related feedback, and social comparison), body image disturbance, unhealthy dieting, and low mood. To achieve this objective a survey study was designed for a high school student sample.

Method

Participation Recruitment

Teenage participants were recruited from high schools within the Hamilton area. Five high schools agreed to participate in the research. Of these, three had female students only. Decile ratings of the five schools ranged from 3 through to 10, therefore incorporating schools from low, medium, and high socio-economic catchment areas. The information package disseminated to schools can be found in Appendix B.

Once the school principal expressed interest, a meeting was arranged with either the principal or his/her representative. The way in which students were approached was individually negotiated with each school. All students in Years

11, 12, and 13 (ages 14 – 18) were invited to participate in the research through announcements (e.g., assemblies, school notices, health classes). The purpose of the research was explained to students, as was the assurance that participation was both voluntary and anonymous. Caregiver consent was required for participants under the age of 16, and a caregiver consent form (see Appendix C) was distributed to those students who were interested in participating in the research. The consent form informed caregivers of the purpose of the research, what the research would involve, and why their consent was required. Caregivers were invited to contact me if they had any questions about the research. They were also able to request that a summary of findings be forwarded to them (see Appendix D). Caregivers were asked to return consent forms to the school via their teenager.

Participant Characteristics

One hundred and ninety female high school students participated in the survey study. The majority of the participants came from all female schools (n = 157, 83%), and the remaining participants were from co-educational schools.

Age. Participants were aged between 14 and 17 years. Twenty-three percent of the sample were 14 (n = 44) and 15 (n = 44) years of age, 43% (n = 82) were 16 years old and 11% (n = 20) of the sample were 17 years old.

Ethnicity. One hundred and seventy three participants answered the question regarding their ethnic or cultural identity. The majority of the sample identified as Pākehā (n = 128, 74.0%), 14.5% (n = 25) identified as Māori or part-Māori, 2.3% (n = 4) identified as a Pacific person, 6.9% (n = 12) identified as Asian, 1.2% (n = 2) identified as South African, and 2 participants (1.2%) identified with 2 other minority cultures within New Zealand.

Living Arrangements. One hundred and eighty nine participants answered the question “Who do you live with?” Of those, the majority were from intact families - living with both biological parents with or without siblings ($n = 109$, 58%). Twenty percent of the sample were living with one parent with or without siblings ($n = 37$), while 9% ($n = 17$) of the sample were from a blended family – living with one biological parent and one non-biological parent with or without siblings. Nine percent ($n = 17$) of the students indicated that they lived in a school hostel and 5% ($n = 9$) lived with either a foster family or another relative.

Self-Report Measures

A battery of eight measures assessing appraisal sensitivity, need for approval, internalisation of thin-ideal, appearance-related feedback, social comparison, body image disturbance, unhealthy dieting, and negative affect were given to each participant in the same order. The wording of some items was adapted for the New Zealand context, and for the age of the participants. Demographic information was also obtained through the survey.

Pilot Survey. To ascertain the appropriateness of the battery of measures for adolescents in New Zealand, 49 female students from 3 Waikato high schools were administered the questionnaire. The age-appropriateness of the questions was determined by talking with the staff representative who discussed the questionnaire with the participants after completion. The staff gave the impression that the majority of participants did not have any difficulty answering the questions, and that the directions given were clear and understandable. The other way age-appropriateness was determined was by calculating the number of questions that were not answered, and to see if there were any discernable patterns

in answering. No such pattern existed, which suggested that the questions were appropriate for the school-aged sample. Therefore, the final survey consisted of eight measures.

Appraisal Sensitivity. The Public Self-Consciousness Scale of the Revised Self-Consciousness Scale (Scheier & Carver, 1985), and the Brief Fear of Negative Evaluation Scale (Leary, 1983) were used to assess appraisal sensitivity. The Public Self-Consciousness Subscale is based on Fenigstein, Scheier, and Buss's (1975) Self-Consciousness Scale and was adapted by Scheier and Carver for use with the general population. The nine-item Public Self-Consciousness Subscale assesses the "general awareness of the self as a social object that has an effect on others" (Fenigstein et al., 1975, p. 523). A sample item is:

"I'm concerned about my style of doing things"

Each item was scored by participants on a 4-point-scale, ranging from *not at all like me* (0) to *a lot like me* (3). The psychometric properties of the Revised Self-Consciousness Scale are reported by Scheier and Carver (1985) for an undergraduate sample. The correlations between the original and revised subscales are in the .80s. Good internal consistency coefficients are given for each of the subscales and are all above 0.75. Test-retest reliability for the public self-consciousness scale has been shown to be high with a correlation of .74 over a four-week period. Complete norms are available for undergraduate men and women, and partial norms are available for two non-tertiary student samples (Scheier & Carver, 1985).

The Brief Fear of Negative Evaluation Scale (Leary, 1983) has 12 items and is derived from Watson and Friend's (1969) Fear of Negative Evaluation Scale. The scale is designed to assess the "degree to which people experience

apprehension at the prospect of being evaluated negatively” (Leary, 1983, p. 371). Each item is scored by participants on a 5-point-scale, ranging from *not at all characteristic of me* (1) to *extremely characteristic of me* (5). An example item from the Brief-Fear of Negative Evaluation Scale is:

“Sometimes I think I am too concerned about what other people think of me”

The Brief Fear of Negative Evaluation Scale and Watson and Friend’s (1969) original scale correlate highly at .96 (Leary, 1983). Temporal stability has been demonstrated with a correlation of .75 over a four-week period (Leary, 1983). To assess construct validity, the Brief Fear of Negative Evaluation Scale was correlated with the Social Avoidance and Distress Scale (Watson & Friend, 1969), and the Interaction Anxiousness Scale (Leary, 1983), and, as expected, low correlations of .35 and .19 respectively were found (Leary, 1983). As another indicator of construct validity, moderate correlations (.31, .57) were found between participants’ scores on the Brief Fear of Negative Evaluation Scale and participants’ responses to questions about their concerns with being evaluated during a conversation they had just participated in (Leary, 1983).

Need for Approval. The Revised Martin-Larsen Approval Motivation Scale (Martin, 1984) was used to assess the “need for positive evaluations from others and the desire to avoid negative evaluations and social punishments” (p. 509). The scale focuses on social situations and interpersonal behaviour, and thus reflects needs for social approval rather than a more global form of approval and presenting in a positive light, otherwise known as social desirability. The measure incorporates the desire to please and avoid rejection, which may involve being submissive and changing one’s opinion. For example:

“In order to get along and be liked, I tend to be what other people expect me to be”

Items are endorsed by participants on a 5-point-scale ranging from *disagree strongly* (1) to *agree strongly* (5). Reliability has been established through an internal consistency coefficient of 0.75. Test-retest reliability over a one-week period was reported to be 0.72. Concurrent validity was established by the correlation of the revised Martin-Larsen approval motivation scale with the MMPI, Eysenck Personality Inventory, and the Marlowe-Crowne Social Desirability Scale (Martin, 1984).

Internalisation of Thin-Ideal. Two of the three internalisation subscales of the Multidimensional Media Influence Scale (Thompson & van den Berg, 2002) were used to assess internalisation of the thin-ideal. The Multidimensional Media Influence Scale is a revision and extension of the Sociocultural Attitudes towards Appearance Questionnaire (Heinberg, Thompson, & Stormer, 1995). The Multidimensional Media Influence Scale was developed following research which suggested that the influence of the media on body dissatisfaction and disordered eating is more than just exposure (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). The two subscales Television/Magazines and Athleticism consisted of six and three items respectively and are scored on a 5-point-scale ranging from *definitely disagree* (1) to *definitely agree* (5). Sample items from the two subscales are are:

“I would like my body to look like the people on TV”

“I wish I looked as athletic as the people in magazines”

The Multidimensional Media Influence Scale was developed using two university female student samples. Convergent validity was demonstrated by

correlations with other measures of sociocultural influences and measures of eating disturbance, body image, and general psychological functioning (Thompson & van den Berg, 2002).

Appearance-Related Feedback. The Fear of Negative Appearance Evaluation Scale (Lundgren, Thompson, & Anderson, 2001) was used to assess apprehension about appearance evaluation. This original measure was developed from Leary's (1983) Brief Fear of Negative Evaluation Scale by modifying some questions and introducing new items that would assess "apprehension related to a negative appearance evaluative experience". The revised scale consists of six items and is scored on a 5-point-scale, ranging from *not at all like me* (1) to *extremely like me* (5). A sample question is:

"I worry people will find fault with the way I look"

As the Fear of Negative Appearance Evaluation Scale is new, extensive psychometric statistics are not available. The internal consistency of the scale is high at .94, and all item correlations were significant at the .01 level (Lundgren et al., 2001). Correlations between the Fear of Negative Appearance Evaluation Scale and measures of eating disturbance and body image indicate that there is good concurrent validity (Lundgren et al., 2001). The correlation between the original Fear of Negative Evaluation Scale (Watson & Friend, 1969) and the Fear of Negative Appearance Evaluation of .78 is high, although the Fear of Negative Appearance Evaluation Scale does account for unique variance when body image, restraint, and cognitive restraint are dependent variables in a regression equation (Lundgren et al., 2001).

Social Comparison. The Dieting Peer Competitiveness Scale (Huon, Piira, Hayne, & Strong, 2002) was used as an assessment of peer comparison and was

developed to assess “one’s perceptions of the way one looks and what one eats (or avoids) in comparison with one’s friends” (p. 432). The measure consists of nine items which are scored on a 5-point-scale ranging from *not at all like me* (1) to *extremely like me* (5). Two factors have been identified, with the first factor focusing on drawing comparisons about one’s external physical appearance and is made up of five items, an example of which is:

“I don’t like wearing a swimming costume because I don’t think I look as good as the other girls”

Factor 2 is related to public behaviours such as eating or avoiding food, and consists of four items, a sample item is:

“I don’t mind having junk food even if my friends are having healthy food”

Huon et al. (2002) report good and extensive psychometric properties for the Dieting Peer Competitiveness Scale in which three samples of adolescent females were used. Internal consistency was determined by item-total correlations, which ranged from .05 to .89 across three samples. Test-retest reliability was assessed over a 10-month interval for three independent samples, correlations of .71, .75, and .71 respectively indicate that the measure has good test-retest reliability (Huon et al., 2002). Convergent and divergent validity was assessed by correlating the Dieting Peer Competitiveness scale with measures of disordered eating, social self-efficacy, peer-related social influence, and frequency of engaging in exercise. Discriminative validity was indicated by the Dieting Peer Competitiveness Scale being able to discriminate between serious and non-serious dieters (Huon et al., 2002).

Body Image Disturbance and Unhealthy Dieting. Two of the original subscales of the Eating Disorder Inventory (Garner, 1991), Body Dissatisfaction and Drive for Thinness, were used to assess body image and unhealthy dieting. The Body Dissatisfaction subscale contains nine items and measures dissatisfaction with the overall shape and size of particular areas of the body, including the stomach, hips, thighs, and buttocks. An example item is:

“I think my stomach is too big”

The Drive for Thinness subscale consists of seven items and is designed to measure “excessive concern with dieting, preoccupation with weight, and fear of weight gain” (Garner, 1991, p. 5). An item from this subscale is:

“I eat sweets and carbohydrates without feeling nervous”

Each item is endorsed on a 6-point-scale, ranging from *always* (1) to *never* (6) to reflect how true the item is about the participant. Garner summarised the extensive research on the psychometric properties of the Eating Disorder Inventory-II. Satisfactory internal consistency data was reported for both clinical samples and non-patient samples. In a New Zealand study assessing one-week test-retest reliability of the subscales on student staff and nurses (Welch, 1988), coefficients of 0.95 and 0.85 were found. The Eating Disorder Inventory has been shown to differentiate between clinical and non-clinical samples, thus indicating criterion validity. Concurrent validity was established by comparing results from the Eating Disorder Inventory with judgements of consultants and therapists familiar with the individual (Garner, 1991).

Negative Affect. The Child Depression Inventory-Short Form (Kovacs, 1992) was used to assess depressive symptomatology for all participants. The Child Depression Inventory-Short Form consists of 10 items and assesses negative

mood, ineffectiveness, anhedonia, negative self-esteem, and interpersonal difficulties. Each item consists of three statements and participants indicate the most relevant statement for them over the past two weeks. For example:

“Things bother me all the time”

“Things bother me many times”

“Things bother me once in a while”

The Child Depression Inventory-Short Form correlates highly with the full inventory (.89). The alpha reliability of the short form is also high (.90) indicating that it approximates the full measure at an acceptable level (Kovacs, 1992).

Procedure

Ethical approval was obtained from the Psychology Human Research and Ethics Committee, University of Waikato. Two Māori researchers within the Psychology Department of the University of Waikato were consulted prior to the survey study commencing. The questionnaire, consent forms, and information packs were reviewed to ensure the cultural appropriateness of the items and information. I followed all suggestions given which were language-based changes.

The survey (see Appendix E) was given to the student by the school representative. This occurred after caregiver consent forms were returned from those participants under 16 years old. The coversheet of the questionnaire explained the purpose of the research, that the research was voluntary and anonymous, and that by completing the questionnaire the student was giving his/her consent to participate in the research. Students were also invited to contact me if he/she had any questions about the research or wanted assistance with

completing the questionnaire. Brightly coloured boxes were placed in convenient location points within the school for students to return the questionnaire to.

As an incentive to participate in the research, students who completed the questionnaire went into a draw to win a \$50 music or book voucher. The competition form (see Appendix F) was attached to the questionnaire and students were instructed to separate the competition form from the questionnaire to ensure anonymity. Competition forms were also returned to a separate brightly coloured box in a location within the school.

Results

Multivariate statistics were used to analyse the data collected from the survey study. Exploratory data analysis was conducted using SPSS for Windows (SPSS Inc, 2001) where data were screened for any anomalies such as missing values and indications of explicit patterns of answering. A cut-off level of 10% missing data for each measure was used to identify participants who needed to be removed from the sample. If there was less than 10% of data missing, mean substitution was used to replace missing values. At this screening stage, two participants were removed from the sample because they were the only 18-year-olds, and three participants were removed because of distinct patterns in their answers; no participant was removed because of missing data. This resulted in the sample being reduced from 195 to 190.

Descriptive Data

Descriptive data are presented in Table 4.1. Minimum and maximum values, means, and standard deviations are presented for the normative sample (as stated by the authors of the measures where available) and the current sample.

Table 4.1

Descriptive Statistics of Normative Sample and High School Student Sample for Measures Used

Measure	Normative Sample				High School Students			
	Range		<i>M</i>	<i>SD</i>	Range		<i>M</i>	<i>SD</i>
	Min	Max			Min	Max		
Public Self Consciousness	0	21	14.2	4.7	1	21	15.6	4.0
Fear of Negative Evaluation	12	60	35.7	8.10	21	56	41.4	7.4
Fear of Appearance Evaluation	6	30			6	30	18.8	6.4
Dieting Peer Competitiveness	9	45	24.6	7.5	13	41	25.8	5.8
Approval Motivation	20	100	53.6	9.02	32	88	55.6	9.6
Television and Magazines	6	30			6	30	16.8	6.6
Athleticism	3	15			3	15	8.0	3.3
Body Dissatisfaction	0	27	12.2	8.3	0	27	11.2	7.4
Drive for Thinness	0	21	5.5	5.5	0	19	5.4	5.6
Child Depression Inventory – S	0	20			0	15	4.3	3.6

An ANOVA was conducted to test for significant differences between students grouped by age, the school they attended, and cultural identity on the measures used. No significant differences were found between students varying by age or high school at the .01 level. Participants indicating they were a New Zealander or Pākehā were grouped together, as were those who identified as either

Māori or Māori/Pākehā. No statistical differences were found on the measures used between the cultural groups Pākehā, Māori, Pacific, Asian, South African, or Other at the .01 level.

Significant correlations were found between all the measures at the .01 level. These results are predictable given the sample size and the close theoretical relationship between each of the variables. Correlations between the measures are shown in Table 4.2. Scores on most of the measures were not normally distributed as tested by the Kolmogorov-Smirnov test. The exceptions to this were the Brief-Fear of Negative Evaluation Scale, the Fear of Negative Appearance Evaluation Scale, and Revised Martin-Larsen Approval Motivation Scale. Histograms showing the distribution of scores on each of the measures can be seen in Appendix G.

Table 4.2
Correlation Coefficients between Subscale Scores for High School Participants

Subscale	1	2	3	4	5	6	7	8	9	10
1 Public Self-Consciousness	-	.64*	.66*	.48*	.43*	.46*	.34*	.31*	.34*	.35*
2 Fear of Negative Evaluation		-	.75*	.50*	.61*	.33*	.26*	.36*	.40*	.50*
3 Fear of Appearance Evaluation			-	.66*	.45*	.50*	.38*	.54*	.55*	.46*
4 Dieting Peer Competitiveness				-	.42*	.52*	.36*	.57*	.59*	.48*
5 Approval Motivation					-	.47*	.36*	.35*	.39*	.44*
6 Television/Magazines						-	.52*	.48*	.49*	.43*
7 Athleticism							-	.28*	.39*	.29*
8 Body Dissatisfaction								-	.66*	.42*
9 Drive for Thinness									-	.41*
11 Child Depression Inventory - S										-

Note: * $p < 0.01$.

In screening for disordered eating, the Drive for Thinness subscale of the Eating Disorder Inventory-2 (Garner, 1991) has been used most widely to determine clinically significant eating difficulties. In a recent Australian study (Sheffield & Spence, 2002) a cut-off score of 11 was used which yielded the top 15% of participants, who were identified as being at risk for developing an eating disorder. Garner recommends a more stringent cut-off score of 14 as being appropriate for a first step in screening for eating disorders. Table 4.3 presents the percentage of students who are at risk for developing eating disorders.

The Child Depression Inventory is often used as a screening instrument for depressive symptomatology, with T-scores greater than 65 considered clinically significant. Kovacs (1992) suggested that for routine screening of children who are not expected to have difficulties, a T-score of 70 may be more appropriate to identify ‘hidden’ problem children. Table 4.3 presents the percentage of students who met clinical significance on the Child Depression Inventory-Short Form.

Table 4.3

Percentage of Students Who Reached Clinical Significance on the Drive for Thinness Subscale and the Child Depression Inventory – Short Form

Score	Percentage of Students
Drive for Thinness score greater than 11	20% (n = 38)
Drive for Thinness score greater than 14	11% (n = 21)
Child Depression Inventory T-Score greater than 65	20% (n = 37)
Child Depression Inventory T-Score greater than 70	16% (n = 31)
DT greater than 11 and CDI T-Score greater than 65	10% (n = 18)
DT greater than 14 and CDI T-Score greater than 70	5% (n = 10)

Structural Equation Modelling

Structural equation modelling was used to assess the relationships between the variables of interest and to test my proposed model of interrelationships between the latent constructs of appraisal sensitivity, need for approval, thin-ideal internalisation, appearance evaluation, social comparison, body image disturbance, unhealthy dieting, and negative affect.

Maximum likelihood estimation methods are the most commonly used method in structural equation modelling and were used for the current data set. These methods choose estimates that have the maximum likelihood of reproducing the observed data (Byrne, 1994). Wide varieties of goodness of fit statistics are available to determine whether the model being tested should be accepted or rejected. If the goodness of fit statistics are acceptable, the path coefficients within the model are then interpreted. The goodness of fit statistics used for the current data sets were the Satorra-Bentler chi-square which is an overall test for model fit, and takes into account non-normality. Non-significant values represent good model fit. The Comparative Fit Index, which compares the model fit with a null model of no correlations between latent variables, was also used. The Comparative Fit Index considers sample size, and values over 0.9 represent good model fit. The Root Mean Square Error of Approximation was the third goodness of fit measure used; values less than or equal to .08 represent adequate fit, and values less than or equal to .05 represent good fit. Robust versions of the Comparative Fit Index and Root Mean Square Error of Approximation were used. The Wald and Lagrange Multiplier refitting tests were used to determine what paths were redundant in the models and what paths needed to be added to the models for a better fit (Jöreskog, 1993).

Byrne (1994) recommends that a minimum of three indicator variables per latent construct be used to reduce measurement error, increase reliability of data, and to ensure that the model is identified. Identification refers to whether or not there is a unique set of parameters consistent with the data. Ideally, a model should be over-identified, to allow a model to be rejected. If a model is under-identified, there is not enough information to obtain a solution (Byrne, 1994). In structural equation modelling every latent variable is required to have a metric, which is done by constraining the path between the latent variable and one of its indicators to the arbitrary value of 1.0. The indicator variable with the highest reliability coefficient was constrained as suggested by Garson (n.d.), as this stabilises the meaning of the latent variable.

An important idea behind structural equation modelling is that the latent variables, which are included in a model, are theoretically distinct. Therefore it was important that items that would represent a latent variable be assessed between the variables to ensure there was minimal overlap. For example, an item intended to load onto appraisal sensitivity “I often worry I will say or do the wrong thing” is similar to an item from the need for approval variable “I am careful at parties for fear that I will do or say things that others won’t like”. It was decided that conceptually this latter item was more in accordance with appraisal sensitivity, so it was dropped as an indicator for need for approval and the original item retained for appraisal sensitivity. An item intended to assess low mood was also removed, as it pertains to feeling ugly, which overlaps with issues of body image.

Three stages were undertaken to analyse the hypothesised model, which were firstly, item-level analysis, secondly, assessment of the confirmatory measurement models, and thirdly, assessment of the structural model.

Item-Level Analysis. Item analysis was carried out to ensure that the indicator variables for each latent factor were measuring the same phenomena. Item-total correlations for the latent factors appraisal sensitivity, need for approval, peer comparison, body image disturbance, and unhealthy dieting revealed that there was a possible response bias, with questions that were reversed scored showing negative or no correlations. Therefore, to ensure consistency all items that were reversed scored were removed from future analysis. This resulted in changes to the variables appraisal sensitivity, need for approval, peer comparison, body image disturbance, and dieting. To further test whether the multiple indicators of each latent variable should be grouped together, Cronbach’s alpha was assessed, as was the difference to the alpha that would be found if a certain item was removed. This analysis resulted in changes to the peer comparison, unhealthy dieting, and negative affect variables. The resulting Cronbach’s alpha for each variable are shown in Table 4.4. Scores over .7 are taken to mean a reliable set of indicators (Garson, n.d.).

Table 4.4
Cronbach’s Alpha for the Latent Constructs

Latent Construct	Cronbach’s Alpha
Appraisal Sensitivity	.82
Need for Approval	.71
Thin-Ideal Internalisation	.91
Appearance Evaluation Beliefs	.85
Peer Comparison	.82
Body Image Disturbance	.77
Unhealthy Dieting	.89
Negative Affect	.84

Confirmatory Measurement Models. Following the assessment of the item-total correlations, as recommended by Jöreskog (1993), each latent variable and its indicators were assessed as a measurement model, which depicts the relationships between the latent variable and its indicators. Jöreskog recommends that each construct be tested individually and then together as one larger measurement model. All models were tested using EQS for Windows 6.0 Beta Build 105 (Bentler, 2002). The path between the latent factor and its highest loading indicator was set to the arbitrary value of 1.0 for identification purposes and to set the scale of the factor. The adequacy of each measurement model was assessed by robust goodness of fit measures and an assessment of the residual matrix.

For the construct appraisal sensitivity, the measurement model consisted of eight items, resulting in a Satorra-Bentler (S-B) χ^2 (20, $N = 190$) = 24.86, $p = .21$; a Robust Comparative Fit Index (CFI) = .99; and a Robust Root Mean Square Error of Approximation (RMSEA) = .04. Analysis of the residuals indicated some misspecification, closer analysis suggested the removal of one indicator, this resulted in a S-B χ^2 (14, $N = 190$) = 12.32, $p = .58$; CFI = 1.00; and RMSEA = .00.

The measurement model for need for approval consisted of four items. Initial goodness of fit measures were S-B χ^2 (2, $N = 190$) = 4.74, $p = .09$; CFI = .98; and RMSEA = .09. Although these results are indicative of some misspecification, analysis of the residuals and a review of the questions suggested that the misspecification was not associated with any one particular item therefore no changes were made.

The measurement model for internalisation of the thin-ideal was made up of nine indicator variables. The goodness of fit measures indicated significant

misspecification. $S-B\chi^2 (27, N = 190) = 363.23, p < .00$; CFI = .74; and RMSEA = .26. Analysis of the residuals matrix revealed that the three indicators that related to athleticism were causing most of the misspecification, therefore these variables were removed, resulting in $S-B\chi^2 (9, N = 190) = 131.87, p < .00$; CFI = .86; and RMSEA = .27. These results were still indicative of misspecification and analysis of the residuals determined that the sixth internalisation variable was creating problems, therefore it was removed. The goodness of fit statistics for the final internalisation measurement model were $S-B\chi^2 (5, N = 190) = 7.24, p = .20$; CFI = 1.00; and RMSEA = .05.

The appearance evaluation measurement model was made up of six indicators. Goodness of fit statistics were $S-B\chi^2 (9, N = 190) = 12.80, p = .17$; CFI = 1.00; and RMSEA = .05. The residual matrix indicated that the residuals were evenly spread among indicators.

The measurement model for peer comparison consisted of five indicator variables. Initial goodness of fit measures were $S-B\chi^2 (5, N = 190) = 6.75, p = .24$; CFI = 1.0; and RMSEA = .04. The residual matrix revealed no problems.

The body image disturbance measurement model consisted of four indicators. Initial goodness of fit statistics were $S-B\chi^2 (2, N = 190) = 1.03, p = .60$; CFI = 1.00; and RMSEA = .00. Analysis of the residual matrix revealed no problems at the item level.

For the construct unhealthy dieting there were five indicator variables. Model fitting statistics $S-B\chi^2 (5, N = 190) = 6.81, p = .23$; CFI = 1.0; and RMSEA = .04 indicated a good fit between latent construct and indicators. The residual matrix revealed no misspecifications.

The measurement model for negative affect initially started with eight indicator variables. The goodness of fit statistics $S-B\chi^2 (20, N = 190) = 62.35, p < .00$; CFI = .88; and RMSEA = .11 revealed that there was some misspecification within the data. Analysis of the residual matrix suggested the removal of two variables which resulted in goodness of fit statistics of $S-B\chi^2 (9, N = 190) = 5.67, p = .77$; CFI = 1.00; and RMSEA = .00.

The next step in assessing the measurement model is to use all variables that passed the previous separate model analyses in one overall confirmatory factor analysis model. In this new, much larger model, all latent variables are allowed to correlate freely. This indicates whether there is misspecification between the latent variables and their indicators, such as if any of the indicators are loading onto different factors. For identification purposes and to set the scale of the latent variable, the indicator variable with the highest factor loading from the individual measurement model was set to 1.0. This initial measurement model resulted in goodness of fit statistics of $S-B\chi^2 (791, N = 190) = 1054.42, p < .00$; CFI = .94; and RMSEA = .04. Although the CFI and RMSEA are indicative of adequate fit, there was some misfit occurring between the latent variables and the indicator variables.

The Lagrange Multiplier Test was used to identify areas of misfit, and signal where paths between latent variables and indicator variables could be added (cross-loadings). Recommendations included cross-loadings between the item "When I look at slim friends I wish I looked like them", which was intended to represent peer comparison and the latent variables appraisal sensitivity, appearance evaluation, body image disturbance, and unhealthy dieting. As the purpose of developing this model was to test interrelationships, having an

indicator variable that loads onto multiple latent factors would only cause complications, therefore this item was removed from the measurement model. The Lagrange Multiplier test also identified that for better fit, the indicator “I try to look like people on TV” from internalisation of the thin-ideal, should cross-load onto appraisal sensitivity, peer comparison, and unhealthy dieting; it was also eliminated for similar reasons.

The standardised residual matrix was also examined for misspecification. Four items were identified as overly contributing to the misfit of the measurement model and were therefore removed from the model; two of these indicators came from the appraisal sensitivity variable, one from the appearance evaluation construct, and the other from the negative affect variable. The removal of these indicator variables resulted in a $S-B\chi^2 (566, N = 190) = 692.50, p < .00$; CFI = .96; and RMSEA = .03. This measurement model, including the factor loadings for each latent construct, is presented in Figure 4.1.

The means, standard deviations, skew coefficients, and kurtosis coefficients for all indicator variables are shown in Appendix H. Although none of the indicator variables were extremely skewed or kurtotic, the normalised Mardia coefficients which assesses multivariate normality (see Table 4.5) were outside the recommended range of +3 to -3 for some of the individual measurement models and the confirmatory factor analysis model, therefore the use of robust statistics is justified. Correlations between the latent constructs are presented in Table 4.6.

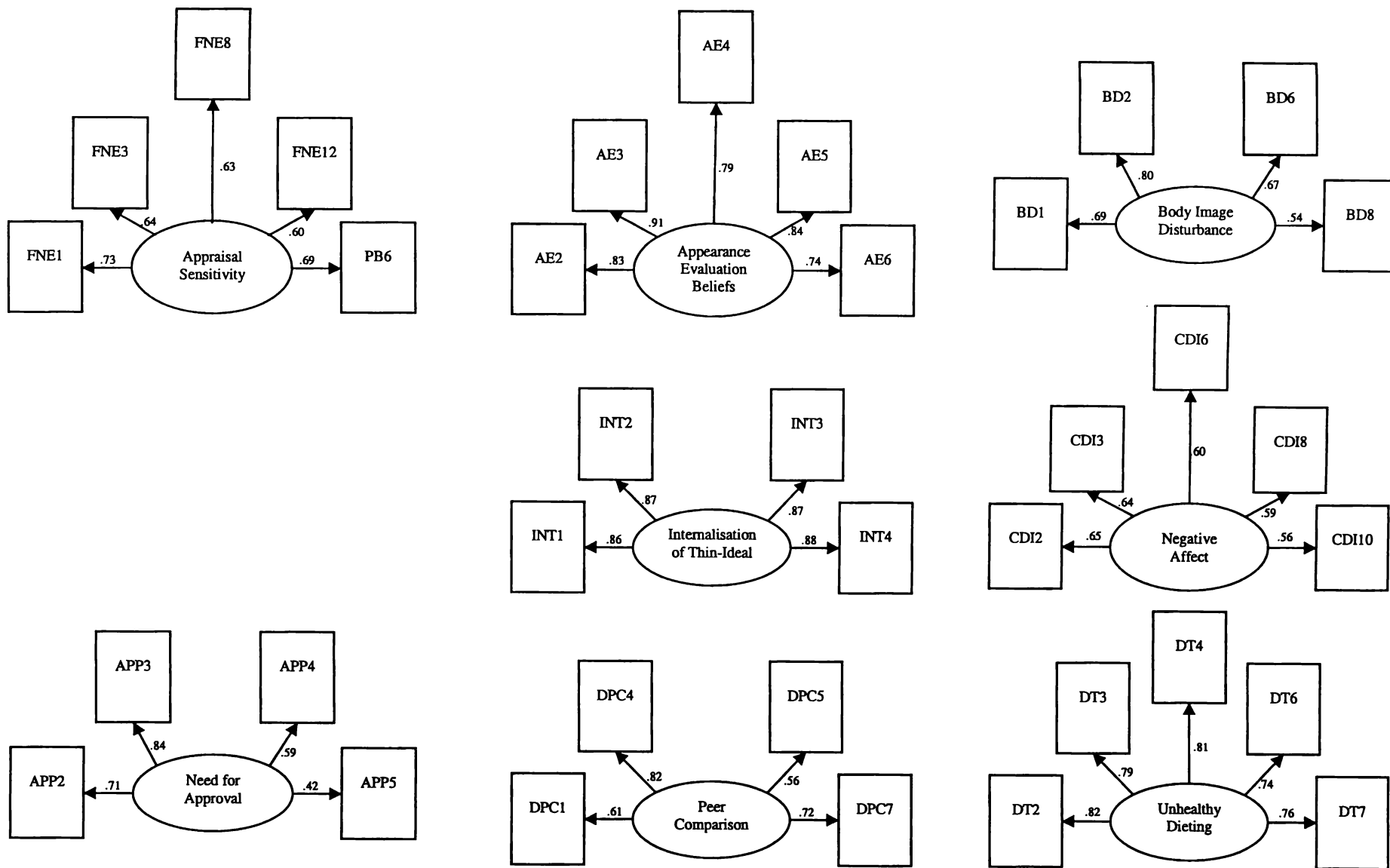


Figure 4.1. Measurement model showing loadings of indicator variables.

Table 4.5

Normalised Mardia Coefficients for Individual Measurement Models and the Confirmatory Factor Analysis Model

Model	Normalised Mardia Coefficient
Appraisal Sensitivity Measurement Model	2.19
Need for Approval Measurement Model	-2.03
Thin-Ideal Internalisation Measurement Model	9.47
Appearance Evaluation Beliefs Measurement Model	4.77
Peer Comparison Measurement Model	-0.65
Body Image Disturbance Measurement Model	-0.90
Unhealthy Dieting Measurement Model	11.97
Negative Affect Measurement Model	11.52
Confirmatory Factor Analysis Model	11.36

Table 4.6

Correlation Coefficients between Latent Constructs

Construct	2	3	4	5	6	7	8
1 Appraisal Sensitivity	.62	.33	.79	.67	.51	.45	.27
2 Need for Approval		.52	.57	.56	.41	.67	.22
3 Internalisation of Thin-Ideal			.47	.62	.43	.34	.23
4 Appearance Evaluation Beliefs				.86	.66	.58	.35
5 Peer Comparison					.71	.63	.38
6 Body Image Disturbance						.89	.53
7 Unhealthy Dieting Behaviour							.47
8 Negative Affect							-

Structural Model. According to Anderson and Gerbing's (1988) two-step modelling procedure, if the fit of the measurement model is good, then when testing the structural model which depicts the relationships between latent variables, any lack of fit is in the relationships between the latent variables. If the structural model is evaluated as being of poor fit, the model is modified by the removal or addition of paths between latent variables.

The model under investigation proposes that common adolescent behaviours such as appraisal sensitivity and need for approval lead to an internalisation by female teenagers of the thin-ideal, and that as the thin-ideal is so heavily promoted within our society achieving this is seen as a way of overcoming any negative evaluation and a way of attaining the 'approval' that teenagers seek. The internalisation of a thin-ideal also promotes the idea that a female adolescent's body is never 'good enough', and that to ascertain whether they are 'good enough' within their own peer group, adolescents compare themselves to their friends. When they feel that they are not similar to their peers and make unfavourable comparisons this leads to body dissatisfaction and a desire to do something about it. The internalisation of thin-ideal also promotes fears and anxieties about what other people will think of their body and appearance. To assess whether these fears about what others think of their appearance are valid, adolescents compare themselves with their peers. These peer comparisons and worries about other people's opinions all lead to a general feeling of dissatisfaction with one's body. These female adolescents then take up unhealthy dieting practices because they are unhappy with their body image, and dieting is seen as being a way to overcome this. Dissatisfaction with one's body and

unhealthy eating practices also create a general feeling of dysphoria or low mood.

This model is represented in Figure 4.2.

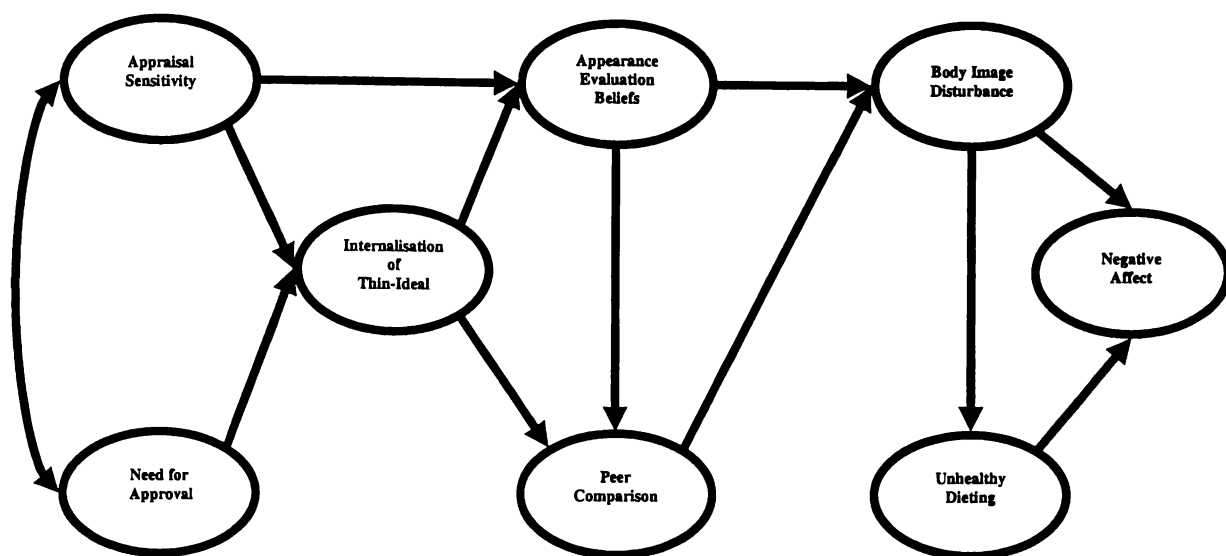


Figure 4.2. Hypothesised structural model of latent constructs.

Initial goodness of fit statistics for this model are $S-B\chi^2$ (582, $N = 190$) = 729.33, $p < .00$; CFI = .96; and RMSEA = .04. Although these results are suggestive of good fit, examination of the Wald Test, and an analysis of the residual matrix indicated that there was some misspecification. The Wald Test identified two non-significant paths, the path between dieting and negative affect, and the path between appraisal sensitivity and the internalisation of the thin-ideal. Although these recommendations are data-driven, the paths that were removed from the model were taken in conjunction with the theory behind the model. The removal of the two paths resulted in fit statistics of $S-B\chi^2$ (584, $N = 190$) = 729.96, $p < .00$; CFI = .96; and RMSEA = .04, which although not significantly different from the initial model are still indicative of good model fit (see Figure 4.3).

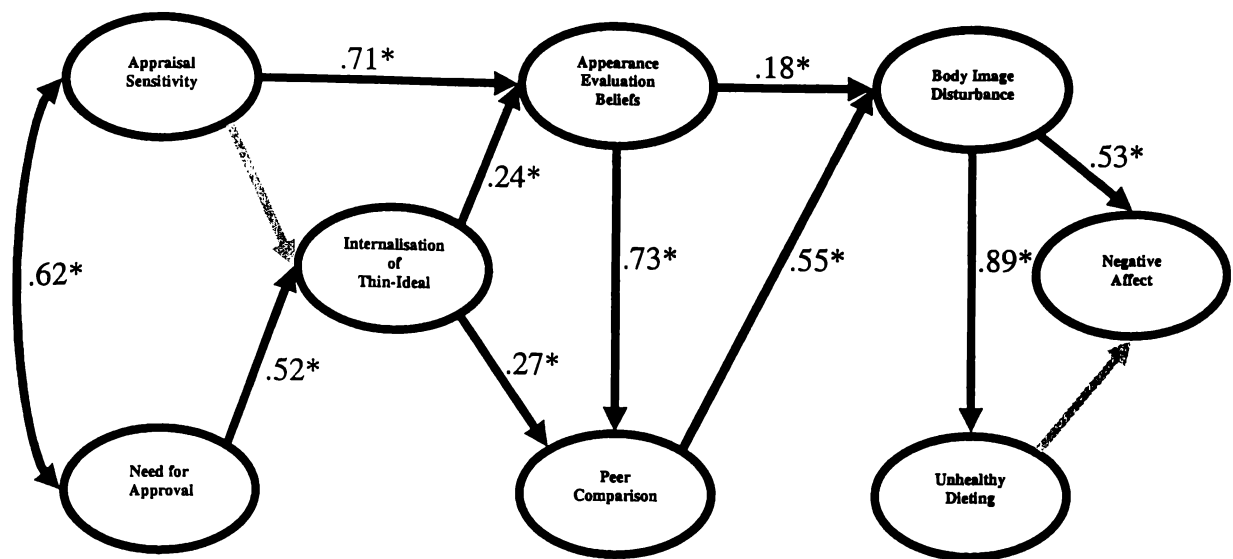


Figure 4.3. Final structural model with standardised coefficients and removed paths faded out.

The final model accounted for 27% of the variance in internalisation of thin-ideal, 67% of the variance in appearance evaluation beliefs, 80% of the variance in peer comparison, 51% of the variance in body image disturbance, 79% of variance in dieting behaviour, and 28% of the variance in negative affect.

As well as identifying the significant direct effects within a model, it is also important to examine whether the indirect effects are significant (Bollen, 1989). All the possible standardised total indirect effects are presented in Table 4.7, and all of the indirect effects were statistically significant. Although it was not hypothesised that the variables appearance evaluation, peer comparison, internalisation of the thin-ideal, the need for approval, and appraisal sensitivity would have direct influences on unhealthy dieting, analysis supports the hypothesis that these variables would indirectly influence unhealthy dieting. Moreover, as hypothesised the influence of appearance evaluation and peer comparison on unhealthy dieting is stronger than that of the other variables. Body

image disturbance was also indirectly influenced by the variables appraisal sensitivity, need for approval, and internalisation of thin-ideal. The results indicate that the influence of appearance evaluation on body image disturbance is partially mediated by peer comparison.

Table 4.7

Standardised Coefficients of Total Indirect Effects between Latent Constructs

Ultimate Predictor	Ultimate Criteria				
	Appearance Evaluation	Peer Comparison	Body Image Disturbance	Unhealthy Dieting	Negative Affect
Appraisal Sensitivity	n/a	.52	.42	.37	.22
Need for Approval	.12	.23	.15	.13	.08
Internalisation of Thin-Ideal		.18	.29	.26	.15
Appearance Evaluation Beliefs			.41	.52	.31
Peer Comparison				.49	.29

Summary

The intention of this study was to extend the findings from the focus groups by exploring the interrelationships between the variables of appraisal sensitivity, need for social approval, internalisation of the thin-ideal, appearance evaluation, and peer comparison, which are all elements of social evaluation, and body image disturbance and unhealthy dieting. This was accomplished by a questionnaire-based study and the use of structural equation modelling, which allowed for the assessment of the relationships between multiple variables.

Looking at the descriptive data from the survey study, the self-reported levels of body image and dieting for the current sample are comparable to the normative adolescent sample (Garner, 1991) and to my previous work that examined eating attitudes and behaviours in university students (McClintock & Evans, 2001; McClintock, Evans, & Williams, 2002). This demonstrates that body image and dieting concerns are consistent across national and international samples. For the self-reported levels of depression however, the number of high school students identified as 'at-risk' was much higher than in other New Zealand studies (Fitzgerald, 2002), which in turn report levels higher than do international studies. Fitzgerald suggested that such discrepancies could reflect over-reporting by adolescent samples.

Moving to the interrelationships between the variables, what was initially hypothesised was that appraisal sensitivity and need for approval were related, and these led to internalisation of the thin-ideal. It was then hypothesised that internalisation of the thin-ideal led to peer comparison and fears about what other people think of one's appearance. These specific worries about appearance evaluation were also proposed to have developed from sensitivity to appraisal. Unfavourable peer comparison and fears of appearance evaluation were hypothesised to lead to body image disturbance, which lead to unhealthy dieting and a state of dysphoria. Unhealthy dieting behaviour was also proposed to lead to negative affect.

A review of the results revealed that some minor changes were required for better fit of the model. Firstly, the path between appraisal sensitivity and the internalisation of the thin-ideal was identified as redundant in the model. This suggests that the internalisation of the thin-ideal is more effectively accounted for

by a need for social approval. Theoretically this makes sense, as the thin-ideal represents social acceptance and approval, whereas appraisal sensitivity is about attitudes and judgements without a standard being set.

The pathway between dieting and negative affect was also found to be redundant in the model, and was therefore removed. A possible reason for the non-significance of this path is that dieting behaviour is often seen as a compensatory behaviour for body image disturbance, which is a negative affective state; therefore if a person can alleviate this negative experience by dieting their general level of mood increases.

The final model included a reciprocal relationship between appraisal sensitivity and need for social approval. Appraisal sensitivity had a direct relationship with fear of appearance evaluation. Need for approval had a direct relationship with internalisation of the thin-ideal, and the internalisation of the thin-ideal directly led to fear of appearance evaluation and peer comparison. These latter two variables also had direct effects on body image disturbance, which led to unhealthy dieting and negative affect.

The final model of interrelationships provides us with important information for selecting a target behaviour for intervention (Voeltz & Evans, 1982), but first it is important to identify what it is about those variables that make them pivotal. Starting at the left hand side of the model (see p. 72), appraisal sensitivity and need for approval have been identified as 'typical' adolescent behaviours (Mallet & Rodriguez-Tome, 1999), and as changing the adolescent developmental stage would be very difficult, it follows that these would not be effective targets. The internalisation of the thin-ideal is now so ingrained within our society, that changing it would require requiring societal-wide change, which

is not likely to be easy given the current emphasis on appearance and beauty. This therefore leads us to examine what other variables in the model are pivotal in order to achieve a better understanding so that we can look at preventing body image disturbance and unhealthy dieting behaviours. Although appearance evaluation beliefs and peer comparison do not directly lead to unhealthy dieting, they have direct effects on body image disturbance and this leads directly to unhealthy dieting. Therefore, if we can gain a more comprehensive understanding of the peer comparison, appearance evaluation, and body image disturbance triad, we may be able to develop preventative interventions that prove to be more effective and efficacious in the long-term for reducing unhealthy dieting behaviour.

CHAPTER FIVE

Introduction to the Experimental Study of Appearance-Related Feedback, Appearance-Related Comparison, and Body Image Disturbance

The focus groups indicated that social evaluation is an important aspect of adolescence and plays a role in body image disturbance and unhealthy dieting behaviour for New Zealand female teenagers. The survey study tested a model of interrelationships between elements of social evaluation, body image disturbance, and unhealthy dieting, where appearance-related feedback and social comparison emerged as critical variables, and as with body image disturbance, warranted further examination. In this chapter, I will introduce research studies that have looked at both appearance-related feedback and social comparison in relation to body image and dieting, and discuss the importance of using experimental research design.

Appearance-Related Feedback and Social Comparison

It is well recognised that negative feedback of any kind can have a detrimental effect on a person's well-being. Therefore, negative appearance-related feedback can impact negatively on both a persons' feelings and their self-evaluation (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999), especially if the person is female, as it is recognised that appearance and weight/size are of significant concern for most women. Reflected appraisal theory proposed that negative feedback affects what a person perceives others to think about them, which in turn affects a person's self-appraisal (Deaux & Wrightsman, 1988;

Milkie, 1999). For the reflected appraisal to exert any influence on a person, the appraisal must be important to the individual.

Therefore, when looking at body image disturbance, if a person internalises the thin-ideal and believes that attractiveness is important, and someone makes a negative appearance-based comment, the recipient is more likely to believe that others think the same way (reflected appraisal), which results in negative affect including body dissatisfaction and negative self-appraisal.

As discussed in Chapter 3, social comparison processes occur when an individual wants to gauge how well they are doing on a dimension of importance (Festinger, 1954). Research into social comparison has looked at contrast and assimilation effects. Contrast effects are when a person experiences negative affect and a negative self-appraisal in response to comparisons made with people better-off than them or they experience positive affect and positive self-appraisal when they compare themselves to someone worse-off than them (Bui & Pelham, 1999; McFarland, Buehler, & MacKay, 2001). Assimilation effects however, are a positive response to upward comparisons or a negative affective and cognitive response to a downward comparison (Bui & Pelham, 1999; McFarland et al., 2001). According to Tesser's (1988; 1991) self-evaluation maintenance model, if the comparison dimension is highly relevant then the closer the comparison target, the more heightened the contrast effects.

Applying the self-evaluation maintenance model (Tesser, 1988, 1991) to the area of body image, which is a highly self-relevant dimension for most females, a heightened negative appraisal and negative affect would be expected if a female teenager compared her body or appearance to that of her close friend and made an unfavourable comparison. A contrast effect would also be expected if a

person subscribed to the societal norm of the thin-ideal, as this means appearance is an especially salient concept for that person.

Non-Experimental Studies of Appearance-Related Feedback and Social Comparison

Theoretically, we can see how negative feedback and social comparison can be detrimental to a person's body image. However, few studies have investigated the role of both appearance-related feedback and social comparison in body image disturbance and disordered eating behaviours. Thompson and Heinberg (1993) used regression analyses to examine the relative importance of social comparison and negative feedback on body dissatisfaction and disordered eating in women who attended university. Negative weight/size feedback and the importance of comparison targets accounted for unique variance of both body image disturbance and restrictive eating, whilst negative appearance feedback and frequency of appearance comparison did not predict the outcome variables. This preliminary study provided some initial evidence that negative feedback and comparison with others are both important in body image disturbance and eating behaviour.

A further study that included teasing history and social comparison was by Stormer and Thompson (1996), who extended Thompson and Heinberg's (1993) research. The role of four factors in body image disturbance: maturational status, teasing history, social comparison, and awareness and internalisation of the thin-ideal, were examined in university females. In contrast to the earlier study, negative feedback or teasing history did not significantly contribute to body dissatisfaction. In addition, comparison of size and weight was a more significant

predictor than ratings of importance of comparison targets. Therefore, social comparison was a more significant predictor of body image disturbance and disordered eating than negative feedback. It must be noted however, that the negative feedback variable was history of teasing, and as the authors stated this is a developmental variable, so its influence may lead to social comparison behaviour.

The mediational role of social comparison between negative appearance-related feedback and body dissatisfaction was investigated using covariance structure modelling techniques (Thompson, Coover, & Stormer, 1999). By using structural modelling, Thompson, Coover et al. (1999) further extended the previously mentioned studies through the use of multiple indicator variables, and by testing mediating effects. Results indicated that appearance-related comparison acted as a partial mediator between a history of negative appearance feedback and body dissatisfaction, with negative feedback also having a direct effect on body image disturbance.

Taken together, these three studies provide evidence that appearance-related feedback, albeit retrospective, and social comparison play pivotal roles in the development of body image disturbance and disordered eating behaviours. However, all three studies (as with the previous survey study from this thesis) are questionnaire-based, and as is known from social psychology research, saying and doing do not always correspond. Therefore if we can directly investigate a person's reaction to a situation, more accurate information may be obtained (Conaglen, 1999).

Experimental Paradigms

Evans (1985) suggested that system models, such as the survey study from this thesis and Thompson et al.'s study (1999), provide an approximation of theory, and although they can not be tested directly, components of the model can be tested. Thus, experimental- and laboratory-based studies may be able to offer further insight into the relationship between negative appearance feedback, peer comparison, and body image disturbance. Social comparison and reflected appraisal theory also tell us that these processes have affective components. Questionnaire-based studies do not readily allow for the manipulation of affect and thus do not allow for the direct investigation of changes in affect. Experimental designs however, allow for the manipulation of state levels of affect, and thus can provide further information about the role of affect in body dissatisfaction, social comparison, and negative feedback.

A frequently used experimental methodology in social and clinical psychology to study affect and cognition is mood induction procedures. Many different strategies have been developed to induce a positive or negative affect, of which many involve direct intervention in cognitive processes, such as instructing a participant to think of something (Isen, 1984). Velten statements, imagine/remember procedures, and exposure are three commonly used techniques that fall under the rubric of affect manipulations involving direct intervention in cognitive processes (Isen, 1984). The Velten technique is the most studied form of mood induction and dates back to Velten's studies of 1968, where participants were asked to read self-referent statements and to try and feel the mood suggested by the statements. Results of these studies indicated that reading the affect-laden statements influenced participant's depression or elation mood ratings.

Velten statements have been used to examine changes in body image disturbance (Taylor & Cooper, 1992). Taylor and Cooper assessed body image before and after the presentation of self-statements designed to induce positive and negative mood. They found that women who had body shape concerns and underwent a negative mood induction procedure had greater disturbances in body image perception and greater dissatisfaction with their body size than women who experienced a positive mood induction.

The theory underlying the imagine/remember technique proposes that different affective responses can be induced by having participants imagine or recall an emotionally laden event (Westermann, Spies, Stahl, & Hesse, 1996). Guided imagery is used regularly in social and clinical psychology, where words and images are used to create a situation for the participant to imagine. Asking participants to imagine themselves in a situation allows scenarios to be investigated that would be unethical or impractical to study in vivo (Davison, Vogel, & Coffman, 1997). Imaginal or fantasy scenes activate parallel emotional and cognitive states as if the person was experiencing the situation in reality. The use of imaginal scenarios to induce affect is similar to systematic desensitisation hierarchies where clinicians ask clients to imagine feared situations (Velten, 1968; Wolpe, 1958).

In a New Zealand study, Carter, Bulik, Lawson, Sullivan, and Wilson (1996) evaluated body image and cue reactivity in women with and without bulimia after a mood induction procedure. The mood induction technique used was musical. However the participants were also told to “remember past sad events” (p. 69) and to “fantasize about future unhappy experiences” (p. 69) thus incorporating imagine and remember techniques. Women with bulimia rated their

bodies and the body of a 'healthy weight' female as larger following the negative mood cues. The ideal body estimation was also negatively affected by the negative mood induction technique for women without bulimia.

The remember technique was also used by Kurlbartz-Klatt, Florin, and Pook (1999), who asked women to think of events that had made them very sad, and try to experience the same emotion that had accompanied that event. A sad piece of music was also played during the 're-experiencing' phase. Results of this study found that the negative mood induction increased body size estimation in women with bulimia nervosa.

Exposure is a commonly used experimental technique in social and clinical psychology and for mood induction purposes involves exposing participants to stimuli that are positive, negative, or neutral in nature. As mentioned in Chapter 2, media exposure has been proposed as an influential factor in the development of body image disturbance and dieting difficulties. Experimental studies that investigated media exposure and body image have found higher ratings of body image disturbance and negative mood after exposure to material containing thin-media images, such as photos, magazines, television advertisements or programmes, and movies (Groesz, Levine, & Murnen, 2002).

Experimental Studies of Appearance-Related Feedback and Social Comparison

To date there have been no experimental studies that have explored the roles of both negative feedback and peer comparison in relation to body image disturbance or disordered eating in one study. However, there have been a number of experimental studies that have looked at the effects of social comparison and negative feedback independently.

A probable reason why few studies have experimentally manipulated negative appearance- or weight-related feedback and their relationship to body image disturbance is the ethical considerations associated with exposing a person to any form of negative feedback. In a study investigating negative weight-related feedback, McFarlane, Polivy, and Herman (1998) weighed restrained and unrestrained eaters either 5 lb (2.27 kg) lighter or heavier, or did not weigh them. The restrained eaters who were told that they weighed heavier than their actual weight (negative weight-related feedback) had lower self-appraisal, higher levels of negative mood, and lower levels of positive mood after weighing than did restrained eaters in the other two conditions. This study therefore provided some experimental evidence for negative weight-related feedback affecting self-evaluation and affective states.

In an experimental study of negative feedback and body dissatisfaction, Tantleff-Dunn and Thompson (1998) took a cognitive-processing approach, and assessed the effects of appearance feedback on recall and emotional distress through the use of videotaped vignettes. The experimental vignette was an interaction between male and female colleagues, containing verbal and nonverbal feedback about appearance issues. Participants who had high body image anxiety did not recall more appearance-related information, nor did they recall more appearance feedback incidents, which did not support the researchers' hypotheses. The participants with high body image anxiety, however, recalled significantly more negative emotional responses from the recipient of the feedback in the video. Tantleff-Dunn and Thompson highlighted this because the responses by the actor were intended to be neutral in nature; this finding suggested that women with high body image anxiety were more conscious of appearance-related

feedback and assumed the feedback to have a negative consequence. Other findings from this study were that anger levels of the women who viewed the experimental tape increased from pre-exposure to post-exposure, regardless of whether they were high or low in body image anxiety. Overall, this study highlighted the importance of negative affect in both body image disturbance and negative verbal commentary, by the participants recalling negative emotional incidents and by the change in anger levels when presented with significant stimuli.

Using a methodology similar to the imagine/recall mood induction technique, Furman and Thompson (2002) manipulated appearance-related verbal feedback. In their study, female university students were asked to read vignettes that involved another female who received both positive and negative appearance-related feedback or positive and negative abilities-related feedback. The hypothesis that teasing history would impact on the participants' reactions to the negative verbal commentary scenarios was not supported. Furman and Thompson suggested that a history of teasing may not be a strong enough contributor to induce a response from a current teasing experience. An unexpected finding was that eating disturbance was a significant predictor for both the appearance-related scenarios and the abilities-related scenarios. Furman and Thompson offered the explanation that disordered eating may partially consist of general distress, thus bearing on mood after the presentation of an abilities scenario.

The majority of experimental studies investigating social comparison have used exposure techniques to examine comparison in relation to media images, such as actresses in television advertisements or models in magazines. In a seminal experimental study of social comparison processes that also incorporated

peer comparisons, Cash, Cash, and Butters (1983) presented women with pictures of physically attractive female peers, physically attractive female models, and non-physically attractive females. Those participants who viewed 'attractive peer' pictures had lower levels of personal attractiveness after the exposure; this provided experimental evidence that comparison is an important process for determining one's body image. Moreover, comparison with peers rather than models produced a greater negative effect on physical attractiveness, which is supported by Tesser's (1988; 1991) self-evaluation maintenance model.

The contrast effects of presenting women with photographs of fashion models, and the moderating effect of trait public self-consciousness and state public self-awareness were examined by Thornton and Maurice (1999) in two experimental studies. Self-perceptions of physical attractiveness, social physique anxiety, and social self-esteem were all negatively affected after the presentation of the photographs. Moreover, the effects were more significant in those participants who were high in public self-consciousness or self-awareness. Thornton and Maurice's studies demonstrated how negative contrast effects occurs when comparisons are made with targets deemed superior on appearance dimensions, and also that comparison may be moderated by both stable and transient personality characteristics.

The self-evaluation maintenance model proposes that if a person subscribes to the societal norm of the thin-ideal and makes an unfavourable comparison with an attractive person then heightened contrast effects are expected. To examine this, Heinberg and Thompson (1995) divided women into groups based on their levels of sociocultural attitudes and body image, and assessed them on state levels of negative affect and appearance dissatisfaction

after they viewed appearance-focussed commercials or non-appearance-focussed commercials. Women who were higher on body image and sociocultural attitudes and who were exposed to the appearance-related commercials scored higher on levels of negative affect and appearance dissatisfaction after the exposure. The findings from this study supported the hypothesis that a strong contrast effect in the form of a negative affective response will be evidenced if a person subscribes to the societal norm of a thin-ideal and makes an unfavourable appearance-based comparison.

Using an exposure technique, Cattarin, Thompson, Thomas, and Williams (2000) extended Heinberg and Thompson's (1995) research by showing women either a control or experimental videotape (where the experimental tape contained thin-ideal media images), and allocating participants into a neutral, comparison, or distraction condition. Participants in the comparison condition were instructed to compare themselves to the people in the videotape. The main findings from this study were that women who were instructed to compare themselves reported more comparisons. Regardless of whether participants had been instructed to compare, participants who viewed the experimental tape reported more comparisons to models than the control group. In addition, appearance dissatisfaction was only significantly affected if the women who viewed the thin-ideal media images were instructed to compare themselves. Levels of anger and depression were negatively affected by viewing the videotape of thin-ideal media images. Therefore, the findings from this study provide support for the theory that contrast effects result when comparisons are made with people deemed better off, as indicated by the participants in the experimental group all rating more comparison behaviours and having increased levels of negative affect after viewing the videotapes.

Summary

The studies presented in this chapter provide both correlational and experimental support for the role of negative feedback and social comparison in body image disturbance. As Furman and Thompson (2002) state, “An experimental paradigm ... was a viable strategy for investigating the role of verbal commentary on appearance” (p. 455). From the experimental studies that have investigated social comparison, we can see that experimentally designed studies are effective means of determining the roles of these variables in body image disturbance.

Therefore, for the third stage of this thesis an experimental paradigm using an imaginal mood induction technique was carried out to extend the findings of the focus group discussions and the survey study by investigating the role of peer appearance-related feedback and comparison. *Peer* appearance-related feedback and *peer* appearance-related comparison were selected for the experimental study, as most studies that have examined social comparison have used models or actresses from television, and the self-evaluation maintenance model (Tesser, 1988, 1991) suggested that unfavourable comparisons with close others are more likely to have a more significant effect. It also follows that if the person who provides the negative appearance-related feedback is a close friend this is more likely to have a significant effect than if the person was simply an acquaintance or stranger. This was also reinforced in the focus group discussions, where the teenagers stated that negative comments from a close friend were more likely to have a damaging effect than remarks from an acquaintance.

CHAPTER SIX

Pilot Experimental Study

Aims of Study

Experimental studies have proved to be more useful in obtaining information about temporal relationships and changes in affective states than questionnaire-based studies. However, as noted in the previous chapter, few studies have experimentally manipulated the effects of peer appearance-related feedback and peer appearance-related comparison on body image disturbance, and no study has experimentally manipulated these variables in one research design.

Two experimental studies were conducted in this phase of the research. This chapter details a pilot study conducted to ensure the emotionally-laden scenarios I developed to manipulate peer feedback and peer comparison were powerful enough to elicit changes in body image and negative affect.

Method

Participant Recruitment

Female teenagers from an all-female high school in a medium socio-economic catchment area of Hamilton were contacted by school staff to participate in the current study. Potential participants were given an information sheet and consent form (see Appendix I) from a staff representative, which they were asked to read and sign before they participated in the study. The information and consent form explained that the research was both voluntary and confidential and that they could withdraw at any stage of the research. If the potential participant was under 16, they were also given a caregiver consent form (see

Appendix J) to be completed. They were also asked to complete a consent form themselves. A sign-up sheet (see Appendix K) showing times at which the experiment was to be conducted was made available to potential participants; they were asked to sign up to participate at a time that was most convenient for them. A maximum of 10 people were allowed to sign up for participation during any one experimental time slot.

Participant Characteristics

Thirty-three female students volunteered to participate in the study. The students were aged between 15 and 18, with a median age of 16½ years. The majority of the participants identified as Pākehā ($n = 24$, 72.7%), 5 participants identified as either Māori or part-Māori (15.2%), and 1 participant identified as a Pacific person (3%).

Materials

Social Situation Vignettes. Two vignettes were used, each containing two types of experimental manipulation – peer appearance-related feedback and peer appearance-related comparison (see Appendix L). Scenario A involved getting dressed for an end-of-school term party with friends and Scenario B described shopping for some clothes with friends. These were intended to be both realistic and typical situations for adolescent females. As each scenario had two possible manipulations, participants received both scenarios and one of each of the manipulations, depending on which group they were in. To ensure that the emotional valences of the manipulations were balanced, psychologists and

research students at the University of Waikato were asked to rate how negative the event was and how negative or bad the events would make them feel.

Body Image Disturbance. To assess body image disturbance visual analogue scales of state levels of weight/size dissatisfaction and appearance dissatisfaction were used. The weight/size dissatisfaction and appearance dissatisfaction scales were based on Heinberg and Thompson's (1995) research. These scales have been shown to be sensitive to changes in body satisfaction in experimental studies (Cattarin, Thompson, Thomas, & Williams, 2000; Hargreaves & Tiggemann, 2002; Heinberg & Thompson, 1995; Tantleff-Dunn & Thompson, 1998). They have also been reported to correlate highly with the Eating Disorder Inventory Body Dissatisfaction subscale (Heinberg & Thompson, 1995). The visual analogue scales consisted of 100 mm lines and had endpoints of "no dissatisfaction" and "extreme dissatisfaction". Both of these visual analogue scales were scored so that higher values equalled greater distress.

Negative Affect. Visual analogue scales were also used to assess depression, anxiety, anger, confidence, happiness, and inferiority/'stinkness'. The scales assessing depression, anxiety, and anger were also based on Heinberg and Thompson's (1995) research, and have been shown to correlate with the Profile of Mood States (Heinberg & Thompson, 1995). The use of the confidence and happiness visual analogue scales was based on Hargreaves and Tiggemann (2002) study. A 'stinkness' visual analogue scale was developed to assess general feelings of negativity and inferiority, the term 'stinkness' was taken from the focus group discussions. All the negative affect scales were 100 mm in length, and had end points of "none" and "bad as could be". All negative affect scales were scored so that higher values equalled greater distress.

Visual analogue scales were used because the participants were less likely to remember previous responses unlike for items on questionnaires. To assess the reliability of the current visual analogue scales, an independent rater measured a random selection of 20% of the total sample of scales. The inter-rater reliability was excellent, with 85% agreement between the two raters on the items assessed. Agreement was to within 1 mm for the remaining 15% of the scales. To minimise the possibility of biases, presentation of both the body image and negative affect visual analogue scales were randomised and counterbalanced (see Appendix M).

Demographics. Participants were asked their age, cultural identity, and living arrangements. This questionnaire can be seen in Appendix N.

Distracters. Two children's poems by Kenn Nesbitt (2002) shown in Appendix O were used in the experiment to ensure that there were no carry-over effects from one manipulation to the other.

Mood Improvement Activity. To ensure that at the conclusion of the study participants were not feeling distressed by the study, a mood improvement activity (see Appendix P) was carried out. Participants were asked to write down three things they like about themselves; two things they did really well; and a success or achievement they had accomplished.

Procedure

Before the study commenced ethical approval was obtained from the Psychology Human Research and Ethics Committee, University of Waikato. The protocol of the study was also discussed with a Māori researcher within the Psychology Department of the University of Waikato.

Before the experiment started, the purpose of the research was explained to the students as looking at typical social situations that make teenagers react in different ways. It was explained that I would read them some scenarios and they would rate on scales how those scenarios made them feel. After any questions were answered, participants were asked to refrain from overtly reacting to the stimulus material or from communicating with other participants.

Participants were given booklets containing all the experimental materials. These booklets were ordered in the way the experiment would be conducted with the demographics questionnaire first, followed by a distracter poem, a sheet of visual analogue scales, a blank page, and another sheet of visual analogue scales. This sequence was then repeated from the distracter poem for the second scenario/manipulation combination. Participants were asked not to turn the pages in their booklet until instructed to do so.

Participants were asked to complete the demographics questionnaire then read the first poem. Ninety seconds later participants were asked to complete a sheet of visual analogue scales for which 60 seconds was allocated. The participants were then asked to turn to the next page in their booklet which was blank. I told the teenagers that I would read them a scenario, which I wanted them to try and imagine happening. I asked the participants to “close your eyes and really picture yourself there”. I then read the first scenario and participants were asked “to picture yourself in the situation; really try and get a feel for what it would be like”. After 10 seconds the first manipulation was read, then after 5 seconds I asked the participants to complete a sheet of visual analogue scales.

For the second scenario/manipulation combination, the same procedure was followed. The teenagers were asked to read the second distracter poem in

their booklet and then to complete a page of visual analogue scales. They were given 60 seconds to complete the scales. I then told participants I would read them a scenario, which I wanted them to try to imagine happening, and I asked them to “close your eyes and really picture yourself there”. I read the second scenario, and asked participants “to picture yourself in the situation; really try and get a feel for what it would be like”. After 10 seconds the second manipulation was given, then 5 seconds later participants were asked to complete a sheet of visual analogue scales.

At the completion of the experiment, a brief discussion was held to determine how easy it had been for the girls to imagine themselves in the scenarios, and how the scenarios had made them feel. To complete the session the mood improvement activity was given to the teenagers to complete. Participants were also given a sheet containing my contact phone number and phone numbers of community agencies that they could contact (see Appendix Q).

Research Design and Hypotheses

For the pilot study there were four experimental groups. These four groups were to ensure that any order effects could be detected and involved counterbalancing of scenarios and presentation of the manipulations. Group 1 were presented with Scenario A and the Peer Feedback manipulation first, followed by Scenario B and the Peer Comparison manipulation; Group 2 were presented with Scenario B and the Peer Comparison manipulation first, then Scenario A and the Peer Feedback manipulation; Group 3 were presented with Scenario A and the Peer Comparison manipulation first, followed by Scenario B and the Peer Feedback manipulation; and Group 4 were presented with Scenario B

and the Peer Feedback manipulation combination first, and then Scenario A and Peer Comparison manipulation.

It was expected that when participants were exposed to the negatively emotion-laden manipulations increases would be seen between pre-manipulation and post-manipulation on the measures of body image disturbance and negative affect. Previous research suggested that when participants are requested to report emotional reactions, there is a 'blending' of emotion, where emotions are reported in groups rather than individually (Polivy, 1981). Therefore, rather than specifying what category of emotion would show changes, it was hypothesised that there would be a general increase in negative affect.

Results

Tests of normality indicated that half of the visual analogue scales were of a non-normal distribution; therefore, non-parametric statistics were employed for analysis. SPSS for Windows (SPSS Inc, 2001) was used for statistical analysis.

To ensure that there were no order effects, a Mann-Whitney *U* test was conducted comparing groups 1 and 3 and groups 2 and 4 on the pre- and post-visual analogue scales. No significant differences were found at the $p = .05$ level.

Because no order effects were found between the individuals who received the manipulations first or second, groups 1 and 3 were collapsed to form group 1-3 and groups 2 and 4 were collapsed to form group 2-4. This allowed for the assessment of differences between receiving Scenario A and Scenario B by comparing group 1-3 with group 2-4. Using a Mann-Whitney *U* test no significant differences were found between the scenario types at the $p = .05$ level, allowing pre- post- comparisons by collapsing the groups into one.

Comparisons of Pre-Manipulation and Post-Manipulation Scores

The average scores of the pre- and post- ratings for the Peer Feedback condition and the Peer Comparison condition are presented in Table 6.1. Line graphs for each of the variables are shown in Appendix R. Wilcoxon tests were conducted to assess whether presentation of the experimental manipulation significantly affected the teenagers' ratings of body dissatisfaction and negative affect. The results indicated significant statistical differences for all measures in both the Peer Feedback condition and Peer Comparison condition.

Comparison of the Peer Feedback Condition and Peer Comparison Condition

A Wilcoxon test was also conducted on the pre-post *difference* scores (post-score minus pre-score) to ascertain if there was a significant difference between the Peer Feedback condition and the Peer Comparison condition for the dependent variables. A significant difference was found between the two conditions for anxiety $z = -2.37, p = .018$. The mean of the ranks for the Peer Feedback condition was 17.38, and the mean of the ranks for the Peer Comparison condition was 11.75. For feelings of happiness and inferiority/'stinkness', the Peer Feedback condition had a marginally greater effect, Wilcoxon $z = -1.94, p = .052$, and Wilcoxon $z = -1.81, p = .071$ respectively.

Table 6.1
Means and Standard Deviations of the Dependent Variables Pre- and Post-Manipulations for the Peer Feedback and Peer Comparison Conditions

Dependent Variable	Peer Feedback		Peer Comparison	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Weight/Size Dissatisfaction				
Pre-Manipulation	45.12	32.56	43.76	28.85
Post-Manipulation	68.42	26.68	61.33	28.87
Appearance Dissatisfaction				
Pre-Manipulation	48.15	29.23	46.39	29.84
Post-Manipulation	64.12	29.81	56.64	30.80
Anger				
Pre-Manipulation	29.33	24.38	24.47	24.38
Post-Manipulation	59.33	24.88	45.24	23.77
Anxiety				
Pre-Manipulation	24.96	23.79	34.27	26.65
Post-Manipulation	57.58	28.23	46.21	25.46
Depression				
Pre-Manipulation	27.39	25.00	34.82	28.30
Post-Manipulation	51.52	27.09	51.12	23.92
Confidence				
Pre-Manipulation	39.66	24.36	41.09	24.78
Post-Manipulation	63.42	27.22	58.58	24.77
Happiness				
Pre-Manipulation	35.12	22.86	40.61	23.85
Post-Manipulation	64.73	22.40	59.27	23.66
Inferiority/‘Stinkness’				
Pre-Manipulation	27.21	23.93	34.24	25.58
Post-Manipulation	65.09	25.95	62.06	24.83

Note: all pre-post differences were significant, Wilcoxon $z < -3.00, p < .001$.

Summary

The significant changes that were observed before and after the presentation of the scenarios and manipulations indicate that the scenarios and manipulations were powerful enough to elicit changes in weight/size dissatisfaction and appearance dissatisfaction, as well as multiple aspects of negative affect. Thus, this pilot study demonstrated that the use of an imaginal mood induction technique was effective in eliciting changes in body image disturbance and mood levels.

An important aspect of the research design was to ensure that the scenarios and manipulations were realistic and typical for the participants. Discussion with the female teenagers after the experiment suggested that the scenarios and manipulations were appropriate and relevant to them as young females in New Zealand today.

Although no discernible pattern was found suggesting negative feedback or peer comparison differed in their influence on weight/size dissatisfaction or appearance dissatisfaction, state levels of anxiety were more strongly influenced in the Peer Feedback condition than the Peer Comparison condition. A possible reason for this is that the term anxiety is commonly associated with worries about what other people think of you, which closely aligns itself with social anxiety, and a hallmark of social anxiety is a fear of negative evaluation or criticism. In the Peer Feedback condition, the teenagers were asked to imagine getting very specific and direct criticism towards them about their appearance from a close friend.

Overall, this pilot study provided support for the use of imaginal mood induction techniques for bringing about changes in body image disturbance and

negative affect, and that the scenarios and manipulations developed for the experiment were realistic and typical for New Zealand teenagers. Therefore, the same methodology was employed for the final stage of this research programme.

CHAPTER SEVEN

Final Experimental Study

Aims of Study

As was demonstrated in the pilot study, the scenarios developed for the experimental phase of the research programme were powerful enough to elicit changes in levels of body image disturbance and negative affect. Therefore, the purpose of this final experimental study was to examine changes in body image and negative affect in an independent sample, and to examine aspects of the derived model from the questionnaire study. Specifically, an objective of the final experimental study was to look at whether endorsement of the thin-ideal and appraisal sensitivity were significant predictors of change in body image disturbance and negative affect. To achieve these objectives the same methodology as in the pilot study was used, with the addition of two questionnaires.

Method

Participant Recruitment

Female teenagers from an all-girls Hamilton high school were contacted by school staff to participate in the current study. The school was classified as being in a medium socio-economic catchment area. Potential participants were given an information sheet and consent form from a staff representative, which they were asked to read and sign before they participated in the study. The information and consent form explained that the research was both voluntary and confidential and that they could withdraw at any stage of the research. All

participants went into a draw to win music, book, or movie vouchers from a local retailer. The competition form was incorporated into the consent form (see Appendix S). If the potential participant was under 16, they were given a caregiver consent form (see Appendix J) to be completed. They were also asked to complete a consent form themselves. A sign-up sheet (see Appendix K) with available times that the experiment was to be conducted was made available to potential participants; they were asked to sign up at a time that was most convenient for them. A maximum of 10 students were allowed to sign up for participation during any one experiment time slot.

Participant Characteristics

Thirty-three students volunteered to participate in the study. The students were aged between 15 and 17, with the mean age of the participants being 16 years. The majority of the participants identified as Pākehā ($n = 29$, 86.9%), and 1 participant each identified as Māori (3%), Pacific (3%), and Asian (3%). One participant did not answer the ethnicity question.

The majority of participants were from intact families – living with both biological parents with or without siblings ($n = 20$, 61%). Twenty-one percent of the sample were living with one parent with or without siblings ($n = 7$), while 6% ($n = 2$) of the sample were from a blended family – living with one biological parent and one non-biological parent with or without siblings. Twelve percent ($n = 4$) of the students indicated that they lived in a school hostel.

Materials

Social Situation Vignettes. The vignettes used in the pilot study were used again in the current experimental study. Each participant received both scenarios and one of each of the manipulations, depending on which group they were in. The social situation vignettes and manipulations can be seen in Appendix L.

Appraisal Sensitivity. To assess appraisal sensitivity, the participants were asked to complete the Brief-Fear of Negative Evaluation Scale (Leary, 1983), where higher scores represented greater sensitivity to appraisal. The Brief-Fear of Negative Evaluation Scale is discussed fully in Chapter 4 and can be seen in Appendix E.

Internalisation of Thin-Ideal. To assess the extent to which the participants accepted the sociocultural norm of the importance of appearance, the Ideal-Body Stereotype Scale-Revised (Stice & Agras, 1998; Stice, Ziemba, Margolis, & Flick, 1996) was used (see Appendix T). This questionnaire asked participants to rate their level of agreement with statements about attractive women. A specimen item is:

“Slender women are more attractive”

Each item is scored by participants on a 5-point scale, ranging from *strongly disagree* (1) to *strongly agree* (5), with higher scores representing more internalisation. Acceptable internal consistency, test-retest reliability, convergent, discriminant, and concurrent reliability in a high school sample are reported (Stice & Agras, 1998; Stice et al., 1996).

Body Image Disturbance. The visual analogue scales used in the pilot study were also used in the current study to assess weight/size dissatisfaction and

appearance dissatisfaction. The visual analogue scales consisted of 100 mm lines and had endpoints of “no dissatisfaction” and “extreme dissatisfaction”.

Negative Affect. The visual analogue scales used in the pilot study were also used to assess depression, anxiety, anger, confidence, happiness, and inferiority/‘stinkness’. These visual analogue scales were also 100 mm in length, and had end points of “none” and “bad as could be”.

All visual analogue scales were scored so that higher values equalled greater distress. To assess the reliability of the visual analogue scales in the current sample, an independent rater measured a random selection of 20% of the total sample of questionnaires. The interrater reliability was excellent with 92% agreement between the initial scorer and independent rater on the items assessed. Agreement was within 1 mm for the remaining 8% of the scales. To minimise the possibility of biases, the presentation of both types of visual analogue scales was randomised and counterbalanced (see Appendix M).

Scenario Conclusion. A page showing the scenario and manipulation at the top was given to participants for them to write how they would like the scenario to end (see Appendix U).

Demographics. Participants were asked their age, cultural identity, and living arrangements. This questionnaire can be seen in Appendix N.

Distracters. Two children’s poems by Kenn Nesbitt (2002) were used in the experiment to ensure that there were no carry-over effects after the participants completed the questionnaires, and from one manipulation to the other (see Appendix O).

Mood Improvement Activity. To ensure that at the conclusion of the study participants were not feeling distressed by the study, a mood improvement activity

(see Appendix P) was carried out. Participants were asked to write down three things they like about themselves; two things they did really well; and a success or achievement they had accomplished.

Procedure

Prior to this final study beginning, ethical approval was granted from the Psychology Human Research and Ethics Committee, University of Waikato. The protocol of the study was also discussed with a Māori researcher within the Psychology Department of the University of Waikato.

The purpose of the research was explained to the participants as looking at different social situations that make teenagers react in different ways. It was explained that they would be asked to complete some questionnaires, and that I would read them some scenarios and ask them to rate on scales how those scenarios made them feel. After any questions were answered, participants were asked to refrain from overtly reacting to the stimulus material or from communicating with other participants.

Participants were given booklets containing all the experiment materials. These booklets were ordered in the way the experiment would be conducted with the demographics questionnaire first, followed by the internalisation of thin-ideal questionnaire, and then the appraisal sensitivity questionnaire. The first poem followed, then a sheet of visual analogue scales, a blank page, another sheet of visual analogue scales, and then the scenario conclusion page. This sequence was then repeated from the distracter poem for the second scenario/manipulation combination. Participants were asked not to turn the pages in their booklet until instructed to do so.

Firstly, the participants completed the demographics, internalisation of thin-ideal, and appraisal sensitivity questionnaires; 5 minutes was allowed for this task. The participants were then instructed to read the first poem. Following this, I asked them to complete a sheet of visual analogue scales, and they were given 60 seconds to do this. They were then asked to turn to a blank page. I then told the teenagers that I would read them a scenario, which I wanted them to try and imagine happening. I asked the participants to “close your eyes and really picture yourself there”. I read the first scenario and participants were asked “to picture yourself in the situation; really try and get a feel for what it would be like”. After 10 seconds the first manipulation was read, then after 5 seconds I asked the participants to complete a sheet of visual analogue scales. Participants were then given two minutes to write how they would like the scenario to finish.

As with the pilot study, the second scenario/manipulation combination followed the same procedure as the first. The teenagers were asked to read the second distracter poem in their booklet, I then asked participants to complete a page of visual analogue scales, and turn to the next page in their booklet which was blank. I then told them that I would read a scenario, which I wanted them to try and imagine happening. I asked them to “close your eyes and really picture yourself there”. I read out the scenario, and participants were again asked “to picture yourself in the situation; really try and get a feel for what it would be like”. After 10 seconds the second manipulation was given, then 5 seconds later participants were asked to complete a sheet of visual analogue scales and spend 2 minutes writing how they would like the scenario to finish.

A brief discussion was held between the participants and myself as to how they found imagining the scenarios, how realistic they were for them, and also

how the scenarios made them feel. This discussion was to gauge how well the teenagers had participated in the imagination task.

The teenagers were then given the mood improvement activity to complete. The teenagers also received a list of community agencies with phone numbers and my contact details, so that they could access assistance if they wanted to.

Research Design and Hypotheses

As with the pilot study, there were four experimental groups. This was to ensure that any order effects could be detected and involved counterbalancing of scenarios and presentation of the manipulations. Group 1 were presented with Scenario A and the Peer Feedback manipulation first, followed by Scenario B and the Peer Comparison manipulation; Group 2 were presented with Scenario B and the Peer Comparison manipulation first, then Scenario A and the Peer Feedback manipulation; Group 3 were presented with Scenario A and the Peer Comparison manipulation first, followed by Scenario B and the Peer Feedback manipulation; and Group 4 were presented with Scenario B and the Peer Feedback manipulation combination first, and then Scenario A and Peer Comparison manipulation.

It was expected that when participants were exposed to the negatively emotion-laden manipulations increases would be evident between pre-manipulation and post-manipulation on the measures of body image disturbance and negative affect. As with the pilot study, rather than specifying what category of emotion would show change, it was hypothesised that there would be a general increase in negative affect.

Based on the model of interrelationships derived in the questionnaire study, where internalisation of the thin-ideal had an indirect effect on body image disturbance through peer feedback and peer comparison, internalisation of the thin-ideal was hypothesised to moderate the levels of body image disturbance and negative affect for both manipulations. Appraisal sensitivity was also hypothesised to moderate levels of body image disturbance and negative affect, although more so for the Peer Feedback condition because of its direct relationship on negative appearance-related feedback in the derived model.

Power Analysis

A power analysis was conducted based on the results of the pilot study. For the repeated measures aspect of this study, Cohen's (1988) power tables revealed that a sample of 33 people was sufficient to detect a medium effect ($d = .50$) with a power of .71 and an alpha of .05 (see Appendix V for calculation).

Results

Tests of normality indicated that the majority of the visual analogue scales were of a non-normal distribution; therefore, non-parametric statistics were employed for the first stage of analysis. SPSS for Windows (SPSS Inc, 2001) was used for statistical analysis. The scores on the Brief-Fear of Negative Evaluation scale were normally distributed (Shapiro-Wilks Statistic = .97, $p = .39$). Scores on the Ideal-Body Stereotypes Scale-Revised were not normally distributed (Shapiro-Wilks Statistic = .93, $p = .04$).

To ensure that there was no difference in the order that the experimental manipulations were received; a Mann-Whitney U test was conducted comparing

groups 1 and 3 and groups 2 and 4 on the questionnaires and the pre- and post-visual analogue scales. No significant differences were found at the $p = .05$ level.

Groups 1 and 3 were then collapsed to form group 1-3 and groups 2 and 4 were collapsed to form group 2-4 because there were no statistical differences between the individuals who received the manipulations first or second. This allowed for the assessment of differences between receiving Scenario A and Scenario B by comparing group 1-3 with group 2-4. Using a Mann-Whitney U test no significant differences were found between these groups at the $p = .05$ level, allowing pre-post comparisons by collapsing the groups into one.

Correlations were reasonably high between the dependent variables post-manipulation. For the Peer Feedback condition the correlation between weight/size dissatisfaction and appearance dissatisfaction was $r_s(33) = .73, p < .001$ and for the Peer Comparison condition the correlation was $r_s(33) = .62, p < .001$. Correlations were of a medium to high strength between the negative affect variables anger, anxiety, and depression. For the Peer Feedback condition the correlations ranged from $r_s(33) = .43, p = .01$ between anxiety and depression to $r_s(33) = .65, p < .001$ between depression and anger. For the Peer Comparison condition the lowest correlation was between depression and anger $r_s(33) = .49, p < .001$, and the highest was between depression and anxiety $r_s(33) = .84, p < .001$.

Comparisons of Pre-Manipulation and Post-Manipulation Scores

The average scores of the pre- and post- ratings for the two conditions (Peer Feedback, Peer Comparison) are presented in Table 7.1. Scores clearly increased towards distress after the presentation of the manipulation, as shown in Figures 7.1 through 7.8. Wilcoxon tests were conducted to assess whether the presentation

of the experimental manipulation affected the teenagers' ratings of body image disturbance and negative affect. Significant statistical differences were found for all measures in both the Peer Feedback and the Peer Comparison conditions.

Table 7.1

Means and Standard Deviations of the Dependent Variables Pre- and Post-Manipulations for the Peer Feedback and Peer Comparison Conditions

Dependent Variable	Peer Feedback		Peer Comparison	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Weight/Size Dissatisfaction				
Pre-Manipulation	48.18	30.41	35.76	28.44
Post-Manipulation	81.85	13.74	61.24	28.88
Appearance Dissatisfaction				
Pre-Manipulation	48.61	26.93	41.97	27.41
Post-Manipulation	72.82	24.03	65.00	20.38
Anger				
Pre-Manipulation	27.88	28.32	25.64	26.53
Post-Manipulation	68.18	25.56	47.06	23.36
Anxiety				
Pre-Manipulation	36.18	26.31	30.82	22.25
Post-Manipulation	62.42	27.69	54.15	25.96
Depression				
Pre-Manipulation	38.12	25.77	28.21	20.77
Post-Manipulation	63.91	27.39	51.36	24.29
Confidence				
Pre-Manipulation	39.39	23.10	36.21	23.01
Post-Manipulation	71.85	25.23	60.33	24.01
Happiness				
Pre-Manipulation	35.36	21.80	37.70	21.51
Post-Manipulation	76.39	19.54	61.73	20.06
Inferiority/'Stinkness'				
Pre-Manipulation	33.73	24.79	31.67	23.21
Post-Manipulation	79.55	17.86	61.77	21.35

Note: All pre-post differences were significant, Wilcoxon $z < -3.00$, $p < .001$.

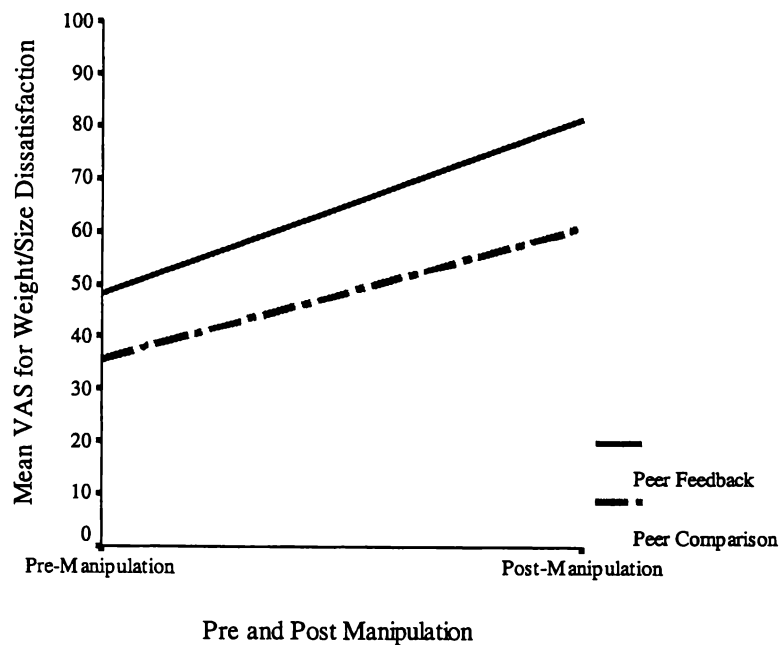


Figure 7.1. Mean pre- and post- manipulation scores for Weight/Size Dissatisfaction in the Peer Feedback and Peer Comparison conditions.

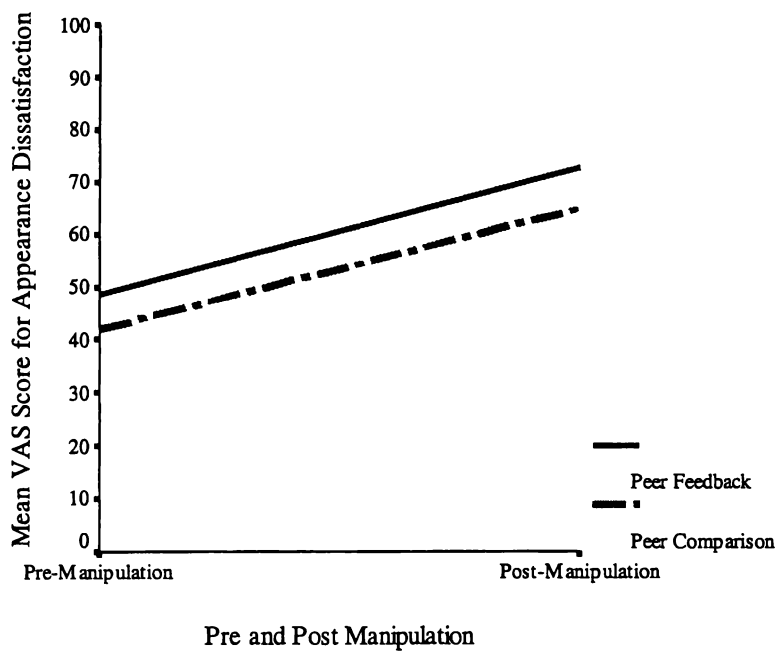


Figure 7.2. Mean pre- and post- manipulation scores for Appearance Dissatisfaction in the Peer Feedback and Peer Comparison conditions.

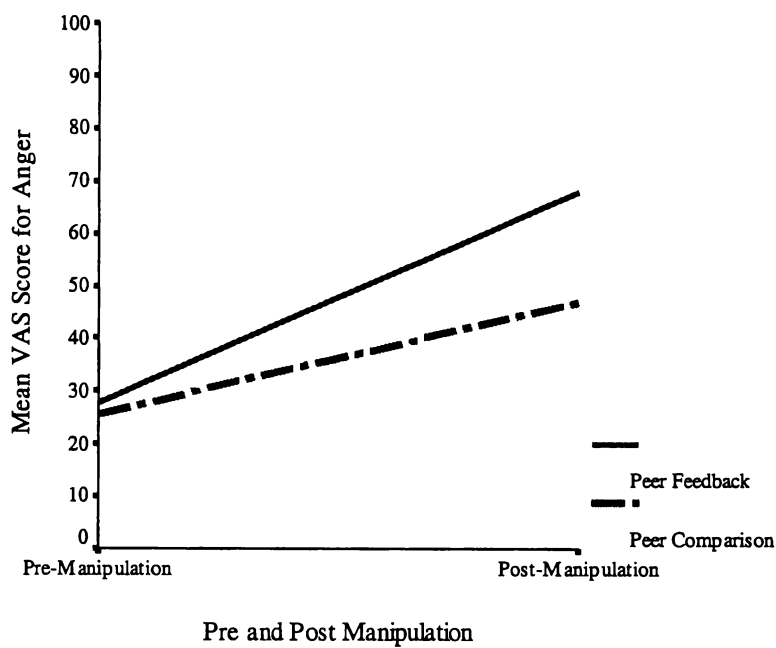


Figure 7.3. Mean pre- and post- manipulation scores for Anger in the Peer Feedback and Peer Comparison conditions.

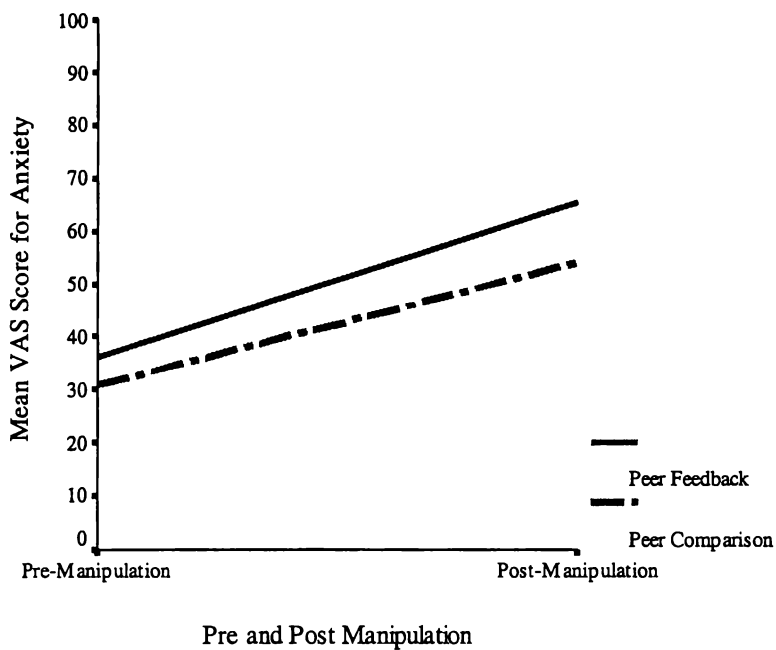


Figure 7.4. Mean pre- and post- manipulation scores for Anxiety in the Peer Feedback and Peer Comparison conditions.

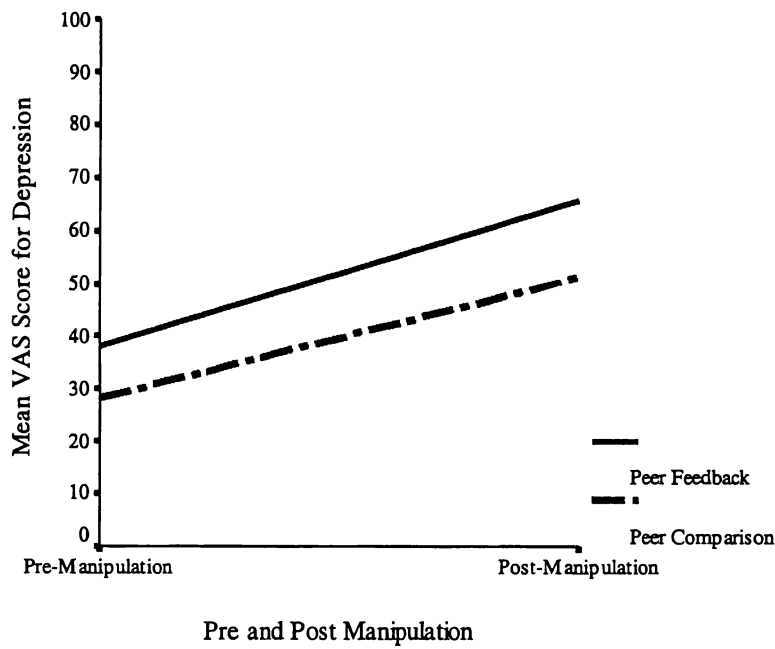


Figure 7.5 .Mean pre- and post- manipulation scores for Depression in the Peer Feedback and Peer Comparison conditions.

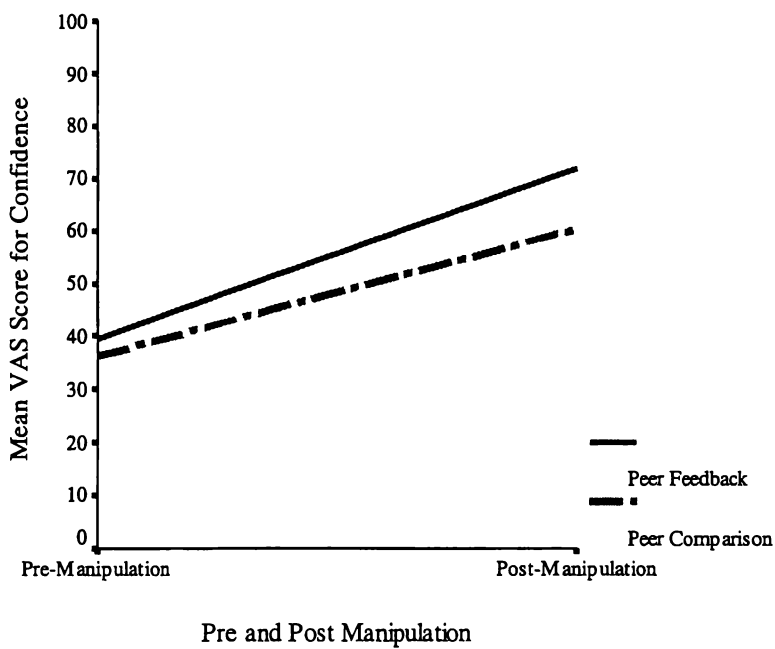


Figure 7.6. Mean pre- and post- manipulation scores for Confidence in the Peer Feedback and Peer Comparison conditions.

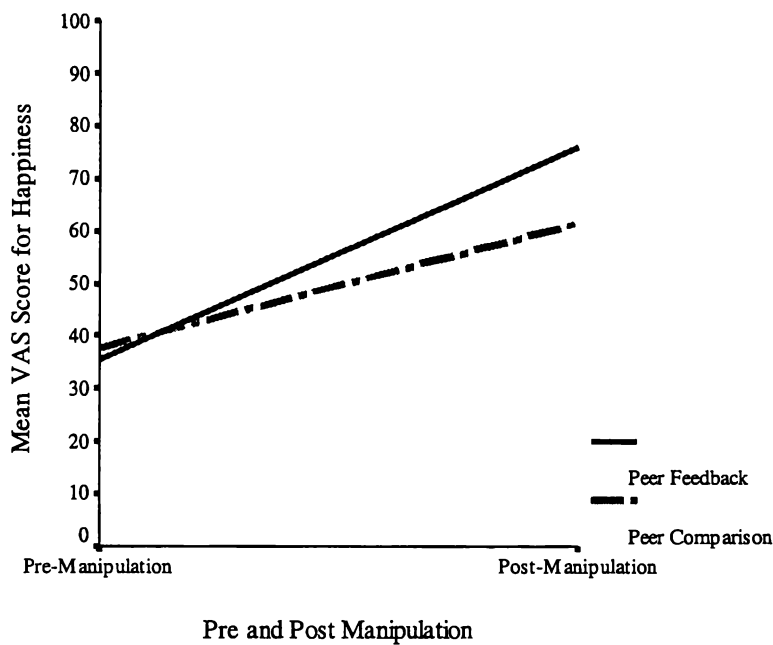


Figure 7.7. Mean pre- and post- manipulation scores for Happiness in the Peer Feedback and Peer Comparison conditions.

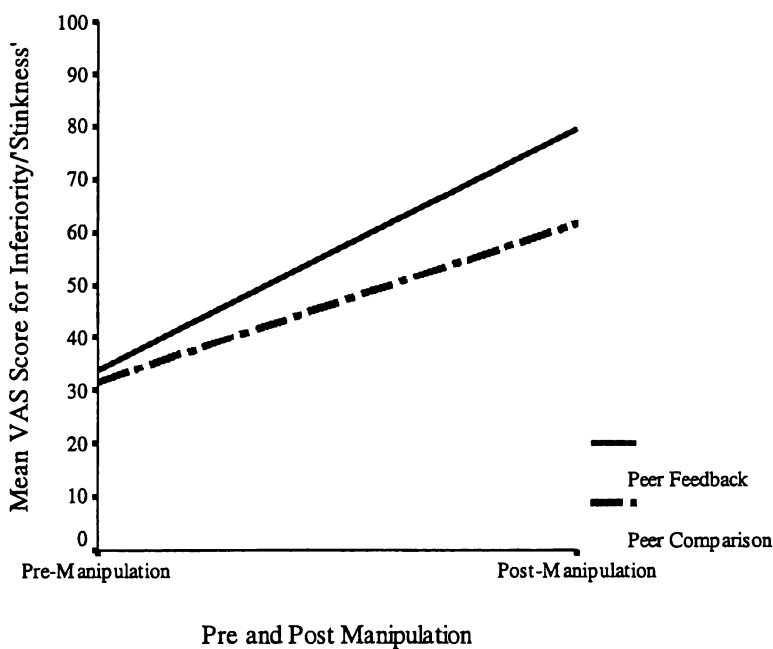


Figure 7.8. Mean pre- and post- manipulation scores for Inferiority/'Stinkness' in the Peer Feedback and Peer Comparison conditions.

Comparison of the Peer Feedback Condition and Peer Comparison Condition

To assess for differences between the Peer Feedback condition and the Peer Comparison condition, a Wilcoxon test was conducted on the pre-post *difference* scores. Significant differences were found for anger ($z = -2.47, p = .01$), happiness ($z = -2.98, p < .001$), and inferiority/‘stinkiness’ ($z = -3.09, p = .01$). For all three variables, the Peer Feedback condition produced significantly more change than the Peer Comparison condition.

Internalisation of Thin-Ideal

The sample was divided into two groups based on the total scores of the internalisation of the thin-ideal measure by way of a median split. Four univariate ANCOVA’s were conducted with post-manipulation weight/size dissatisfaction and appearance dissatisfaction acting as dependent variables to determine if internalisation had a significant effect on body image disturbance. Pre-manipulation scores were the covariates (see Figures 7.9 and 7.10).

In the Peer Feedback condition, preliminary analyses evaluating the homogeneity-of-slopes assumption indicated that for both weight/size dissatisfaction and appearance dissatisfaction the relationship between the pre- and post- scores did not differ significantly as a function of the high and low internalisation groups. For weight/size dissatisfaction, $F(1, 29) = 1.83, p = .19, \eta^2 = .06$, and for appearance dissatisfaction, $F(1, 29) = 1.62, p = .21, \eta^2 = .05$. The ANCOVA’s were non-significant for both aspects of body image disturbance in the Peer Feedback condition. For weight/size dissatisfaction $F(1, 30) = .350, p = .56, \eta^2 = .01$, and for appearance dissatisfaction $F(1, 30) = .186, p = .67, \eta^2 = .01$. Therefore holding the pre-manipulation scores constant, there were no significant

differences across the two internalisation groups on body image disturbance in the Peer Feedback condition.

Similar results were found for the Peer Comparison condition, analyses evaluating the homogeneity-of-slopes assumption indicated that for both weight/size dissatisfaction and appearance dissatisfaction the relationship between the pre- and post- scores did not differ significantly as a function of the high and low internalisation groups. For weight/size dissatisfaction, $F(1, 29) = 1.62, p = .21, \eta = .05$, and for appearance dissatisfaction, $F(1, 29) = .276, p = .60, \eta = .01$. The ANCOVA's were also non-significant for both aspects of body image disturbance. For weight/size dissatisfaction $F(1, 30) = .016, p = .90, \eta = .001$, and for appearance dissatisfaction $F(1, 30) = .096, p = .76, \eta = .003$. Therefore as with the Peer Feedback condition, holding the pre-manipulation scores constant, there were no significant differences between the two internalisation groups on body image disturbance in the Peer Comparison condition.

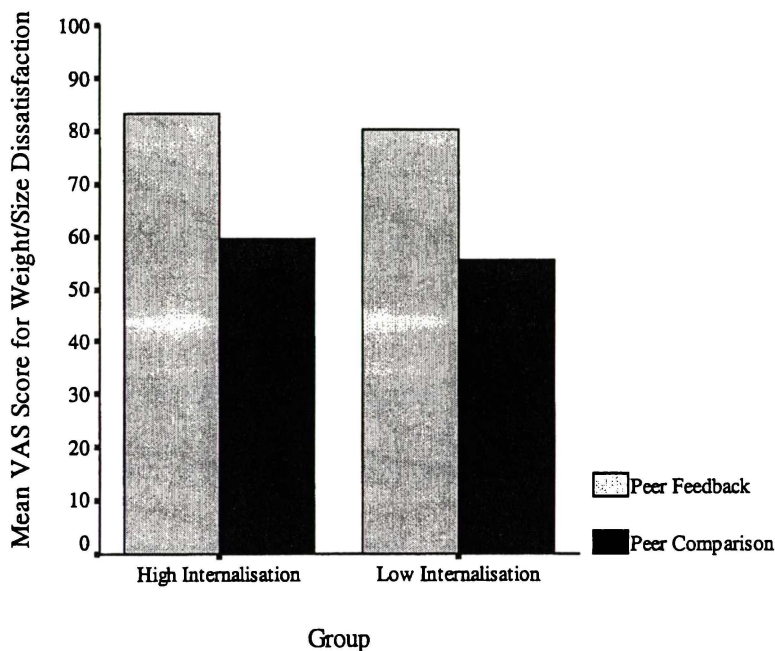


Figure 7.9. Adjusted mean Weight/Size Dissatisfaction (controlling for pre-Weight/Size Dissatisfaction) after presentation of scenario and manipulation for participants high and low in internalisation of thin-ideal.

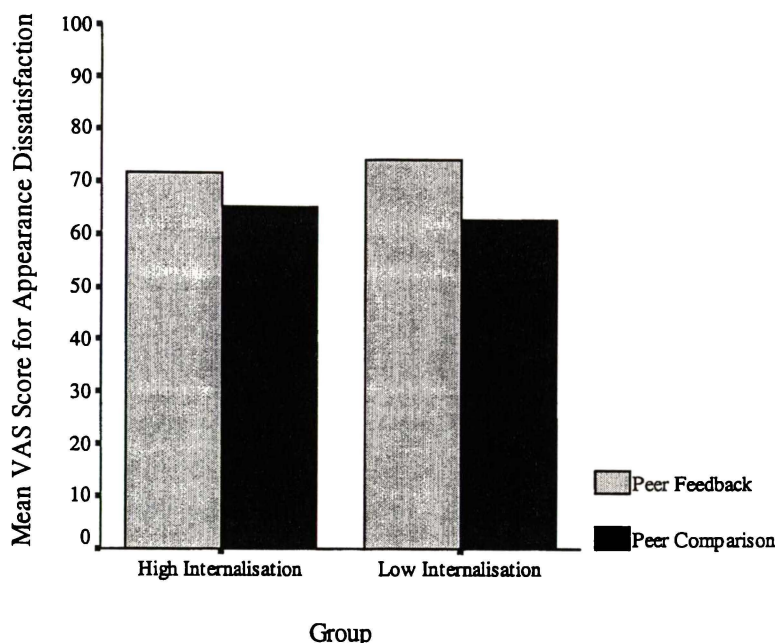


Figure 7.10. Adjusted mean Appearance Dissatisfaction (controlling for pre-Appearance Dissatisfaction) after presentation of scenario and manipulation for participants high and low in internalisation of thin-ideal.

Appraisal Sensitivity

Similar analysis was undertaken to determine if appraisal sensitivity had a significant effect on body image disturbance. The sample was divided into high appraisal sensitivity and low appraisal sensitivity groups by way of a median split. Univariate analyses were conducted for the two measures of body image disturbance in both conditions (see Figures 7.11 and 7.12).

For the Peer Feedback, the homogeneity-of-slopes assumption was met for both weight/size dissatisfaction $F(1, 29) = .002, p = .97, \eta = .001$, and appearance dissatisfaction $F(1, 29) = .045, p = .83, \eta = .002$. The ANCOVA's however were not significant, for weight/size dissatisfaction $F(1, 30) = 1.12, p = .23, \eta = .04$, and for appearance dissatisfaction, $F(1, 30) = 1.03, p = .32, \eta = .03$. Therefore, for the Peer Feedback condition, being high or low in appraisal sensitivity did not

have an effect on post-manipulation scores of body image disturbance, while controlling for pre-manipulation scores.

For the Peer Comparison condition, the homogeneity-of-slopes assumption was not met for weight/size dissatisfaction $F(1, 29) = 4.54, p = .04, \eta = .14$, where a significant result was found, meaning the p-value of the ANCOVA needs to be interpreted with caution. For appearance dissatisfaction the homogeneity-of-slopes assumption was met $F(1, 29) = .004, p = .95, \eta = .001$. ANCOVA results for weight/size dissatisfaction were $F(1, 30) = 3.27, p = .08, \eta = .10$, and for appearance the results were also non-significant $F(1, 30) = 1.56, p = .22, \eta = .05$. Thus, holding the pre-manipulation scores constant, there were no significant differences between the two appraisal sensitivity groups on body image disturbance in the Peer Comparison condition.

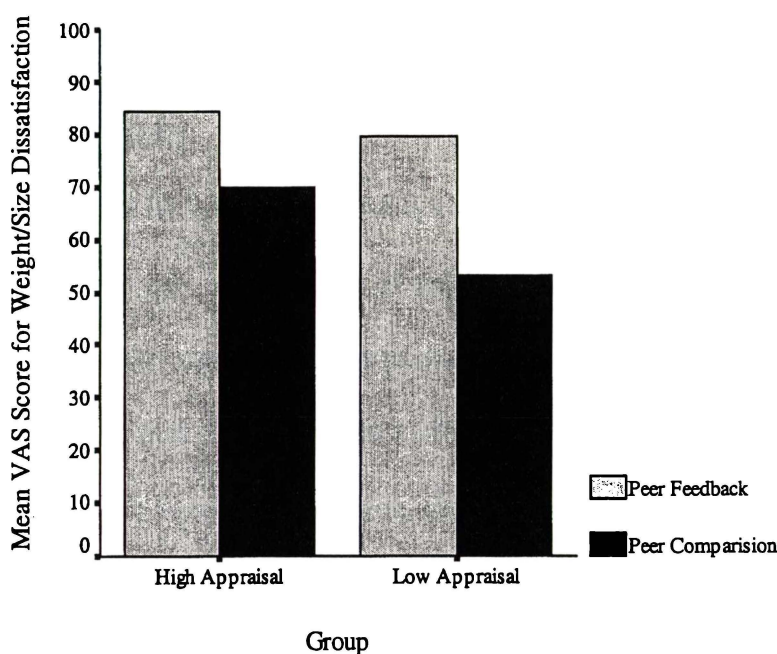


Figure 7.11. Adjusted mean Weight/Size Dissatisfaction (controlling for pre-Weight/Size Dissatisfaction) after presentation of scenario and manipulation for participants high and low in appraisal sensitivity.

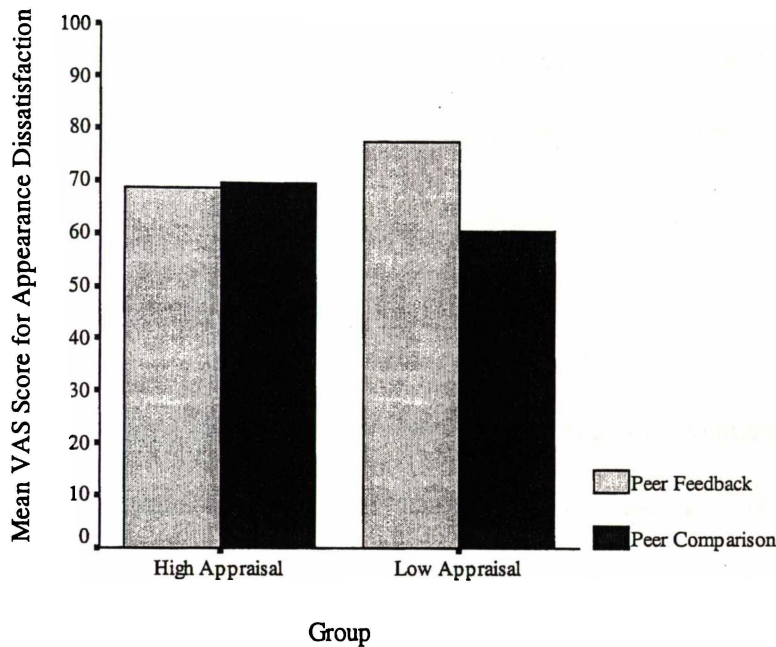


Figure 7.12. Adjusted mean Appearance Dissatisfaction (controlling for pre- Appearance Dissatisfaction) after presentation of scenario and manipulation for participants high and low in appraisal sensitivity.

Scenario Conclusion

Participants were asked to spend a few minutes writing how they would like the scenario to end. The purpose of this was to identify whether the strategies used to complete the scenario were something they themselves would do, or if it was something the friend was required to do.

For the Peer Feedback condition, there were two main responses. The first was the individual finding something else to wear, and the other was the friend (who said the negative comment) saying they were wrong or apologising for what they had said. Other responses included saying something negative back and ignoring what had been said.

For the Peer Comparison condition, the vast majority of participants said that they would find something else to wear that looked better on them, and then all the friends would look good. The other main response was the friend making a positive comment.

Summary

The purpose of the final experimental study was to investigate changes in body image disturbance and negative affect in adolescent females after an imaginal mood induction procedure. The scenarios created for the mood induction were developed based on the results of the survey study, where peer feedback and peer comparison were identified as being pivotal in the development of body image disturbance. A second aim of this study was to identify whether subscription to the thin-ideal moderated the relationship between peer feedback and body image disturbance, and peer comparison and body image disturbance, and also whether appraisal sensitivity moderated the relationship between peer feedback and body image disturbance, and peer comparison and body image disturbance.

As with the pilot study, the changes observed from pre-manipulation to post-manipulation demonstrated that the scenarios and manipulations were effective in eliciting changes in body image disturbance and negative affect. The results of the experimental study also highlight the importance of considering body image as a “fluid and dynamic person-situation interaction” (Cash, 2002, p. 164), rather than a stable and dispositional characteristic.

In accordance with the model derived in the questionnaire study, the results suggest that both peer feedback and peer comparison have a direct effect

on body image disturbance, as indicated by an increase in weight/size and appearance dissatisfaction after exposure to the manipulations. No specific hypotheses were made about whether one condition would be more influential than the other on state levels of body image disturbance. It was interesting that neither condition emerged as being more powerful than the other in producing changes in body image disturbance. However, for measures of negative affect, anger was identified as being more significantly influenced by negative peer feedback than by peer comparison. Following Lazarus's (1991) conceptualisation of anger as arising from a demeaning offence by another person against one's ego identity (p. 828), it follows that the Peer Feedback condition produced a more significant change, as in the peer feedback situation a degrading or negative comment was made about the person.

The Peer Feedback condition also produced more significant changes in the measure of happiness and inferiority/'stinkness'. As these two scales are assessing general levels of negative affect, it is possible that negative feedback has a more significant effect on how one feels in general rather than specific emotional categories such as depression or anxiety. It is also possible that the terms 'happiness' and 'stinkness' as well as 'anger' are developmentally relevant for the teenagers in the experiment.

Based on the results of the survey study where internalisation led to peer feedback and peer comparison, it was expected that teenagers who scored highly on the dispositional measure of internalisation would be more affected by the peer feedback and peer comparison manipulations. The results however did not support this, there were no differences between those teenagers who scored highly on internalisation of the thin-ideal and those who scored below the median. A

possible reason for no effect being found may be the measure chosen to assess internalisation of thin-ideal. The measure may not have been appropriate for the sample, although it has been validated in a United States teenage sample (Stice & Agras, 1998). Another possible reason for no effect is that the measure focuses more on shape, by using the terms such as 'slender', 'thin', and 'slim', although I would still have expected some change, if only for weight/size dissatisfaction. Sample size may also have been a problem, although Green, Salkind, and Akey (2000) state that if each group has at least 15 cases this may be large enough to yield accurate p-values, and in the experimental study there were 16 or 17 people in each group. However, if the sample had been larger, effects may have become more evident.

In the survey study appraisal sensitivity had a direct effect on body dissatisfaction mediated through peer feedback. Therefore, I expected teenagers who were high in appraisal sensitivity to be more affected by the peer feedback manipulation. Once more the results did not support this, and no differences were found between the teenagers who scored high on the measure of appraisal sensitivity and those who scored low. Similar reasons as for internalisation may also account for a lack of difference in appraisal sensitivity. The measure may not have been sensitive enough, and there may not have been a wide enough range in scores to highlight a difference. Furthermore, if the sample size had been larger, medium or small effects may have become apparent.

Overall, the findings of the experimental studies demonstrated that imaginal exposure to social situations that reflect negative feedback and peer comparison has the ability to affect weight/size dissatisfaction and appearance dissatisfaction, as well as negative affect in an adolescent female sample.

CHAPTER EIGHT

General Discussion

The intention of this thesis was to investigate the role of social evaluation in body image disturbance and unhealthy dieting behaviour in New Zealand adolescent females and to identify any elements of social evaluation that are pivotal in body image disturbance and unhealthy dieting. The aims of this thesis were carried out through focus groups, a survey study, and an experimental paradigm.

Main Research Outcomes

The majority of the research and literature on body image and dieting has come from a European-American perspective. Therefore, it was important to obtain from New Zealand teenagers their perspective on issues of body image, dieting, and social evaluation, to ensure that the area under investigation was relevant to a New Zealand population. The focus groups held with female adolescents provided confirmation that issues of social evaluation are relevant to them and that this was an appropriate area of study. The focus group discussions also provided insight into specific areas of social evaluation that were relevant to body image and dieting, specifically the need for social approval, influence of societal pressures, effects of negative feedback, and use of peer comparison.

Based on the focus groups, body image and dieting literature, and the sociocultural and interpersonal theories of disordered eating, I developed a model of interrelationships between aspects of social evaluation, body image, and unhealthy dieting (see p. 70). The model hypothesised that there were indirect and

direct relationships between the variables appraisal sensitivity, need for approval, internalisation of the thin-ideal, appearance evaluation, peer comparison, body image disturbance, unhealthy dieting, and low mood. The model proposed that need for approval would have a direct effect on the internalisation of the thin-ideal, while appraisal sensitivity would have a direct effect on both internalisation of the thin-ideal and appearance evaluation beliefs. Internalisation of the thin-ideal was proposed to directly influence appearance evaluation beliefs and peer comparison. Appearance evaluation was predicted to have a direct influence on peer comparison and body image disturbance, and peer comparison was hypothesised to directly affect body image disturbance. This latter variable was hypothesised to have direct effect on unhealthy dieting and low mood, while unhealthy dieting was proposed to influence low mood as well.

The survey study established that the hypothesised model with a few adjustments was an accurate portrayal of the sample of high school students (see p. 71). This derived model suggested that a need for social approval led to internalising the thin-ideal, and that the internalisation of such a standard promotes appearance evaluation concerns, and comparison of self to others. The act of peer comparison also developed from appearance evaluation beliefs, which in turn developed from a general sensitivity to appraisal. Unfavourable peer comparison and appearance evaluation beliefs both led to body image disturbance, which in turn led to unhealthy dieting and low mood.

Two changes were made to arrive at this derived model, which were the removal of the path between appraisal sensitivity and internalisation of the thin-ideal and removal of the path between unhealthy dieting and low mood. It is important to consider both the theory and statistical reasoning behind changes to a

model. As the hypothesised model was based on theory, changes should not be solely based on the statistics.

Examining the path between appraisal sensitivity and internalisation of the thin-ideal, internalisation of the thin-ideal refers to meeting a standard set by society, whereas there is no such criterion for appraisal sensitivity, which involves attitudes and judgments. Therefore, although it was hypothesised that worrying about what other people think would lead you to internalise a norm instigated by society, the idea that internalisation of the thin-ideal is *only* directly affected by need for approval also makes theoretical sense, as need for approval also implies that there is a standard a person has to reach.

The removal of the path between unhealthy dieting and negative affect was the second suggested change to the model. Theoretically, we can see that unhealthy dieting acts as compensatory behaviour for body image disturbance, and as appearance and body image are central evaluative dimensions for females, we can see that dieting could act as a compensatory behaviour for low mood as well.

The derived model accounted for 28% of the variance for negative affect; 79% of the variance in unhealthy dieting; 51% of the variance in body image disturbance; 80% of the variance for peer comparison; 67% of the variance for appearance evaluation beliefs; and 27% of the variance in thin-ideal internalisation. This suggests that the model is an accurate representation of many of the variables.

Looking more closely at variables that were not accounted for satisfactorily, such as internalisation of thin-ideal, I would hypothesise that if pressures from family and peers to look a particular way were included in the

model then more variance for internalisation may be accounted for. In addition, the inclusion of awareness of societal ideals may also account for some of the variance in thin-ideal internalisation; if a person is not aware that standards exist, then they are unlikely to be affected by them. Support for these variables as influential on thin-ideal internalisation comes from research where pressures and awareness were significant predictors of internalisation of the thin-ideal (Cusumano & Thompson, 1997; Heinberg, Thompson, & Stormer, 1995; Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Stormer & Thompson, 1996; Thompson & Stice, 2001; Thompson & van den Berg, 2002).

A similar argument could be made for body image disturbance, where 51% of the variance was accounted for, suggesting that there are other variables that influence a person's body image. Possible variables that could impact on body image include pressures to be thin from family and awareness of certain ideals. Maturational status and body mass index have also received research support for their role in body image disturbance (Stormer & Thompson, 1996).

Only 28% of the variance was accounted for in negative affect. One would not expect negative affect to be fully accounted for by the current model, primarily because the focus was appearance and body image, and it is widely recognised that low mood in adolescents is influenced by other variables such as satisfaction with schooling or occupation and stressful life events (Fitzgerald, 2002).

The derived model of interrelationships makes clear that all identified aspects of social evaluation are important in the development of body image disturbance and unhealthy dieting. More specifically, it provides us with information about which variables have a pivotal role in the development of such

disturbances, and that warrant further investigation. Appearance evaluation and peer comparison were critical in the model, and as with body image disturbance, were variables that required closer examination.

Analysis of the other variables in the model provided further justification for these two variables being identified as keystone behaviours that could be targeted in an intervention. Appraisal sensitivity and need for approval are typical adolescent behaviours. Trying to intervene at this stage would prove both difficult and most likely ineffectual, as change would probably be required at both the peer and individual level. The next stage of the model, internalisation of the thin-ideal, is a society wide issue, and trying to convince teenagers that they should not succumb to the expectations of society would be very difficult. This is even more so considering the thin-ideal norm is imposed on people in a practical way, not just through the media and other people's opinions, as evidenced by the availability of certain sizes and styles of clothes.

Although appearance evaluation beliefs and peer comparison do not directly lead to unhealthy dieting, they have direct effects on body image disturbance and this leads directly to unhealthy dieting. Therefore, if one can reduce the degree of worrying about what other people think of one's appearance and of excessive comparison with others, it is likely that body image disturbance will reduce, and hence unhealthy dieting may reduce as well.

The use of an experimental paradigm allowed for closer investigation of the variables, and provided more evidence for causal pathways than the survey study was able to do. Experimental studies also allow for manipulation of affective states, which questionnaire studies can not do. An imaginal procedure was used in the experimental phase of the research to investigate the differential

effects of negative appearance-related feedback and peer appearance-related comparison on state measures of weight/size dissatisfaction, appearance dissatisfaction, anger, anxiety, depression, confidence, happiness, and inferiority/‘stinkness’.

Results of this study provided support for the hypothesis that peer comparison and negative feedback would have direct effects on body image disturbance, with both weight/size and appearance dissatisfaction increasing after the presentation of the appearance feedback and peer comparison manipulations. All measures of negative affect also increased after exposure to the imagined scenarios. Neither peer feedback or peer comparison were identified as a more powerful manipulation for body image disturbance.

Interestingly, in the pilot study, a significant difference was found for anxiety, with peer feedback having more of an influence than peer comparison. This finding could possibly be explained by the common use of the term anxiety in relation to social interactions, where in the Peer Feedback condition participants were asked to imagine receiving personal criticism from a close friend. However, for the final study, no difference was found for anxiety; rather, it was anger, happiness, and inferiority/‘stinkness’ that showed a greater change in the Peer Feedback condition. In the previous chapter, I postulated that ‘happiness’ and ‘stinkness’ may reflect general negative affect for the teenagers and thus an active stimulus such as criticism about appearance was more powerful than a passive act such as comparison. It follows that the Peer Feedback condition produced a more significant change in anger than the Peer Comparison condition, because anger is a response to a demeaning offence against self, which is what occurred in the Peer Feedback condition.

No significant differences in body image disturbance were found between participants who had high or low ratings of thin-ideal internalisation. This is a surprising finding, considering that reflected appraisal and social comparison theories proposed that if the dimension is important to the person, the feedback and comparison process will have a more powerful influence. Having a high score on the internalisation score represents high agreement with societal ideals of thinness; therefore, I would have expected greater changes in weight/size dissatisfaction and appearance dissatisfaction.

No differences in body image disturbance were also found between participants low and high in appraisal sensitivity. This is unexpected especially for the Peer Feedback condition, because in the model derived from the survey study, appraisal sensitivity had an indirect effect on body image disturbance through appearance evaluation. Moreover, the measure of appraisal sensitivity was assessing fears of negative evaluation, and in the Peer Feedback condition, there was a negative evaluation of a personal attribute.

As discussed in the previous chapter a number of reasons could possibly explain these non-significant differences. It would be important to conduct further experimental studies to investigate internalisation of the thin-ideal, appraisal sensitivity, appearance-related feedback, appearance-related comparison, and body image disturbance to try to identify any possible differences, rather than deeming the model derived in the survey study as inappropriate.

Results in Comparison to Other Studies

To determine how significant the results of the current series of studies are to the field of body image disturbance, it was necessary to see if the results from

the current research programme were consistent with or deviated from previous research. The model of interrelationships determined from the current survey study extends research that has looked at the relationship between two variables such as internalisation of thin-ideal and body image by including mediational relationships (i.e., internalisation → comparison → body image disturbance), therefore it makes sense to focus on research that has investigated these more complex relationships.

Survey findings. In earlier work, I investigated the relationship between fears of negative evaluation and body esteem, and fears of negative evaluation and eating disturbance (McClintock & Evans, 2001). As found in the current survey study, fears of negative evaluation had an indirect relationship to body image and eating disturbance. Hence, this provides further support for the indirect role of fear of negative evaluation in body image disturbance. It is still unclear however, as to what mediates the relationship; in the earlier work, self-acceptance was found to be the mediating variable, whereas appearance evaluation was the mediator in the current research. Additional support for appearance evaluation acting as a mediator comes from a study by Lundgren and colleagues (2001), who developed the Fear of Negative Appearance Evaluation Scale, hypothesising that appearance evaluation would have a more significant impact on body image and eating disturbance than general fears of negative evaluation. The results of the current survey study are consistent with this hypothesis where the relationship between appraisal sensitivity (where fear of negative evaluation is a major component) and body image disturbance was mediated by fears of negative appearance evaluation.

The results of the survey study also corroborate the findings of Thompson, Coover, et al. (1999) who similarly used structural equation modelling to assess the relationships between sociocultural variables, interpersonal factors, and body image disturbance. Thompson, Coover, et al. also found social comparison to be a mediator between negative feedback and body image; teasing to have a direct effect on body image disturbance; body image disturbance to mediate between teasing and eating disturbance, and between social comparison and eating disturbance. The primary difference between the findings of Thompson, Coover, and colleagues and the current survey study, is that their earlier study reports a direct relationship between comparison and eating disturbance, which was neither hypothesised nor statistically suggested in the current study. A possible reason for this discrepancy is the use of different assessment measures, as Thompson, Coover and colleagues used a measure that asks about comparison of specific body sites and dimensions (waist, shoulders, and shape of face). In contrast, the measure used in the current study focussed on a degree of overall appearance comparison to friends, with no specific mention of body sites.

Experimental findings. The results of the experimental study found an increase in weight and appearance dissatisfaction as well as negative affect after feedback and comparison processes. These findings are similar to those of other experimental studies that have looked at negative feedback and social comparison. For example, Cash, Cash, and Butters (1983) found that after comparison with attractive peers, levels of personal attractiveness were negatively affected. With reference to levels of negative affect, Tantleff-Dunn and Thompson (1998) found that women exposed to a videotaped vignette involving negative appearance-related feedback had increased levels of anger, whether they were high or low in

body image anxiety. In a social comparison experiment, Cattarin et al. (2000) found anger and depression were negatively affected by exposure to thin-ideal images.

Dispositional levels of sociocultural ideals did not moderate the effects of the manipulation in the experimental study. These results are in contrast to the findings of other researchers. For example, in a study by Hargreaves and Tiggemann (2002) the level of body dissatisfaction of women who were high in appearance schemas increased significantly more than those who were 'appearance aschematic' after viewing commercials that contained female actors that epitomised the thin-ideal. As has been mentioned in the previous chapter possible reasons for this include the assessment measures and sample size.

Overall, there have been more similarities than differences between the current research programme and studies by other researchers. This therefore demonstrates that the area of social evaluation in general and more specifically, negative peer appearance-related feedback and unfavourable peer appearance-related comparison are important in the consideration of body image disturbance and unhealthy dieting behaviour.

Implications for Intervention

It is especially important when designing treatment programmes to acknowledge the complexity of the individual repertoire. Often the presenting problem is a manifestation of "general system malaise or of a disturbance in one part of the system that is producing disturbance in another part" (Evans, 1985, p. 23), and if intervention only focuses on the presenting problem then the client is not benefiting from the most effective treatment. From the current series of

studies, I have identified peer comparison and negative feedback as pivotal in the development of body image disturbance and hence unhealthy dieting, providing important information as to where an intervention should target.

An intervention cannot be expected to eliminate the act of negative feedback or the act of peer comparison, but an intervention can assist with the negative cognitive and affective consequences of these behaviours. Many of the techniques recommended in the literature to combat the damaging effects of negative feedback and unfavourable peer comparison are commonly used cognitive-behavioural techniques; unfortunately the average teenager who is not 'in therapy' is missing out on developing skills and behaviours that can help them in their everyday life. As the survey study identified many teenagers may be experiencing body image disturbance without other people realising it. This therefore emphasises a need for prevention programmes that facilitate the development of such skills to be implemented at the wider community level, such as through schools and community groups.

With reference to the effects of social comparison, Cash (1997) developed techniques to assist in the correction of "unfair-to-compare" cognitive distortions based on cognitive-behavioural theory. Cash suggested that clients need to learn to recognise the behaviour of comparison, identify the cognitive distortion, and replace the distortion with corrective thinking. For example, replacing the cognitive distortion "I am so much uglier than that person" with "everybody is better looking than somebody else; everybody is less attractive than somebody else. I don't have to feel bad just because there's something about me that I don't like as much as what someone else has" (p. 122). Another recognised cognitive-behavioural strategy to reduce the effects of peer comparison is to identify

dimensions for comparison that will result in favourable outcomes, in essence making a downward comparison that has positive consequences.

The use of these techniques has been validated in treatment outcome research, and Cash's (1997) manualised treatment is currently the gold-standard for body image intervention. Therefore if, as clinicians, teachers, and mentors, we can coach teenagers to recognise when they are comparing their weight, size, and appearance and assist them in learning to reframe the distorted thoughts, we can expect to reduce the negative cognitive and affective consequences of unfavourable peer comparisons and thus reduce the development of body image disturbance.

It is well recognised that the effects of negative feedback can be very detrimental. When looking for intervention techniques that target negative feedback, the bullying literature is rife with suggestions, of which most are school-based programmes. Within New Zealand, the Kia Kaha! (Stand Strong! New Zealand Police, n.d.) programme, an initiative of the Youth Education Services of New Zealand Police in association with Specialist Education Services, is a school wide course that is taught through the health or social studies curriculum and has components for all age groups. In the secondary school programme, teenagers examine the behaviours and feelings associated with bullying, identify strategies for dealing with bullying, and develop interpersonal skills to respond to bullying situations. All of these skills will be beneficial to those teenagers who are the target of negative feedback regarding appearance.

More specifically in relation to negative appearance-related feedback, Tantleff-Dunn and Thompson (1998) suggest that treatment strategies may include reframing techniques, so that positive interpretations are made of

ambiguous or vague appearance-related feedback. An additional technique that may be helpful in reducing the hurtful consequences of negative feedback is for teenagers to question the evidence for the feedback (Cash & Strachan, 2002; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). Thus they are taking the feedback but looking to see what evidence there is for such an opinion and weighing up the pros and cons of the comment or remark.

Anger was highlighted as a significant affective response to negative feedback in the current experimental study as with other previous research (Furman & Thompson, 2002; Tantleff-Dunn & Thompson, 1998), thus it is important that teenagers develop skills that help them cope with this negative emotion. Training in assertive responses to negative feedback may assist teenagers in dealing with negative feedback and may also reduce the possibility of the teasing from occurring again (Cash & Strachan, 2002; Tantleff-Dunn & Thompson, 1998).

Future Research

The current research programme provides a foundation for future research in the area of body image disturbance and unhealthy dieting. Many New Zealand studies that have investigated body image or unhealthy dieting have utilised university samples, presumably because of the ease of accessibility. The current thesis is one of few New Zealand studies looking at an adolescent population. Therefore it would be worth attempting to replicate the findings of this study with adolescent populations from other areas. It would also be beneficial to examine the variables in a pre-adolescent sample (aged 10-13), which is when young females are beginning to become more aware of other people's opinions, going

through maturational changes, and developing their self-concept. Doing so may also help identify at what age prevention programmes need to be targeted. Another useful study would be to test a model of interrelationships with a male sample. It is hypothesised that different processes underlie the development of body image and eating disturbances in males, but few studies have investigated such disorders in men. Development of model of interrelationships specifically for men would allow for the identification of pivotal variables that could be incorporated into a male-oriented intervention programme.

Peer comparison was highlighted as a pivotal variable in the development of body image disturbance and unhealthy dieting in both the survey and the experimental study. An extension of this type of social comparison would be comparison of the actual self to the ideal self, following the lines of self-discrepancy theory (Higgins, 1987). Self-discrepancy theory suggests that when comparisons are made between one's 'actual' self and one's 'ideal' and/or 'ought' self, and there are negative discrepancies, maladaptive psychological states result. Social comparison theory suggests that the closer the target of comparison is to the self the more significant the result of the comparison will be, therefore if one was comparing their actual self to an internal self-representation a more powerful effect may be produced. Studies have investigated self-discrepancy theory in relation to body image disturbance (Harrison, 2001; Snyder, 1997; Szymanski & Cash, 1995). However, few studies have examined the role of self-discrepancies as a mediator of other social influences on body image disturbance, unhealthy dieting, or in contrast to peer comparisons or other social comparisons, such as media images.

It would be interesting to examine other dieting and body image disorders in conjunction with the proposed model of interrelationships, such as anorexia nervosa, bulimia nervosa, binge-eating disorder, and body dysmorphic disorder. These syndromes should be separated out to ensure that pathways to each disorder are identified, and thus the important mediators for each disturbance. It would be expected that each of these disorders has a different developmental pathway, and that certain variables are more influential than others. Identification of these would be beneficial when designing intervention programmes.

A measure of self-concept and/or self-acceptance would also be a useful extension of the current model. All the variables in the proposed model imply some kind of 'check' to see whether you are acceptable to other people, and for adolescents acceptance by other people implies acceptance of oneself. Therefore I would expect that the variables in the model would have an influence on self-concept and self-acceptance. Body image is also commonly regarded as an important aspect of female self-concept.

The study of interrelationships between variables has been advanced through the introduction of structural equation modelling, however it needs to be acknowledged that causality cannot be ascertained from cross-sectional analyses such as the current survey study. A more advanced analysis would be through the use of longitudinal data, so that changes over time in the data could be analysed.

The current experimental study is one of very few studies that has experimentally manipulated either peer comparison or negative verbal commentary, and is the only experimental study (to the best of my knowledge) that has compared these two variables in relation to body image disturbance. Similar studies of participants from different age groups, and also from different

populations should be conducted to determine how generalisable the results of the study are.

The fact that internalisation of the thin-ideal and appraisal sensitivity did not moderate the relationship between the manipulations peer feedback and peer comparison and body image was an unexpected finding. The possible reasons for this have been explored above but it is important to replicate the study with both similar and different samples, as well as with a larger sample size, to determine if moderating effects are found.

Conclusion

In conclusion, the current series of studies provide evidence for the role of social evaluation variables in the development of body image disturbance and unhealthy dieting practices. Social evaluation incorporates both sociocultural pressures and interpersonal variables, and this thesis highlights the importance of considering the interrelationships between such variables when investigating body image disturbance and unhealthy dieting. The results of the survey study indicated that negative appearance-related feedback and unfavourable appearance-related comparisons are pivotal in the development of body image disturbances, and the experimental study supported the hypotheses that negative feedback and unfavourable peer comparison would unduly affect a person's weight/size and appearance satisfaction as well as mood states. This research programme provides many opportunities for future research in the areas of models of interrelationships, body image, and dieting behaviours.

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CONSENT FORM

Name of Research Project
Teenagers and Social Issues

Researcher

Jo McClintock

Supervisors

Prof Ian Evans and Dr Mike Hills

I have read over the information about the research project. I have had the chance to ask Jo McClintock any questions and they have been answered to my satisfaction.

I agree to participate in this research project and I understand that I may withdraw at any time.

Name: _____

Signature: _____

I would like a summary of the research project. (please provide a postal address).

ANY QUESTIONS

This project is being conducted by Jo McClintock as a university of Waikato Doctoral thesis. It is part of the Clinical Research Laboratory and is being supervised by Professor Ian Evans and Dr Mike Hills.

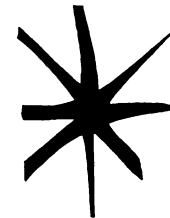
Please feel free to contact Jo McClintock if you have any questions about this research project.

I can be contacted by phone on (07) 838 4466 ext 8040. If I am unavailable, please leave a message and I will get back to you. You can also contact me by email, my email address is jmm20@waikato.ac.nz

Alternatively, you can contact my supervisor Professor Ian Evans on 06 350 5799 ext 7171 or Dr Mike Hills 856 2889

THANK YOU

INFORMATION SHEET AND CONSENT FORM



A STUDY OF
TEENAGERS
AND SOCIAL
ISSUES

WHAT IS THIS PROJECT ABOUT

The purpose of this focus group/discussion is to look at teenagers' emotions, their feelings they have about themselves and other people and how this can affect eating behaviour and the way a person feels about their body shape.

A lot of teenagers these days have feelings of being alone and not being able to 'fit in' in different situations. When we understand some of the issues that teenagers today face, then we can provide more effective help with these difficulties.

Who else is better to ask than the teenager themselves!!

WHAT WILL I BE REQUIRED TO DO

A group discussion will be held with myself (Jo McClintock) and a group of girls from your school.

Topics will be discussed that relate to relationships with friends, feelings teenagers have about themselves and other people. Other issues that will be discussed are the effects of other people and society on the way a person feels about themselves, and ways to help teenagers who are unhappy.

At the end of the discussion we will talk about how the topics covered made you feel.

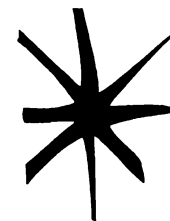
If you do not want to participate, it will not affect you in any way. You have the right to withdraw at anytime from the project, even after you have completed the consent form.

WHAT WILL HAPPEN TO THE INFORMATION

The group discussion will be recorded on an audio-tape. The information you provide as a group will then be transcribed into writing. No individual participants will be identified.

All information provided from the focus group will be kept confidential in a locked filing cabinet at the University of Waikato.

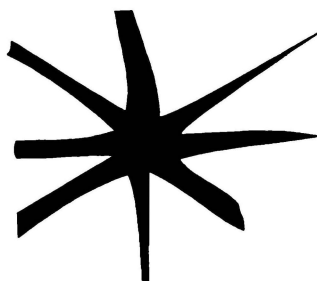
Once the project is completed, the information will be kept in secure storage at the University of Waikato.



APPENDIX B

School Information Package

SELF CONSCIOUSNESS AND EATING DISORDERS A Research Overview



✕ Contact Details

Jo McClintock

Phone: 838 4466 ext 8040

Fax: 856 2158

Email: jmm20@waikato.ac.nz

Postal: C/o Psychology Department
University of Waikato
Private Bag 3105
Hamilton

RESEARCH PROTOCOL

My name is Jo McClintock, I am a PhD candidate at the University of Waikato, and I am also enrolled in the clinical psychology postgraduate diploma. I completed my Masters Degree in 1998, focussing on the relationship between eating disorders and social phobia in a university female population. Additional research that I have been involved in looked at the role of guilt and shame in eating disorders of university females.

WHAT IS THIS RESEARCH ABOUT?

The purpose of this research is to gain a better understanding of variables that have been identified as important in the development of eating disorders in adolescent females.

WHY IS THIS IMPORTANT?

Eating problems such as anorexia or bulimia, or even just excessive preoccupation with weight and appearance are a significant and continuing problem in today's society, causing much distress to both individuals and their families. There is a need for more research in New Zealand to examine the underlying causes of eating concerns and to address this problem.

The information gathered from this research will give us a better understanding of the causes of eating disorders, which will help in developing intervention programmes for those at risk of developing eating disorders. More importantly, if possible causes for eating disorders are identified then prevention programmes can be established to avert the development of eating disorders in adolescents/teenagers.

HOW WILL THE RESEARCH BE CARRIED OUT?

This research project will be developed as a series of small studies. Each project is intended to complement the previous one. All of the projects are designed to examine variables that are thought to be essential when developing an intervention aimed at preventing the development of eating disorders in adolescent females.

Project One: Teenagers and Social Issues

This project was held at the beginning of 2002 and involved focus groups with teenage girls from schools in the Waikato region. The purpose of these focus groups was to identify some of the important social issues with regard to dieting and body image so they could be included in project two, the questionnaire study.

Project Two: Adolescent Emotions and Well-Being

This project is where we are asking for assistance from your school. Through this project we aim to identify variables important in the development of eating disorders. A questionnaire format will be used for looking at areas such as eating behaviours, body image, self-consciousness, and aspects of social evaluation.

A more detailed protocol can be found on the following page.

Project Three: Teenagers and Social Situations

Project three will follow on from Project two: specific variables that have been identified in the questionnaire will be further analysed in an individualised experiment. It is expected that this project will take place at the end of 2002 or the beginning of 2003, and interested schools will be contacted closer to the time.

Project Two: Adolescent Emotions and Well-Being

Contact will be made with the relevant people in Hamilton secondary schools. If the principal wishes to participate in the project, consent will be obtained from the relevant bodies.

The way in which students will be contacted will be negotiated with individual schools. I would be available to invite students to participate in the questionnaire study at a time convenient for the students. At this time the research protocol would be explained and students would be given the opportunity to ask any questions.

Caregiver consent will be sought for those students under 16 before they participate in the research project. The consent form will be given to the students for caregivers to complete. Caregivers are welcome to contact me at their convenience if they wish to ask questions.

It is expected that the questionnaire would take approximately 30 minutes to complete, and the students would be able to do this in their own time. Boxes for the students to return the questionnaires to will be placed in a location negotiated with each school. Upon completion of the questionnaire all students would go in the draw to win a \$50 music or book vouchers. The questionnaires and competition forms would be collected from the schools at arranged times.

At the conclusion of this project, findings in the form of a brief research report will be disseminated back to the schools who participated in the study and to caregivers who expressed an interest.

WHO WILL BE INVOLVED IN THE RESEARCH?

This research is being conducted through the Clinical Research Lab at the University of Waikato. The main researcher is Jo McClintock, under the supervision of Professor Ian Evans and Dr Michael Hills. If you are interested in this research or have any questions or comments, please feel free to contact Jo, Professor Ian Evans or Dr Michael Hills.

Contact Details

Jo McClintock

Professor Ian Evans

Dr Michael Hills

Phone: 838 4466 ext 8040

Phone: 856 2889

Fax: 856 2158

Fax: 856 2158

Email: jmm20@waikato.ac.nz

Email: ievans@waikato.ac.nz
mhills@waikato.ac.nz

Postal: C/o Psychology Dept
University of Waikato
Private Bag 3105
Hamilton

Postal: C/o Psychology Dept
University of Waikato
Private Bag 3105
Hamilton

CONSENT FORM

Please detach and return to your
teenager's school

Name of Research Project
Adolescents Emotions
and Well-Being
Researcher

Jo McClintock
Supervisors

Prof Ian Evans and Dr Mike Hills

I have read over the information about
the research project. I have had the
opportunity to contact Jo McClintock
and my questions have been
answered to my satisfaction.

I agree to allow (please write your teenagers name)

to participate in this research project

Name: _____

Signature: _____

I would like a summary of the research
project. (please provide a postal address).

ANY QUESTIONS

This project is being conducted by Jo
McClintock as a university of
Waikato Doctoral thesis. It is part of
the Clinical Research Laboratory
and is being supervised by Professor
Ian Evans and Dr Mike Hills.

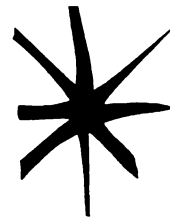
Please feel free to contact Jo
McClintock if you have any
questions about this research project.

I can be contacted by phone on (07)
838 4466 ext 8040. If I am
unavailable, please leave a message
and I will get back to you. You can
also contact me by email, my email
address is jmm20@waikato.ac.nz

Alternatively, you can contact my
supervisor Professor Ian Evans on
06 350 5799 ext 7171 or Dr Mike
Hills 856 2889

THANK YOU

INFORMATION SHEET AND CONSENT FORM



A STUDY OF
ADOLESCENT
EMOTIONS AND
WELL-BEING

WHAT IS THIS PROJECT ABOUT

A teenagers feelings about themselves and their appearance are very influential in the way they will behave and react in certain situations.

As a caregiver and adult you will understand the pressures of being a teenager and wanting to 'fit in'. This project will help us to understand some of the causes of teenager distress, especially those associated with problem eating behaviour, and concerns about appearance.

WHY IS THIS IMPORTANT

When we can better understand the relationships between variables that contribute to distress in adolescents lives, then we can provide them with more effective help.

WHY IS YOUR CONSENT REQUIRED

Your teenager has expressed an interest in taking part in this research. Your consent is required because your teenager is under the age of 16, therefore caregiver consent is required before they can participate.

WHAT WILL YOUR TEENAGER BE REQUIRED TO DO

The research involves your teenager completing a questionnaire examining the variables of emotions, well-being, perceptions of social evaluation, self-consciousness, and eating behaviour.

Your teenager will also be asked to participate, and if they do not wish to continue then they can withdraw.

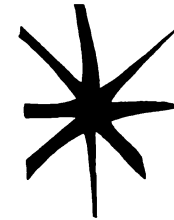
All participants go in the draw to win music or book vouchers

WHAT WILL HAPPEN TO THE INFORMATION

All information provided is kept confidential in a locked filing cabinet at the University of Waikato.

No identifying information will be on any of the questionnaires.

You are welcome to a summary of the research findings from this project. If you would like a summary, please put your address on this consent form and a summary will be sent to you when the project is completed.



APPENDIX D

Summary of Findings from Focus Groups and Survey Study

Faculty of Arts & Social Sciences
 Department of Psychology
 The University of Waikato
 Private Bag 3105
 Hamilton, New Zealand
 Joanna McClintock
 Clinical Research Laboratory
 Telephone 64-7-838 4466 (ext 8040)
 Facsimile 64-7-856 2158
 Email: jmm20@waikato.ac.nz



**The
University
of Waikato**
*Te Whare Wānanga
o Waikato*

06 August 2002

Dear All,

Firstly, I would like to thank you for your support of this research over the past few months, which has been looking at social evaluation and eating behaviours. For your information I have enclosed a summary of the research process and the findings from the two studies that were conducted in schools in the Waikato region.

If you have any further questions regarding these results please contact me and I would be more than happy to discuss the findings with you. Because the studies were confidential, individual results are not known and therefore can not be disclosed. I can be contacted by phone on (07) 838-4466 (extn 8040) or by email on jmm20@waikato.ac.nz

Once again, thank you for your ongoing support and assistance.

Regards,

Jo McClintock
 Trainee Clinical Psychologist and Doctoral Candidate

The Role of Social Evaluation in Eating Behaviours

Research Overview

The purpose of this research study was to gain a better understanding of factors or variables we thought to be important in the development of eating disorders in adolescent females. To date, international research suggests that there are many factors involved in eating difficulties including biological, social, and personal variables. The variables that this study was interested in were the social aspects involved in adolescents eating difficulties and concerns about appearance.

Research Procedure

Two different studies were conducted; focus group discussions and a survey study.

The focus group discussions were held to obtain teenagers perceptions about dieting and body image, and try and identify how serious an issue dieting behaviour is for female teenagers today. A second aim of the focus groups was to identify types of social situations that would elicit evaluation fears.

Twenty-three female students participated in the discussion groups, which were held at two schools in the Hamilton region. The students were 16 and 17 years old and predominantly identified as Pākehā (74%), 17% identified as Māori or part-Māori and 9% identified with a different cultural group.

The aim of the survey study was to assess the importance of social evaluation variables to disordered eating. The variables that I was interested in were self-consciousness, need for approval, fear of evaluation, and the tendency to compare oneself to other people. The other aim of the survey study was to investigate the rate of disordered eating in a New Zealand female high school population.

The survey was administered to 190 high school female students within the Waikato region. These students were between 14 and 17 years old.

The majority of the students identified as Pākehā (74%), 13.2% identified as Māori or part-Māori, and 10.6% identified with a different cultural group.

Research Findings

A commonly used psychological measure for screening disordered eating in a general population was used to determine how many teenagers were experiencing high levels of distress in relation to unhealthy dieting and eating behaviours. Of the 190 female high school students who completed a questionnaire, 20% were identified as being at a high risk for developing an eating disorder, of those 9% may be suspected as having a clinical eating disorder.

Rates of depression were also assessed using a psychological measure that is utilised for screening symptoms of depression in general high school samples. For the 190 student who completed the questionnaire, 20% of the sample would be considered as having clinically significant levels of distress. More specifically of that 20%, 16% were identified as having very much above average levels of depressive symptomatology, in comparison to teenagers of similar age and gender.

These rates do cause concern but it must be stressed that the measures used are brief screening instruments that only indicate teenagers who would benefit from a clinical follow-up. As the results are anonymous, I recommend that if you are concerned about a teenager then please contact either myself, the school counsellor or an organisation such as Lifeline or Youthline.

One of the main areas of knowledge that this study aimed to contribute to was what makes young females diet and dislike their body. From both the discussion groups and the questionnaire study it is apparent that there are many influences. The influence of the media was strongly affirmed, although we must remember that most young people are exposed to similar messages from the media. This therefore raises the age-old question of why some and not others, which is much harder to answer. The results of the study would suggest the need for acceptance

and approval from other people is important when trying to distinguish what makes some young girls more susceptible than others. It would also appear that strong female-peer relationships act as buffers towards levels of distress both in terms of mood and unhealthy eating behaviour.

Conclusions

The findings of this research show the importance of this type of research for obtaining current New Zealand data on the rates of distress that female teenagers are experiencing. The next stage of this research programme is to identify from the results of the survey study specific variables that can be investigated further in an experimental study.

If you would like to continue to be updated as to the progress of the research please contact me either by phone on 07 838 4466 (extn 8040) or by email on jmm20@waikato.ac.nz

APPENDIX E

Survey Information Sheet and Survey

FOR YOUR INFORMATION



I would like to thank you for taking part in this research there are a few important points to know so please read the following

- ✗ This research looks at teenagers' emotions, their feelings they have about themselves and other people and their eating behaviours.
- ✗ If you have any questions or concerns about this questionnaire or would like some help completing the questionnaire, please contact (me) the researcher Jo McClintock in Hamilton on 07 838-4466 (ext 8040).
- ✗ There are no right or wrong answers, so please answer as honestly as you can and try and answer all the questions.
- ✗ When you have completed the questionnaire please put it in the questionnaire return box for me to collect.
- ✗ To thank you for taking part in this research you will go in the draw to win a \$50 music or book voucher, so please make sure your correct details are on the competition form.
- ✗ Please remove the competition form from the questionnaire and place it in the competition return box.
- ✗ To make sure your responses are confidential, please do not put your name on the questionnaire.
- ✗ If any items raise concerns for you please contact the researcher Jo McClintock or your school counsellor.
- ✗ By completing this questionnaire you are giving your consent to participate in this research.

For copyright reasons the measures used in the survey study cannot be reproduced here. However, sample items of each of the measures are provided below. Contact details as to where to obtain the measures are also provided.

Please answer the following questions relating to
your personal background

Age (please tick the appropriate box)

15 ☐ 16 ☐ 17 ☐ 18 ☐

What Ethnic or Cultural Group do you identify with:

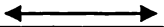
Who Do You Live With:

(E.g.) Mum, Dad, Older Brother (24), Younger Sister (8)

(E.g.) Mum, Step-Dad, Older Sister (19)

The Revised Public Self-Consciousness Scale (Scheier & Carver, 1985).

Please read each of the following statements carefully and indicate how characteristic it is of you according to the following scale			
0	1	2	3
Not at All Like Me	A Little Like Me	Somewhat Like Me	A Lot Like Me

	Not at All				A Lot
I'm concerned about my style of doing things	0	1	2	3	
I'm concerned about what other people think of me	0	1	2	3	

This scale can be obtained from:

Scheier, M. F., & Carver, C. S. (1985). The self-consciousness scale: A revised version for use with general populations. *Journal of Applied Social Psychology*, 15, 687-699.

The Brief Fear of Negative Evaluation Scale (Leary, 1983).

Please read each of the following statements carefully and indicate how characteristic it is of you according to the following scale					
1	2	3	4	5	
Not at All Like Me	Slightly Like Me	Moderately Like Me	Very Like Me	Extremely Like Me	

Not at All

←————→

Extremely

I worry about what other people will think of me even when I know it doesn't make any difference	1	2	3	4	5
I am afraid that people will find fault with me	1	2	3	4	5

This scale can be obtained from:

Leary, M. R. (1983). A brief version of the Fear of Negative Evaluation Scale. *Personality and Social Psychology Bulletin*, 9, 371-375.

The Fear of Negative Appearance Evaluation Scale (Lundgren, Thompson, & Anderson, 2001).

Please read each of the following statements carefully and indicate how characteristic it is of you according to the following scale					
1	2	3	4	5	
Not at All Like Me	Slightly Like Me	Moderately Like Me	Very Like Me	Extremely Like Me	

Not at All

←————→

Extremely

I am concerned about what other people think of my appearance	1	2	3	4	5
When I meet new people, I wonder what they think about my appearance	1	2	3	4	5

This scale can be obtained from:

J. Kevin Thompson, PhD
Department of Psychology
University of South Florida
jthompso@chuma1.cas.usf.edu

The Dieting Peer Competitiveness Scale (Huon, Piira, Hayne, & Strong, 2002).

Please read each of the following statements carefully and indicate how characteristic it is of you according to the following scale					
1	2	3	4	5	
Not at All Like Me	Slightly Like Me	Moderately Like Me	Very Like Me	Extremely Like Me	

Not at All

←→

Extremely

I look at other females' figures to see how well I measure up	1	2	3	4	5
Before going to a party I spend a long time worrying about whether I will look as attractive as some of my friends	1	2	3	4	5

This scale can be obtained from:

Huon, G. F., Piira, T., Hayne, A., & Strong, K. G. (2002). Assessing body and eating peer-focused comparisons: The dieting peer competitiveness (DPC) scale. *European Eating Disorders Review*, 10, 428-446.

The Revised Martin-Larsen Approval Motivation Scale (Martin, 1984).

Please read each of the following statements carefully and using the scale decide to which extent you personally disagree or agree with each statement					
1	2	3	4	5	
Strongly Disagree	Mostly Disagree	Neither Agree or Disagree	Mostly Agree	Strongly Agree	

Strongly Disagree

←→

Strongly Agree

I am willing to argue only if I know that my friends will back me up	1	2	3	4	5
I am careful at parties and social gatherings for fear that I will do or say things that others won't like	1	2	3	4	5

This scale can be obtained from:

Martin, H. J. (1984). A revised measure of approval motivation and its relationship to social desirability. *Journal of Personality Assessment*, 48, 508-519.

**The Television/Magazines and Athletic Scales of the Internalisation
Multidimensional Media Influence Scale (Thompson & van den Berg, 2002).**

Please read each of the following statements carefully and using the scale decide to which extent you personally disagree or agree with each statement

1	2	3	4	5
Strongly Disagree	Mostly Disagree	Neither Agree or Disagree	Mostly Agree	Strongly Agree

Strongly Disagree

←→

Strongly Agree

I would like my body to look like the people on TV	1	2	3	4	5
I would like my body to look like the models in magazines	1	2	3	4	5
I try to look like sports athletes	1	2	3	4	5

This scale can be obtained from:
J. Kevin Thompson, PhD
Department of Psychology
University of South Florida
jthompso@chuma1.cas.usf.edu

**The Body Dissatisfaction and Drive for Thinness Subscales of the Eating
Disorder Inventory-2 (Garner, 1991).**

Please read each of the following statements carefully and decide if the item is true about you. Use the following scale to indicate your rating

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

Always

←→

Never

I think that my stomach is too big	1	2	3	4	5	6
I am terrified of gaining weight	1	2	3	4	5	6
I have gone on eating binges where I feel I can not stop	1	2	3	4	5	6

This scale can be obtained from:
The Eating Disorder Inventory-2
Psychological Assessment Resources, Inc.
16204 N. Florida Ave
Lutz, FL 33549

The Child Depression Inventory – Short Form (Kovacs, 1992).

Please read each group of three sentences carefully
and tick the sentence that describes you best for the past two weeks

I am sad once in a while		Things bother me all the time	
I am sad many times		Things bother me many times	
I am sad all the time		Things bother me once in a while	

This scale can be obtained from:

Child Depression Inventory

Multi-Health Systems

908 Niagara Falls Blvd

North Tonawanda

New York

APPENDIX F

Competition Form

Research Project: Adolescent Emotions and Well-Being

Researcher: Jo McClintock

Supervisor: Professor Ian Evans
University of Waikato

All information on this form is confidential and will not be disclosed to anyone other than the researcher.

I have completed the questionnaire to the best of my ability and returned the questionnaire. I would now like to go in the draw to win \$50 worth of book or music vouchers.

Name: _____

Signature: _____

Phone Number: _____

Address: _____

Please indicate if you would prefer:

Book Vouchers ☐

Music Vouchers ☐

APPENDIX G

Histograms Showing Distributions of Scores on Survey Measures

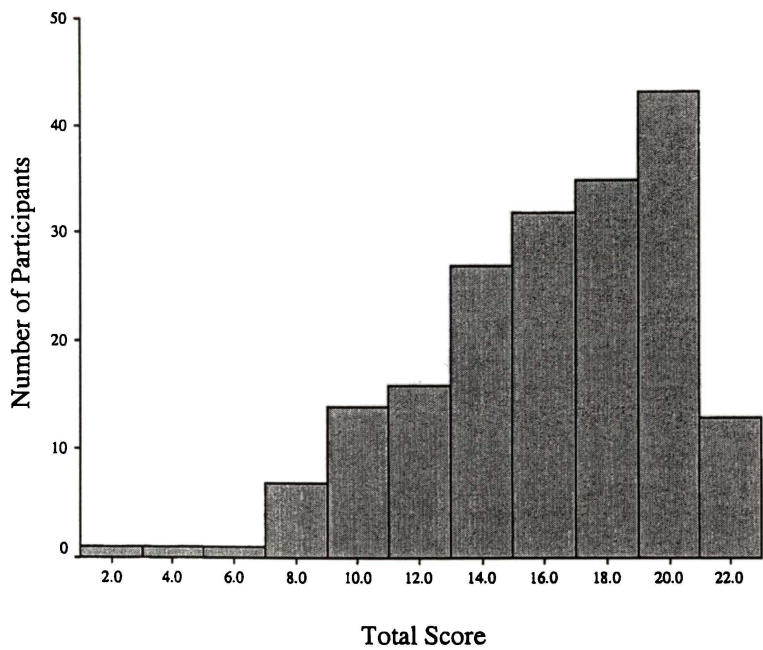


Figure G1. Distribution of participants scores on the Public Self-Consciousness subscale.

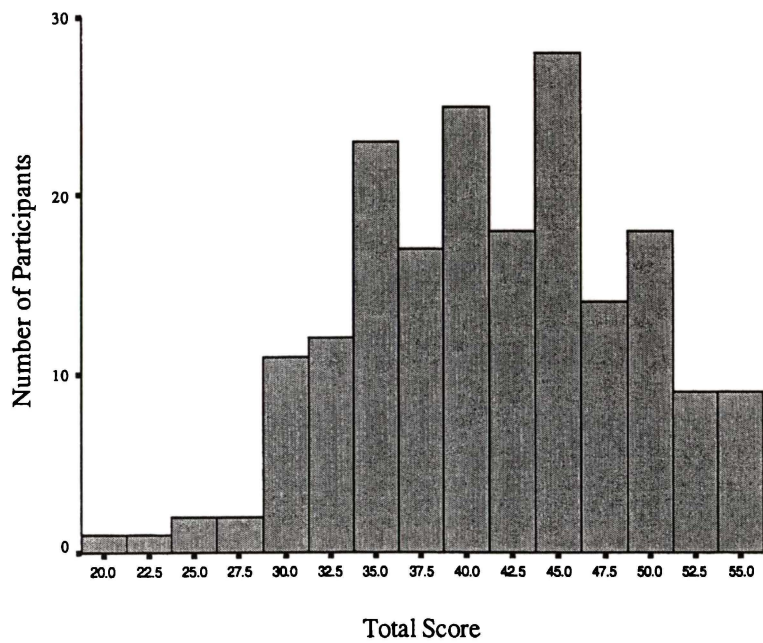


Figure G2. Distribution of participants scores on the Brief-Fear of Negative Evaluation Scale.

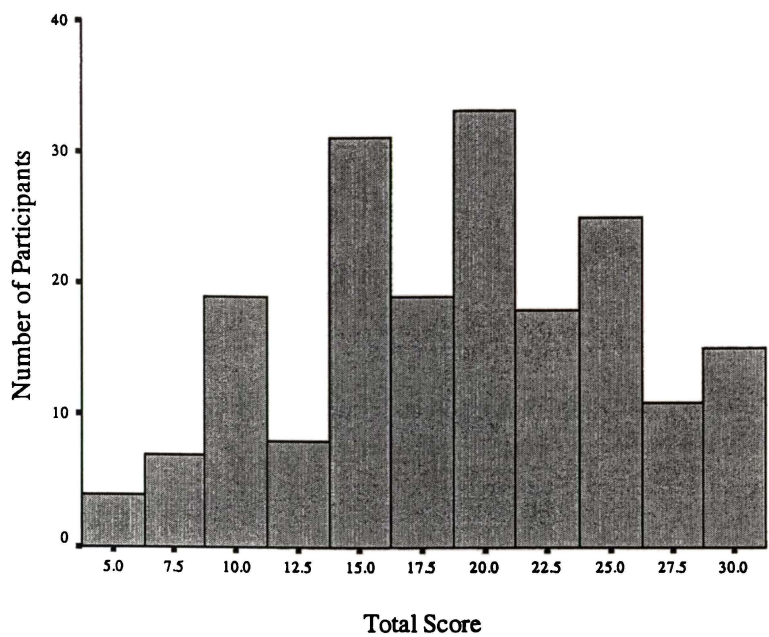


Figure G3. Distribution of participants scores on the Fear of Negative Appearance Evaluation Scale.

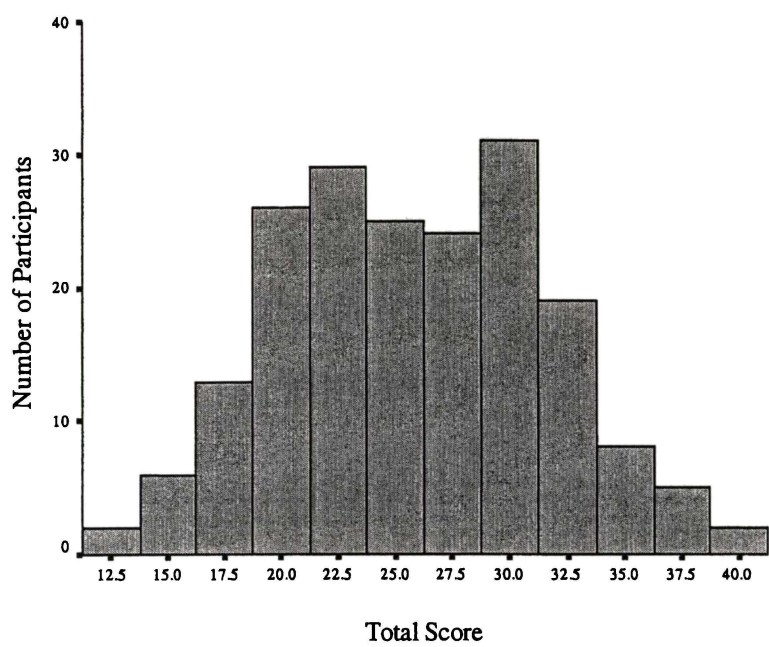


Figure G4. Distribution of participants scores on the Dieting Peer Competitiveness Scale.

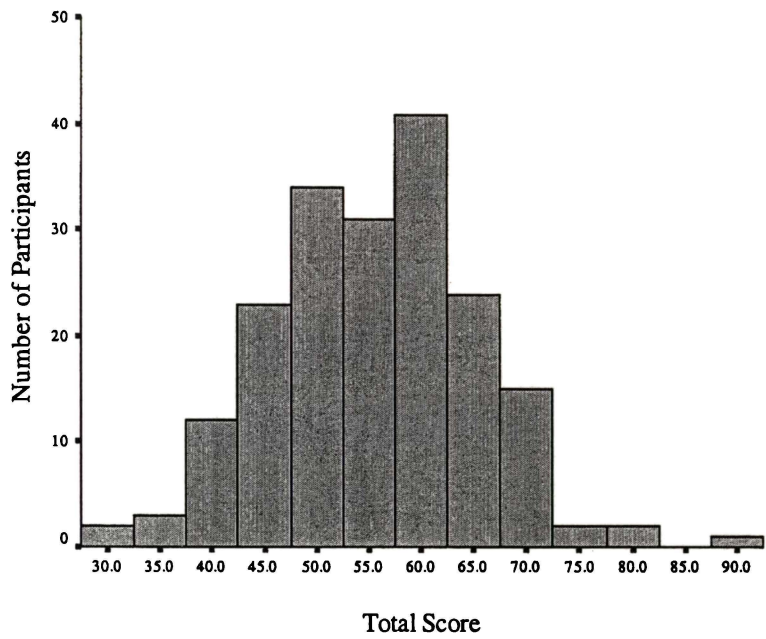


Figure G5. Distribution of participants scores on the Approval Motivation Scale.

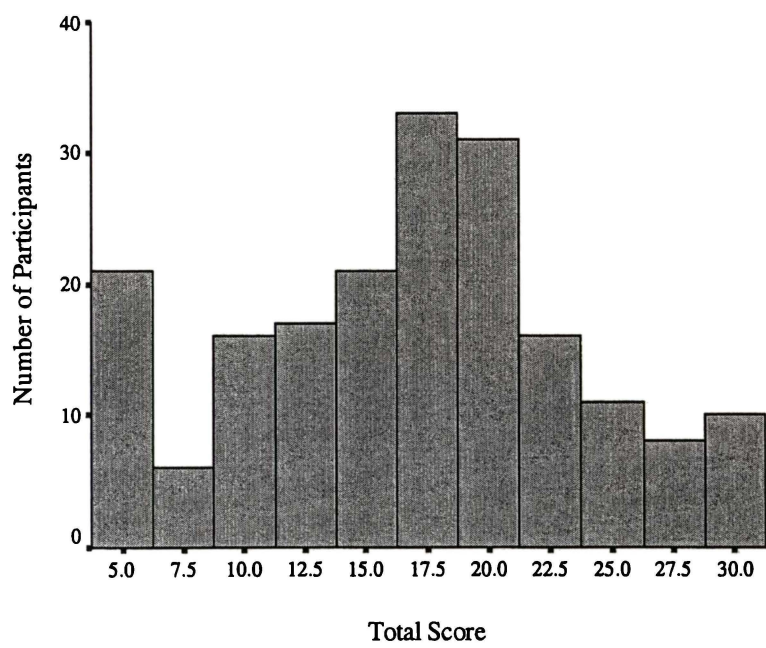


Figure G6. Distribution of participants scores on the TV/Magazine Internalisation Subscale.

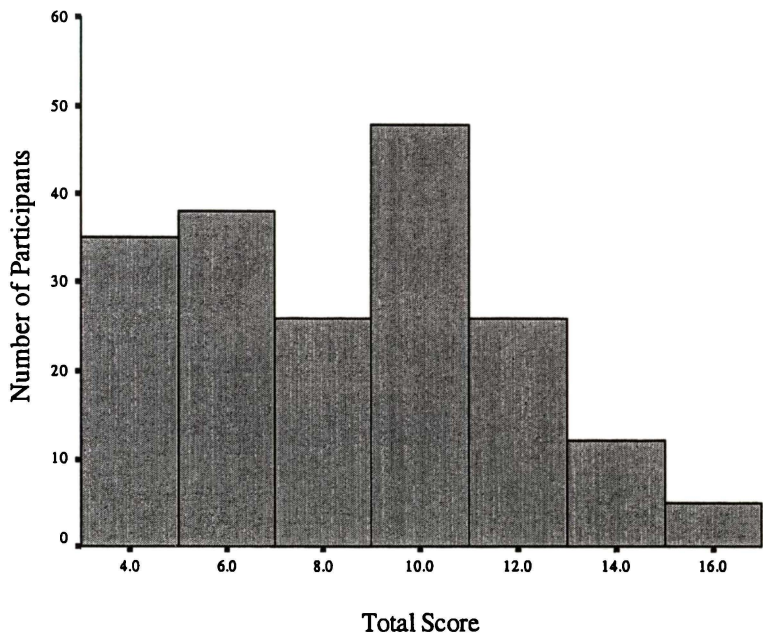


Figure G7. Distribution of participants scores on the Athleticism Internalisation Subscale.

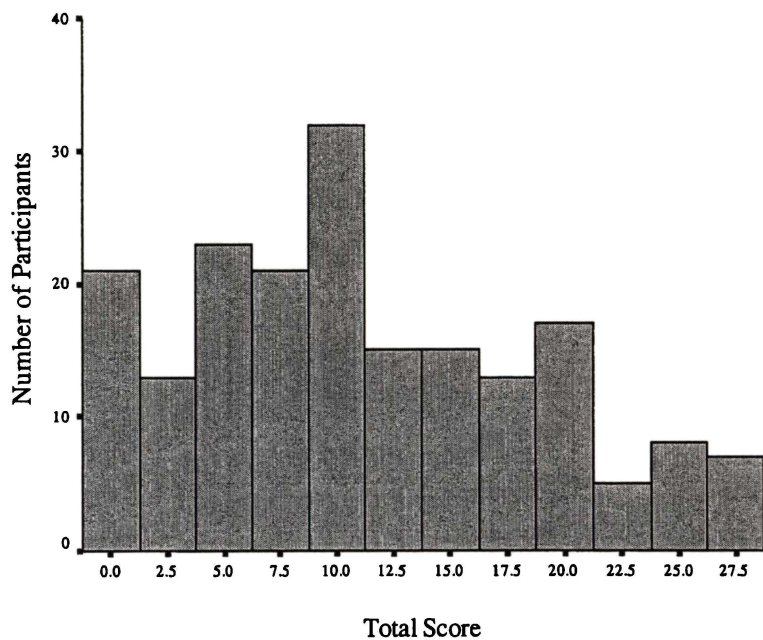


Figure G8. Distribution of participants scores on the Body Dissatisfaction Subscale.

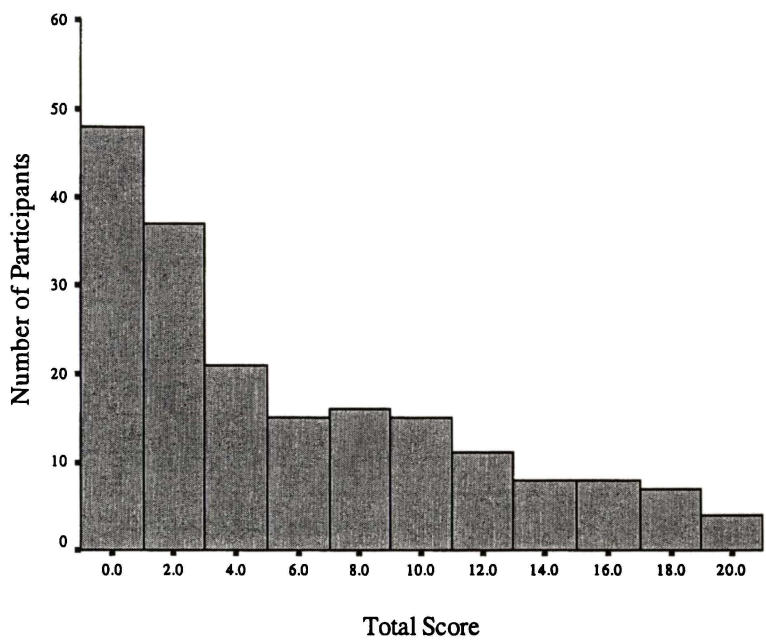


Figure G9. Distribution of participants scores on the Drive for Thinness Subscale.

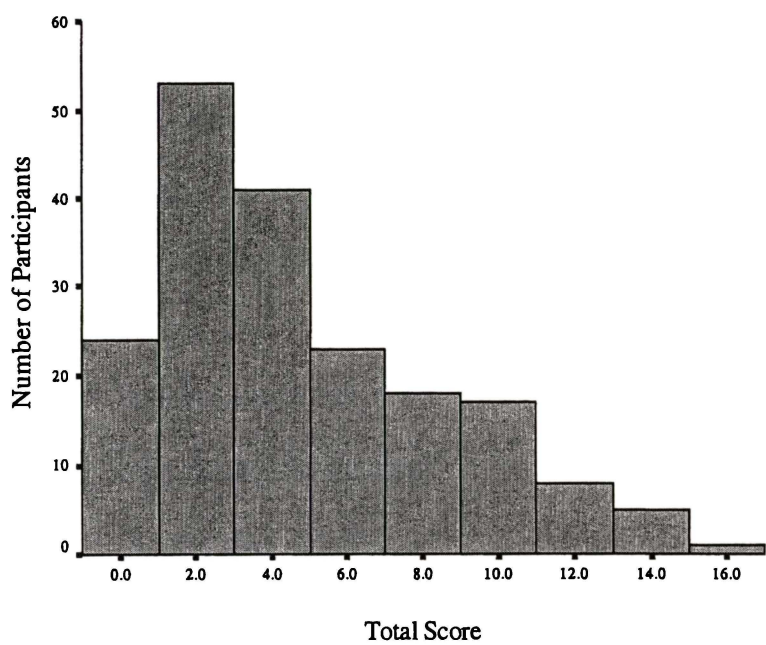


Figure G10. Distribution of participants scores on the Child Depression Inventory-Short Form.

APPENDIX H

Descriptive Statistics for Indicator Variables

Latent Construct	Indicator Variable	M	SD	Skew	Kurtosis
Appraisal Sensitivity	Fear of Negative Evaluation – 1	4.04	1.00	-.62	-.81
	Fear of Negative Evaluation – 3	3.57	.93	-.00	-.85
	Fear of Negative Evaluation – 8	3.70	1.08	-.23	-1.23
	Fear of Negative Evaluation – 12	4.07	.99	-.63	-.81
	Public Self-Consciousness – 6	2.52	.76	-1.57	1.77
Need for Approval	Approval Motivation – 2	2.78	1.17	.02	-.93
	Approval Motivation – 3	2.69	1.20	.20	-1.08
	Approval Motivation – 4	2.69	1.33	.24	-1.20
	Approval Motivation – 5	2.65	1.31	.28	-1.13
Internalisation of Thin-Ideal	Television-Magazines – 1	3.17	1.34	-.28	-1.12
	Television-Magazines – 2	3.06	1.40	-.15	-1.23
	Television-Magazines – 3	3.14	1.33	-.31	-1.06
	Television-Magazines – 4	3.05	1.41	-.09	-1.27
Appearance Evaluation Beliefs	Appearance Evaluation – 2	3.47	1.32	-.45	-.92
	Appearance Evaluation – 3	3.09	1.28	-.11	-.98
	Appearance Evaluation – 4	3.21	1.20	-.16	-.85
	Appearance Evaluation – 5	2.98	1.26	-.04	-.95
	Appearance Evaluation – 6	2.72	1.30	.23	-1.05
Peer Comparison	Dieting Peer Comparison – 1	2.77	1.44	.27	-1.25
	Dieting Peer Comparison – 4	3.00	1.24	-.10	.96
	Dieting Peer Comparison – 5	2.51	1.35	.29	-1.23
	Dieting Peer Comparison – 7	2.72	1.29	.11	-1.13

Table continues...

Latent Construct	Indicator Variable	M	SD	Skew	Kurtosis
Body Image Disturbance	Body Dissatisfaction – 1	1.24	1.21	.31	-1.48
	Body Dissatisfaction – 2	1.36	1.24	.15	-1.59
	Body Dissatisfaction – 6	.86	1.14	.89	-.80
	Body Dissatisfaction – 8	.88	1.15	.82	-.93
Unhealthy Dieting	Drive for Thinness - 2	.93	1.12	.77	-.91
	Drive for Thinness – 3	.97	1.24	.68	-1.27
	Drive for Thinness – 4	1.10	1.21	.52	-1.34
	Drive for Thinness – 6	.67	1.03	1.37	.48
	Drive for Thinness – 7	.34	1.08	1.39	.29
Negative Affect	Child Depression – 2	.51	.59	.67	-.50
	Child Depression – 3	.23	.46	1.79	2.33
	Child Depression – 6	.76	.75	.43	-1.10
	Child Depression – 8	.47	.59	.87	-.20
	Child Depression – 10	.26	.50	1.85	2.60

CONSENT FORM

Name of Research Project
Teenagers and Social Situations
Researcher
Jo McClintock
Supervisors
Prof Ian Evans and Dr Mike Hills

I have read over the information about the research project. I have had the opportunity to contact Jo McClintock and my questions have been answered to my satisfaction.

I agree to participate in this research project and I understand that I may withdraw at any time.

Name: _____

Signature: _____

I would like a summary of the research project. (please provide a postal address).

ANY QUESTIONS

This project is being conducted by Jo McClintock as a university of Waikato Doctoral thesis. It is part of the Clinical Research Laboratory and is being supervised by Professor Ian Evans and Dr Mike Hills.

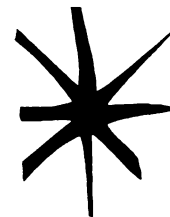
Please feel free to contact Jo McClintock if you have any questions about this research project.

I can be contacted by phone on (07) 838 4466 ext 8040. If I am unavailable, please leave a message and I will get back to you. You can also contact me by email, my email address is jmm20@waikato.ac.nz

Alternatively, you can contact my supervisor Professor Ian Evans on 06 350 5799 ext 7171 or Dr Mike Hills 856 2889

THANK YOU

INFORMATION SHEET AND CONSENT FORM



A STUDY OF
TEENAGERS
AND SOCIAL
SITUATIONS

WHAT IS THIS PROJECT ABOUT

Different people often experience the same social situations in different ways. For example, some people feel slightly anxious in a situation while others may feel completely at ease.

The purpose of this study is to try and determine what makes people react to the same social situation differently.

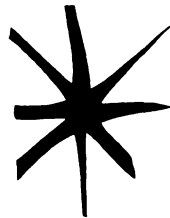
This is an especially important issue for teenagers, because they are facing a wider range of social situations than when they were younger. If we can try and identify the reasons for differences then this may help people become more at ease when in a social situation.

WHAT WILL I BE REQUIRED TO DO

Your involvement will be for approximately one hour.

The study will involve filling in some questionnaires, taking part in some imaginal situations, and a brief interview with myself (Jo McClintock).

If you do not want to participate, it will not affect you in any way. You have the right to withdraw at anytime from the project, even after you have completed the consent form.



WHAT WILL HAPPEN TO THE INFORMATION

Names will not be associated with any of the information that is obtained from the study.

All information provided from the people who participate in the study will be kept confidential in a locked filing cabinet at the University of Waikato.

Once the project is completed, the information will be kept in secure storage at the University of Waikato.

You are welcome to a summary of the research findings from this project. If you would like a summary, please put your address on this consent form and a summary will be sent to you when the project is completed.

CONSENT FORM

Please detach and return to your
teenager's school

Name of Research Project
Teenagers and Social Situations
Researcher
Jo McClintock
Supervisors
Prof Ian Evans and Dr Mike Hills

I have read over the information about
the research project. I have had the
opportunity to contact Jo McClintock
and my questions have been
answered to my satisfaction.

I agree to allow (please write your teenagers name)

to participate in this research project

Name: _____

Signature: _____

I would like a summary of the research
project. (please provide a postal address).

ANY QUESTIONS

This project is being conducted by Jo
McClintock as a University of
Waikato Doctoral thesis. It is part of
the Clinical Research Laboratory
and is being supervised by Professor
Ian Evans and Dr Mike Hills.

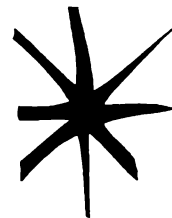
Please feel free to contact Jo
McClintock if you have any
questions about this research project.

I can be contacted by phone on (07)
838 4466 ext 8040. If I am
unavailable, please leave a message
and I will get back to you. You can
also contact me by email, my email
address is jmm20@waikato.ac.nz

Alternatively, you can contact my
supervisor Professor Ian Evans on
06 350 5799 ext 7171 or Dr Mike
Hills 856 2889

THANK YOU

INFORMATION SHEET AND CONSENT FORM



A STUDY OF
TEENAGERS
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SITUATIONS

WHAT IS THIS PROJECT ABOUT

Different people often experience the same social situations in different ways. For example, some people feel slightly anxious in a situation while others may feel completely at ease.

The purpose of this study is to try and determine what makes people react to the same social situation differently.

WHY IS THIS IMPORTANT

This is an especially important issue for teenagers, because they are facing a wider range of social situations than when they were younger. If we can try and identify the reasons for differences then this may help people become more at ease when in a social situation.

WHY IS YOUR CONSENT REQUIRED

Your teenager has expressed an interest in taking part in this research. Your consent is required because your teenager is under the age of 16, therefore caregiver consent is required before they can participate.

WHAT WILL YOUR TEENAGER BE REQUIRED TO DO

The study will involve your teenager completing some questionnaires, taking part in some imaginary situations, and a brief interview with myself (Jo McClintock).

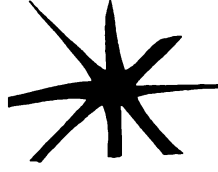
Your teenager will also be asked to participate, and if they do not wish to continue then they can withdraw.

WHAT WILL HAPPEN TO THE INFORMATION

Names will not be associated with any of the information that is obtained from the study.

All information provided from the people who participate in the study will be kept confidential in a locked filing cabinet at the University of Waikato.

You are welcome to a summary of the research findings from this project. If you would like a summary, please put your address on this consent form and a summary will be sent to you when the project is completed.



APPENDIX K

Sign-Up Form for Experimental Study

Teenagers and Social Situations	
Please put your name down at a time that is convenient for you. The study will take no longer than one class period.	
DAY AND TIME	DAY AND TIME
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
DAY AND TIME	DAY AND TIME
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10

APPENDIX L

Social Situation Vignettes and Manipulations

Scenario A

It is Friday night, the end of school term and there is a huge party being held that you and your friends are going to. You and two of your close girlfriends are at your friends place getting ready. You and your friends have 2 or 3 outfits to choose from because you can't decide what you are going to wear.

Peer Feedback Manipulation

Your friend looks you up and down and says "man those pants are fitting aren't they".

Peer Comparison Manipulation

You look at your friend who has put on a top the same as yours and you think the top looks much better on her than it does on you.

Scenario B

You and your friend have decided to have an afternoon of shopping. You stop at the local café/takeaway place and grab some lunch before you hit the shops. You see a top in the window that you think would look good on you so you and your friend go in to try some clothes on.

Peer Feedback Manipulation

Having tried the top on you ask your friend to get a different top you have also seen in your size, it doesn't fit you and your friend says "you are much bigger than I thought you would be"

Peer Comparison Manipulation

Your friend tries the exact same top on as you, and you both come out into the shared changing area, you look at yourself in the mirror and then at your friend and you think that you don't look anywhere near as good as your friend.

APPENDIX N

Demographics Questionnaire

Please answer the following questions relating to your personal background

Age

Please tick the appropriate box

15 ☐ 16 ☐ 17 ☐ 18 ☐

What Ethnic or Cultural Group do you identify with?:

Explain Who You Live With:

(E.g.) Mum, Dad, Older Brother (17), Younger Sister (8)

(E.g.) Mum, Step-Dad, Older Sister (19)

(E.g.) School Hostel

APPENDIX O

Distracters

For copyright purposes the poems used as distracters cannot be displayed. Segments of the two poems used are presented. Contact details as to where to obtain the poems are also provided.

Science Homework by Kenn Nesbitt, 2002

I messed up the assignment
That you gave us yesterday
It burbled from its test tube
And went slithering away.

World's Hardest Test by Kenn Nesbitt, 2002

We'd need to play xylophone, trumpet, and flute,
Accordion, banjo, piano and lute,
Recite all the capital cities by heart
And learn to take rocketship engines apart.

These poems can be obtained from:

kenn@nesbitt.com

<http://www.poetry4kids.com>

APPENDIX P

Mood Improvement Activity

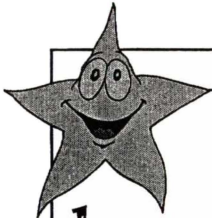
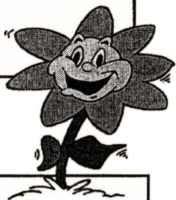
3 THINGS I REALLY LIKE ABOUT MYSELF

(e.g. my sense of humour)

1.

2.

3.



2 THINGS I DO REALLY WELL

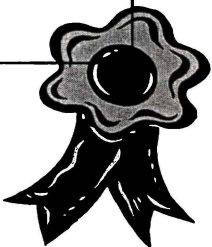
(e.g. make friends)

1.

2.

A SUCCESS THAT I HAVE ACHIEVED

(e.g. passed my maths test)



APPENDIX Q

Contact Phone Numbers

If any of the scenarios raised any issues for you, please contact either myself or one of the community organisations listed below.

Youthline	0800 376 633
Youth Zone	839 4397
Linkage	839 2828
Lifeline Waikato	838 0719
Relationship Services	0800 735 283
Citizen's Advice Bureau	0800 367 222

Alternatively, you can contact me

Jo McClintock	838 4466 (extension 8040)
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APPENDIX R

Line Graphs Displaying Pre- and Post- Manipulation Scores for the Dependent Variables in the Pilot Experimental Study

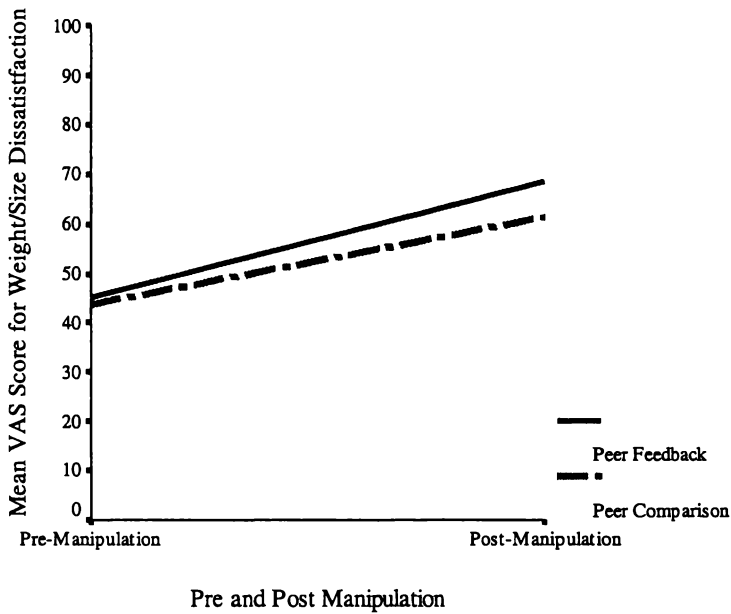


Figure R.1. Mean pre- and post- manipulation scores for Weight/Size Dissatisfaction in the Peer Feedback and Peer Comparison conditions.

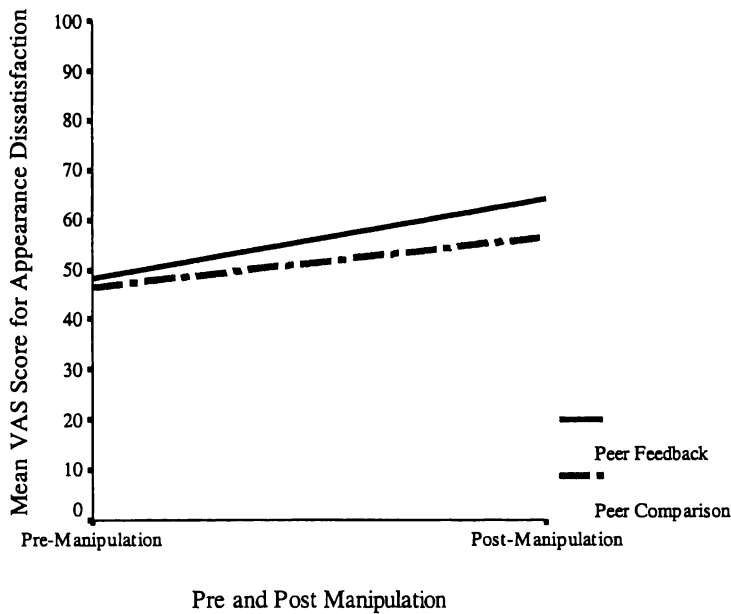


Figure R.2. Mean pre- and post- manipulation scores for Appearance Dissatisfaction in the Peer Feedback and Peer Comparison conditions.

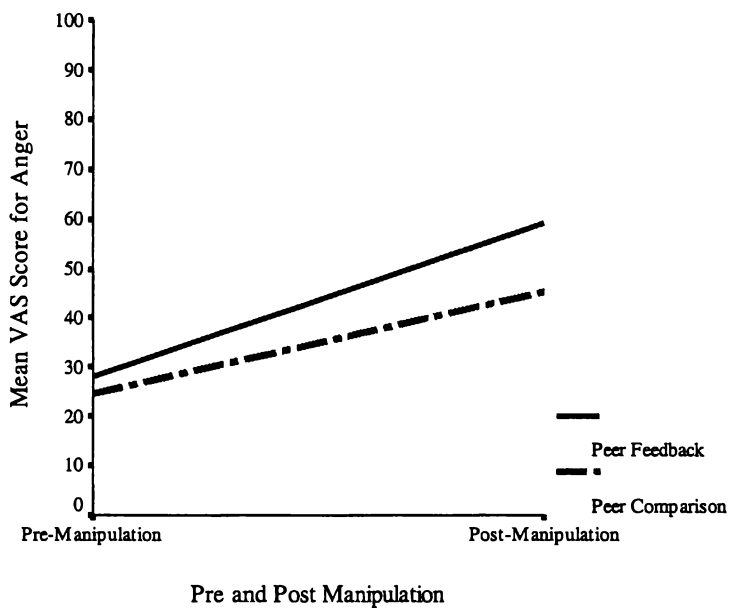


Figure R.3. Mean pre- and post- manipulation scores for Anger in the Peer Feedback and Peer Comparison conditions.

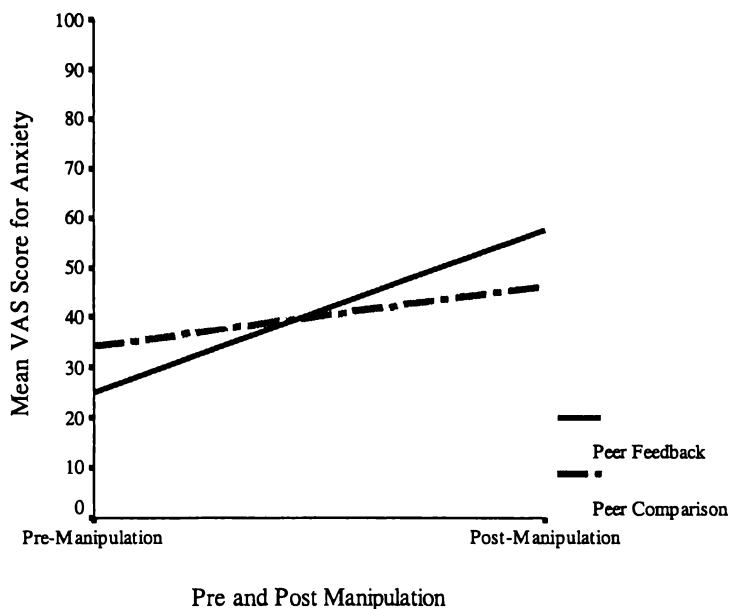


Figure R.4. Mean pre- and post- manipulation scores for Anxiety in the Peer Feedback and Peer Comparison conditions.

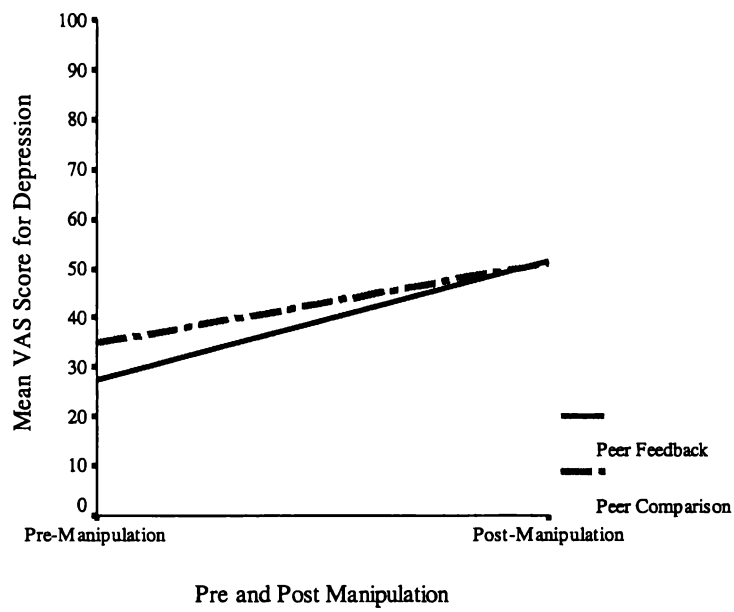


Figure R.5. Mean pre- and post- manipulation scores for Depression in the Peer Feedback and Peer Comparison conditions.

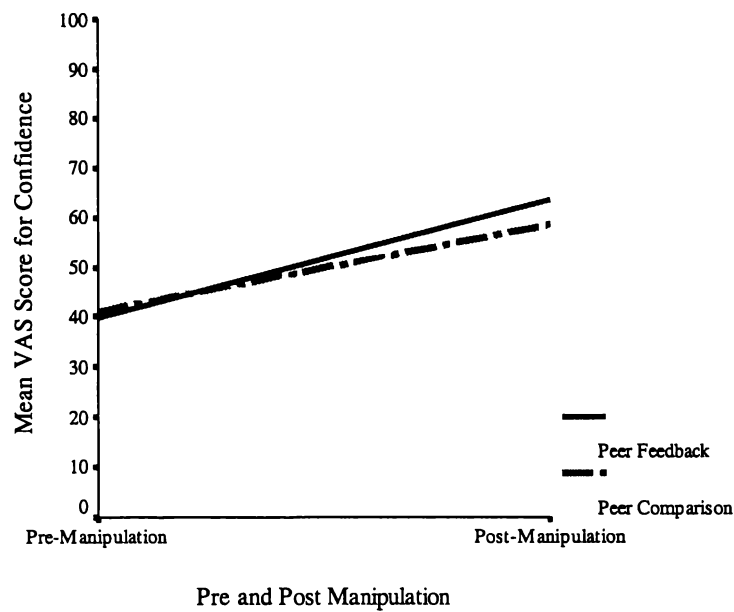


Figure R.6. Mean pre- and post- manipulation scores for Confidence in the Peer Feedback and Peer Comparison conditions.

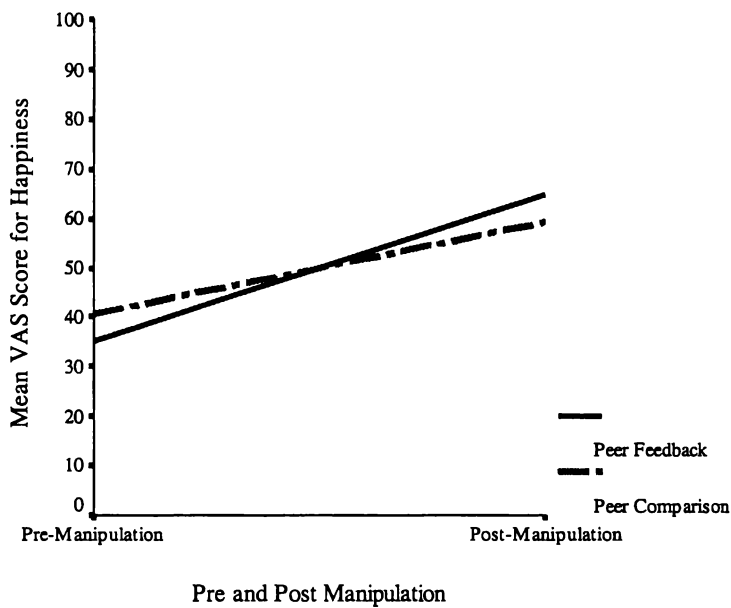


Figure R.7. Mean pre- and post- manipulation scores for Happiness in the Peer Feedback and Peer Comparison conditions.

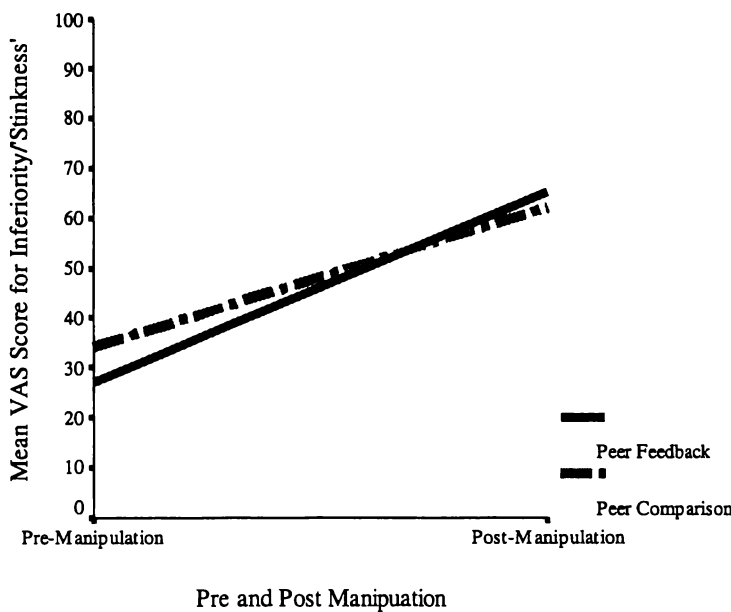


Figure R.8. Mean pre- and post- manipulation scores for Inferiority/‘Stinkness’ in the Peer Feedback and Peer Comparison conditions.

CONSENT FORM

Name of Research Project
Teenagers and Social Situations
Researcher
Jo McClintock
Supervisors
Prof Ian Evans and Dr Mike Hills

I have read over the information about the research project. I have had the opportunity to contact Jo McClintock and my questions have been answered to my satisfaction.

I agree to participate in this research project and I understand that I may withdraw at any time.

Name: _____

Signature: _____

I would like a summary of the research project. (please provide a postal address).

ANY QUESTIONS

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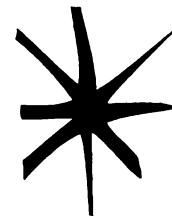
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Alternatively, you can contact my supervisor Professor Ian Evans on 06 350 5799 ext 7171 or Dr Mike Hills 856 2889

THANK YOU

INFORMATION SHEET AND CONSENT FORM



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WHAT WILL I BE REQUIRED TO DO

Your involvement will be for approximately one hour.

The study will involve filling in some questionnaires, taking part in some imaginal situations, and a brief interview with myself (Jo McClintock).

If you do not want to participate, it will not affect you in any way. You have the right to withdraw at anytime from the project, even after you have completed the consent form.

As a thank you for participating in this project, you will go in the draw to win music, book, or movie vouchers,

WHAT WILL HAPPEN TO THE INFORMATION

Names will not be associated with any of the information that is obtained from the study.

All information provided from the people who participate in the study will be kept confidential in a locked filing cabinet at the University of Waikato.

COMPETITION INFORMATION

I would like to win:

- Music Vouchers ☐
- Book Vouchers ☐
- Movie Vouchers ☐

My address is:

APPENDIX T

Ideal-Body Stereotype Scale-Revised

For copyright reasons the Ideal-Body Stereotype Scale can not be reproduced here. However sample items are provided below. Contact details as to where to obtain the measure are also provided.

We want to know what you think attractive women look like. How much do you agree with the following statements					
1	2	3	4	5	
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	

Strongly Disagree ←————→ Strongly Agree

Thin women are more attractive	1	2	3	4	5
Women who are in shape are more attractive	1	2	3	4	5

This scale can be obtained from:
Eric Stice, PhD
University of Texas at Austin
Department of Psychology
330 Mezes Hall
Austin, TX 78712
stice@psyvax.psy.utexas.edu

APPENDIX U

Scenario Conclusion

Each scenario and manipulation combination had its own scenario conclusion page. The following was the scenario conclusion page for the Scenario A and peer feedback combination.

PLEASE WRITE DOWN HOW YOU WOULD LIKE THE SCENARIO TO END

It is Friday night, the end of school term and there is a huge party being held that you and your friends are going to. You and two of your close girlfriends are at your friends place getting ready. You and your friends have 2 or 3 outfits to choose from because you can't decide what you are going to wear.

Your friend looks you up and down and says “man those pants are fitting aren’t they”.

[illegible]

APPENDIX V

Power Calculation

Repeated Measures Analysis

$d = \frac{d^*}{\sqrt{(1-r)}}$

$\frac{0.5}{\sqrt{(1-.17)}}$

(Conventional definition of medium effect size)

$(r = .17 - \text{Smallest pre- post- correlation from pilot study})$

.55

$\alpha = .05$

$N = 33$

$\text{Power} = .71$

(Derived from Cohen's (1988) Table 2.3.2, p. 30)