The Relationship Between Body Weight, Body Image, Self Esteem and Relationship Quality

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Declaration

I declare that this report does not incorporate without acknowledgement any material previously submitted for a degree in any University, College of Advanced Education, or other educational institution, and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

I further declare that the ethical principles and procedures specified in the School of Behavioural and Social Sciences Human Research Ethics Committee document have been adhered to in the preparation of this report.

Name: Melinda S. Millard

Signed:
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Abstract

The aim of the current study was to examine the relationships between body weight, body image, self-esteem and relationship quality in a community sample of obese, overweight and healthy weight individuals. It was hypothesised that as body mass index increased individuals would report greater body image dissatisfaction, experience lower self-esteem and perceive poorer relationship quality. A further prediction was self-esteem would mediate the relationship between body image and relationship quality. The sample consisted of 214 subjects, 162 were female and 52 were male, ages ranged from 18 to 72 years ($M = 36.22$ years, $SD = 10.89$ years). The participants anonymously completed a self-report questionnaire. The results supported the hypotheses, demonstrating a significant difference in the trends. This was significantly different for obese and healthy weight individuals, but not for overweight individuals. Future research using a larger sample size may assist in determining a difference. In addition, self-esteem mediated the relationship between body image and relationship quality. These findings support the idea obesity is indeed a complex condition that includes important psychological and psychosocial elements, which should not be overlooked when dealing with an obese individual.
1.1 *Prevalence of Obesity*

Obesity today is far from being a problem experienced by a select few. In Australia, and indeed in most Western countries, the frequency of obesity is increasing at an alarming rate (Field, Barnoya, & Colditz, 2002). According to the World Health Organisation (WHO) the prevalence of obesity has reached epidemic proportions throughout the world, affecting virtually all age groups (Cameron, 1999; Mustillo, Worthman, Erkani, Keeler, Angold, & Costello, 2003; Waters & Baur, 2003; Zametkin, Zoon, Klein, & Munson, 2004) and socio-economic groups (Variyam, 2002; WHO, 2000). Rather than being an issue affecting only developed nations, obesity is now a global concern, as the prevalence is beginning to rapidly rise in developing countries, often coexisting with malnutrition (WHO, 2000). It has been estimated that approximately 300 million adults are obese globally (Australian Institute of Health and Welfare Health [AIHW] & National Heart Foundation of Australia [NHFA], 2004; WHO, 2000). Recent statistics on Australia's obesity problem estimated the proportion of obese adults has doubled in the past decade, with over 3.3 million adults now classified as obese (Australian Bureau of Statistics [ABS], 2001; AIHW & NHFA, 2004; Cameron, Welborn, Zimmet, Dunstan, Owen, Salmon, Dalton, Jolley, & Shaw, 2004). In addition, the report found obesity is becoming one of the biggest health problems facing
Australia today, with well documented links to high morbidity and mortality rates (Allison, Fontaine, Manson, Stevens, & VanItallie, 1999; AIHW & NHFA, 2004; Field et al., 2002; O’Brien & Webble, 2004; Waters & Baur, 2003).

1.2 Economic Consequences of Obesity

Obesity is a contributing factor in thousands of deaths and is responsible for a large percentage of chronic physical and psychological illness and disability of Australian adults annually (ABS, 2001; Doll, Petersen, & Stewart-Brown, 2000; Cameron et al., 2004). Subsequently, obesity contributes significantly to the increasing health care costs of most industrialised countries (Field et al., 2002; Kortt, Langley, & Cox, 1998; WHO, 2000). Indirect costs, such as the value of lost productivity and loss of wages are also rising rapidly (Gorstein & Grosse, 1994; Gortmaker, Must, Perrien, Sobal, & Dietz, 1993; Rosenberger, Sneh, Phipps, & Gurvitch, 2005). Undoubtedly the medical and economic consequences of obesity are profound, resulting in reduced quality of life and life expectancy, and accounting for billions of dollars in health care expenditure (Fontaine, Baraofsky, & Cheskin, 1997; Fontaine, Cheskin, & Baraofsky, 1996; Gortmaker et al., 1993; Kolotkin, Head, Hamilton, & Tse, 1995; Kolotkin, Meter, & Williams, 2001).
1.3 Medical and Psychological Consequences of Obesity

Clearly, this heterogeneous condition has severe adverse physical and psychological consequences (Doll et al., 2000; Weschler & Leopold, 2003). Obese individuals are at greater risk of developing diseases such as type II diabetes (Cameron et al., 2004), cardiovascular disease, like hypertension (Gallagher, Franklin, Ehrman, Keteyian, Brawner, de Jong, & McCullough, 2005), stroke, atherosclerosis (AIHW & NHFA, 2004), depression (Freidman & Brownell, 1995 cited in Wadden, Womble, Stunkard, & Anderson, 2002) and some types of cancer (Pan, Johnson, Ugnat, Wen, & Mao, 2004). Non-fatal disorders like sleep apnoea, osteoarthritis (Gallagher et al., 2005; Visscher & Seidell, 2001), and lowered self-esteem (Johnson, 2002) can also present in obese people. Obese people are at greater risk of experiencing co-morbidities and are as a result more difficult to treat, especially in terms of complications post surgery (Cameron et al., 2004; Doll et al., 2000; Weschler & Leopold, 2003). For example, weaning from mechanical ventilation is often fraught with difficulty, as is repositioning unconscious obese individuals in bed to try to prevent blood clot formation, the development of pneumonia, or pressure sores (Trembley & Bandi, 2003). These are but a few examples and demonstrate how ensuing longer hospital stays are sometimes inevitable (Epstein, Read, & Hoeffer, 1987).
1.4 Definition of Obesity

Obesity is commonly defined as having excess body fat (Field et al., 2002; Sobal, 1984), however measuring body fat is difficult (AIHW & NHFA, 2004). Traditionally body mass has been measured by weight alone or weight adjusted for height (AIHW & NHFA, 2004; Field et al., 2002; Hoyt & Kogan, 2001). In recent years, body mass index (BMI) has become the most commonly used method to determine body weight in adults and is a reasonable reflection of overall body fat (Field et al., 2002; Weschler & Leopold, 2003). BMI is an individual’s weight calculated in kilograms divided by the square of their height in metres (AIHW & NHFA, 2004; Weschler & Leopold, 2003; WHO, 2000). The BMI classification applied by the WHO defines obesity as a BMI greater than 30 (WHO, 2000).

1.5 Etiology

The increasing obesity epidemic reflects a change in society and its behavioural patterns (AIHW & NHFA, 2004; WHO, 2000). Put simply, the population is eating more and undertaking less physical activity. Poor nutrition, including foods that are energy-dense, nutrient poor, and which contain high levels of saturated fats and sugar, when combined with a marked reduction in physical activity have led to the global rise of obesity (AIHW & NHFA, 2004; Dixon & Waters, 2003; WHO, 2000). A notable shift towards less physically demanding jobs, more passive leisure pursuits and the
escalating use of technology at work and home has created a more sedentary lifestyle (Dixon & Waters, 2003; O’Brien & Webble, 2004; WHO, 2000).

1.6 Prejudice and Discrimination

Historically carrying a few extra kilos symbolised an affluent lifestyle, a style of figure well desired (Schwartz & Brownell, 2003). Today the situation is somewhat different. Social perceptions and expectations of the ideal body in the modern Western world emphasise thinness (Anshel, 2004; Kim & Kim, 2001; Schwartz & Brownell, 2003). Being overweight, more particularly obese, is no longer acceptable (Anshel, 2004; Schwartz & Brownell, 2003). Negative attitudes, subsequent prejudice and discrimination have now become commonplace (Cash, 2004; Grover, Keel, & Mitchell, 2003; Hoyt & Kogan, 2001; Schwartz & Brownell, 2003). It is paradoxical that in a culture that worships slimness, the population is getting larger (Parquette & Raine, 2004; Perez & Joiner, 2002).

Obesity comes from the Latin obesus, which has two meanings: The less well-known meaning is coarse or vulgar (Barnett, 2005), the latter a view frequently synonymous with obese individuals. The literature reflects a widely held societal view that obese people are less competent, less attractive, less desirable, and less disciplined than healthy weight individuals (Cash, 1995; Fowler, 1989; Gortmaker et al., 1993; Grover et al., 2003; Rothblum, Brand, Miller, & Oetjen 1990; Sargent, & Blanchflower, 1994; Schwartz &
Brownell, 2003; Wadden et al., 2002). Negative stigmatisation has been found to have consequences in educational, socio-economic, relational and occupational facets of the obese individual’s life (Blaine, DiBlasi, & Connor, 2002; Bocchieri, Meana, & Fisher, 2002). Obese people are prejudiced in dating relationships, have greater difficulty attracting a marriage partner, marry later, marry less desirable partners, and marry heavier partners (Blaine et al., 2002; Enzi, 1994; Mendelson, Mendelson, & Andrews, 2000; Sheets & Ajmere, 2005; Sobal, Rauschenbach, & Frongillo, 1995; Sobal, Rauschenbach, & Frongillo, 2003). These findings are not surprising when other studies have found obese people are more likely to remain single throughout life, are perceived to be less sexually active (Trappnell, Meston, & Gorzalka, 1997) and have fewer dating opportunities (Gortmaker et al., 1993; Wiederman & Hurst, 1998). In Wiederman and Hurst’s (1998) study, women who believed they might be ridiculed and stigmatised because of their weight frequently avoided social settings. The authors concluded social marginalisation further limited development of social skills and any prospect for the formation of interpersonal relationships. This is a view robustly supported and well acknowledged in other studies (Miller, Rothblum, Barbour, Brand, & Felicio, 1990; Strauss & Pollack, 2003). Fowler (1989) extended on this viewpoint and proposed that a lack of social interaction inhibited the development of identity formation, which has been found to affect self-esteem and body image.
1.7 Body Image and Body Image Dissatisfaction

The bias against obese people is frequently considered the last form of socially acceptable discrimination against a minority group (Bocchieri et al., 2002; Wadden et al., 2002). With ubiquitous prejudice and discrimination of obesity, it is not surprising obese people internalise these opinions shaped by the cultural expectations of thinness (Hoyt & Kogan, 2001; Sarwer & Thompson, 2002). Unable to escape the pressures to achieve the ideal body, the pursuit of thinness has led to concomitant increases in dieting behaviour (Hoyt & Kogan, 2001; Kim & Kim, 2001). Dieting has been implicated in such problematic behaviours as disordered eating (de Zwaan, 2001; Perez & Joiner, 2002; Rieder & Ruderman, 2001), which may, in part, explain the upsurge in eating disorders over the past few decades (Becker, Burwell, Navara, & Gilman, 2003; de Zwaan, 2001; Furnham, Badmin, & Sneade, 2002; Reider & Ruderman, 2001) especially in young girls (Anshel, 2004; Burrows & Cooper, 2002; Holt & Espelage, 2002; Slade, 1995). In addition, attempting to emulate the impossible cultural body ideal has seen a significant rise in body image dissatisfaction (Sarwer & Thompson, 2002; Sarwer, Thompson, & Cash, 2005).

Body image is an active and complex area of research in psychology, a construct often conceptualised as multidimensional in nature (Franzoi & Herzog, 1986; Franzoi & Shields, 1984). Whilst there is no one clear definition of body image, there is an extensive body of research that suggests
body image can be described as an individual’s own perception of and attitude about his or her body (Cash, Morrow, Hrabosky, & Perry, 2004; Pruzinsky & Cash, 2002; Connor, Johnson, & Grogan, 2004). Therefore, having a negative attitude and perception towards one’s body would imply body image dissatisfaction. Today, being unhappy with your body shape and weight is the norm, rather than the exception (Befort, Foley-Nicpon, Robinson-Kurplus, & Huser, 2001; Furnham & Calnan, 1998; Sarwer & Thompson, 2002; Sarwer et al., 2005; Wadden et al., 2002).

1.8 Body Image and Obesity

Obese people are receiving the message, predominantly via the media (Bas, Asci, Karabudak, & Kiziltan, 2004; Dittmar & Howard, 2004; Sherblom, 2004), that thinness equals attractiveness (Fallon & Rozin, 1985; Kostanski & Gullone, 1998; Grover et al., 2003). With the exclusion of underweight individuals, evidence unmistakably demonstrates that body image dissatisfaction worsens as BMI increases (Hill & Williams, 1998; Markey, Markey, & Birch, 2004; Schwartz & Brownell, 2003). Obese individuals frequently report more body image dissatisfaction compared to other weight groups (Pole, Crowther, & Schell, 2004; Sarwer, Wadden & Foster, 1998; Wadden et al., 2002). However, Sarwer and Thompson (2002) found the level of body image dissatisfaction did not worsen as the degree of obesity increased.
In a study by Sarwer and colleagues (1998), the behaviour of a sample of predominantly obese participants was influenced by poor body image. The women reported being frequently upset when thinking about their bodies, hiding their obesity with loose clothing, avoided looking at their bodies and went to great lengths to prevent others, including their partners, from seeing their figure. Interestingly, this behaviour is not specific to obese populations, but has been found to extend across all weight groups (Davison & McCabe, 2005). Undoubtedly, having poor body image significantly impacts on one’s life. The apparent lack of research investigating the causality of the association between body image and obesity is noteworthy considering the topical nature of both variables and subsequent negative consequences.

The link between obesity and body image becomes less apparent when investigating subgroups, such as women seeking weight loss or women with binge eating disorders. To demonstrate, Sarwer et al. (1998) found no significant correlation between body image and BMI in their sample of overweight women seeking weight loss treatment. Similar results were demonstrated in Matz, Foster, Faith, and Wadden’s (2002) study. However, it is feasible confounding factors such as increased self-esteem, for example, may have influenced these results. It is well acknowledged that at the commencement of treatment programs, self-esteem improves markedly, especially if weight loss is experienced (Doll et al., 2000; Johnson, 2002; Porter & Wampler, 2000; Teixeir, Going, Houtkooper, Cussler, Martin,
Metcalfé, Finkenthal, Blew, Sardinha, & Lohman, 2002, cited in Teixeir, Going, Sardinha, & Lohman, 2005). Interestingly, as noted by Nir and Neumann (1991), in their study, self-esteem returned to baseline twelve months after program commencement, regardless of weight loss. Russell and Cox (2003) proposed that with weight loss, perceptions of the ideal body alter causing a shift toward a thinner standard, and hence resultant body image dissatisfaction continues. Of course, not all obese people have poor body image and are vulnerable to developing body dissatisfaction (Faubel, 2001; Sarwer et al., 2005; Teixeira, Going, Sardinha, & Lohman, 2005), which is an issue that still remains one of the enigmas confronting theorists of body image. While investigation findings are beginning to provide a better understanding of body image and obesity and the related effects, the picture still remains unclear.

1.9 Body Image and Self Esteem

Self-esteem is considered to be one of the most researched constructs in the field of psychology (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995). Self-esteem can be conceptualised as a person’s independent feelings about themselves (Rosenberg, 1965). That is, individuals with high self-esteem have been characterised as possessing self worth and self-respect, and indeed better psychological well-being (Rosenberg et al., 1995). In contrast, those with low self-esteem are thought not to respect themselves, feel inadequate, unworthy or otherwise inefficient (Rosenberg, 1979). Findings have shown
low self-esteem can have detrimental effects on psychological well-being as well as physical health (Gray–Little & Hafdahl, 2000; Rosenberg et al., 1995).

Extensive research findings have found the association between self-esteem and body image to be consistently high (Befort et al., 2001; Davison & McCabe, 2005; Furnham et al., 2002; Henriques & Calhoun, 1999; Kim & Kim, 2001; Mirza, Davis, & Yanovski, 2005; Secord & Jourard, 1953; Thompson & Thompson, 1986). This implies that those who report low body image are likely to report poorer self-esteem. Interestingly, Keppel and Crowe (2000) inferred people who were predisposed to lower self-esteem were more likely to develop negative body image, rather than poor body image being the cause of low self-esteem. Matz et al. (2002) found self-esteem accounted for a large variance in body image dissatisfaction, which suggests evaluations of physical self and overall self are linked. In support of this inference, numerous other studies have concluded body image is perhaps not a separate construct to self-esteem but an important aspect of self-esteem, frequently termed body esteem (Franzoi & Herzog, 1986; Lerner & Karabenick, 1974; Lerner, Karabenick, & Stuart, 1973; Mendelson, McLaren, Gauvin, & Steiger, 2002; Mendelson et al., 2000; Pilner, Chiken, & Fleet, 1990; Secord & Jourard, 1953). This is a possible explanation why obese individuals vary in their body image perceptions. Hence, body image evaluations have significant implications for more global evaluations of the
Self-esteem and body image have both been crucially linked to the development and course of affective disorders like depression (Davison & McCabe, 2005; Masheb & Grilo, 2002; Wadden et al., 2002). More specifically, consistent findings demonstrate low self-esteem and poor body image, significantly correlate with depression (Davison & McCabe, 2005; Keppel & Crowe, 2000). As obese individuals are prone to low self-esteem and low body image these findings strongly suggest depression is a significant risk factor for this population. Despite this evidence there are very few studies that have investigated body image and self-esteem in an obese population.

1.10 Body Image and Relationship Quality

Conceptually it would seem logical that individuals who feel positively about their bodies would be more comfortable and confident within themselves, and this confidence would permeate other areas of life, including interpersonal relationships (Wadden et al., 2002). As obese individuals tend to report poorer body image, it is reasonable to expect they may experience poorer relationship quality than other weight groups (Macias, Leal, Lopez-Ibor, Rubio, & Caballero, 2004).
Inherently, human beings are social creatures who require interpersonal relationships for personal growth and development (Lang & Fingerman, 2004; Robles & Kiecolt-Glaser, 2003). The role of the marital (partner) relationship is particularly important, because research has consistently found that a good marital relationship predicts better physical and psychological health, and overall well-being (Lang, & Fingerman, 2004; Katz & Joiner, 2002, Sobal, Rauschenbach, & Frongillo, 1992; Sobal et al., 2003). As noted by Sobal et al. (1992, 2003), because of the social support and intimacy this relationship provides, married people are generally healthier and are subsequently at a lower risk of death than people who are unmarried. Wickrama and Lorenz (1997) found a negative correlation between relationship quality and illness, such that as relationship quality improved, physical illness decreased. Research has shown marriages where at least one partner is obese are unhappier unions (Sobal et al., 2003). This suggests that obesity can negate the value of good relationship quality and well-being.

Relationship quality can be conceptualised as assessing the perceptions individuals have about their feelings, behaviours and attitudes towards his or her relationship (Hendrick, 1988; Lang & Fingerman, 2004). A good quality relationship is when the individual perceives overall satisfaction in their relationship. Research in the field of relationship quality has been somewhat burdened with assessment issues, with the matter of how to evaluate relationship quality appropriately remaining largely unresolved. One issue is
defining what is being investigated. More specifically, global relationship quality scales are being applied to measure specific dimensions of relationships. To illustrate, the dimension of intimacy is measured and evaluated using a global scale rather than analysing the construct independently. A further limitation is despite the increasing trend of cohabitation (ABS, 2001), cohabiting couples including homosexual couples, are poorly represented in study samples. The present study endeavours to address this methodological limitation.

Previous research findings investigating the association between relationship quality and body image are offering new and interesting insights. However, studies have primarily focused on peer and romantic heterosexual relationships in the general population. A review of the literature established body weight is associated with marriage (Lipowicz, Gronklewicz, & Malina, 2002; Sobal et al., 2003). More specifically, individuals, especially women, will gain weight in the first few years after the wedding (Anderson, 2004; Bove, Sobal, & Rauschenbach, 2003; Jeffrey & Rick, 2002; Sobal et al., 2003). Interestingly however, Sobal and colleagues (1995), in their earlier work, found weight gain after the wedding was only prevalent for men and not women. Nonetheless, it was deduced that having a spouse, encouraged and facilitated eating among people (Sobal et al., 2003; Jeffrey & Rick, 2002). Furthermore, married individuals were more likely to be overweight and
obese than those who are unmarried (Kahn, Williamson, & Stevens, 1991; Lipowicz et al., 2002; Sobal & Rauschenbach, 2003; Sobal et al., 1992, 2003).

Interestingly, Sobal et al., (1995) established obese women were more likely to be satisfied with their marriages, while obese men tended to have marital concerns. Stuart and Jacobson’s (1987) study, found a link between weight gain and poor relationship quality. In their community sample of women, those in unsatisfactory marriages gained more weight than happily married women. The authors implied women turned to food for comfort to help with satisfying emotional needs not present in the relationship and to avoid or escape the stresses of the relationship. In support of this, based on the systemic model, Ganley (1986) postulated obesity is a psychosomatic syndrome that fulfils a homeostatic role in relationships to camouflage other problems. These observations are not unfounded (Becker et al., 2003; Makeri, Cummings, & Lees, 1997; de Zwann, 2001). Although binge eating was first recognised by Stunkard (1959) as an important characteristic of obesity, recent recognition that binge eating behaviour is widespread has gained momentum (Bocchieri et al., 2000; de Zwann, 2001).

Qualitative research by Faricy (1991) also sheds light on the effect obesity has on relationship quality. Through individual interviews, spouses and their obese partners reported that obesity put his or her relationship under pressure. A theme to emerge highlighted that the excessive weight of one partner was a
source of conflict, frequently resulting in emotional and sexual distancing
with the potential outcome being marital discord and poorer relationship
quality. Quantitative studies have backed these findings, having established
that overweight couples report difficulty with intimacy as a consequence of
their weight, which has resulted in poorer relationship quality (Cash,
Theriault, & Annis, 2004; Doherty & Harkaway, 1990; Rand, Kowalske, &
Kulda, 1984: Rand, Kulda, & Robbins, 1982). Though this information is
useful, a gap in the literature exists when attempting to discern why an
increase in BMI is linked to marriage, what the subsequent effects on
relationship quality might entail and more specifically, whether body image is
a contributing factor.

In general, studies investigating body image and relationship quality
suggest greater body image dissatisfaction is associated to lower relationship
quality. Hoyt and Kogan (2001) established a correlation in a sample of
university students’ peer and romantic relationships. However, it was difficult
to evaluate relationship quality accurately, as this was not psychometrically
measured, and only relationship status was determined. In addition, while
BMI was measured its effect on the association was not reported.

Studies observing this correlation in marital partners have demonstrated
inconsistent findings. A link between low body image and perceived poor
relationship quality was demonstrated in the study by Friedman, Dixon,
Brownell, Whisman, and Wilfley, (1998). However, this study had several limitations. BMI classification did not conform to the current WHO recommendations and therefore people who were of healthy weight and overweight were considered overweight and obese respectively. Secondly, the sample was a clinical population of women who were attending a weight loss program, and so no data on men’s experiences was documented. In addition, whether the association was affected by confounding factors commonly linked to clinical groups, such as poor self-esteem (Fennell, 1997; Guillon, Crocq, & Bailey, 2003). Finally, with acknowledgement from the authors no psychometrically sound scales were used to measure the variables of body image and relationship quality. Therefore, the results ought to be interpreted with caution.

In contrast, results in specific populations reporting altered body image as a consequence of medical issues such as the removal of a breast due to breast cancer or congestive heart failure, have in general indicated improved relationship quality (Andersen & Jochimsen, 1985; Rohrbaugh, Shoham, Cranford, Nicklas, Sonnega, & Coyne, 2002; Wimberly, Carver, Laurenceau, Harris, & Antoni, 2005). A possible explanation is that these particular circumstances allow the partner to give love, support and attention unreservedly, thereby creating a more supportive cohesion, which can help foster greater relationship satisfaction and therefore enhance well-being. Also it is reasonable to assume the experience of body image dissatisfaction under
these circumstances is more socially acceptable compared to obesity, especially since obesity is commonly perceived as a self-induced condition (Wadden et al., 2002). It is also possible that obesity is not seen as a true condition, or if so, one that does not require support. Therefore, offering support may not be done willingly, nor with much enthusiasm or sincerity.

Surprisingly, there is a paucity of studies investigating the effect body image has on relationship quality in an obese population. One area where a considerable number of longitudinal studies have revealed inconsistent findings is following gastric surgery (Crisp, Kalucy, Pilkington, & Gazet, 1977; Dubovski, Haddenjorst, & Murphy, 1985; Hafner, 1991; Leon, Eckert, Teed, & Buchwald, 1979; Neill, Marshall, & Yale, 1978; Rand et al., 1984; Rand et al., 1982; Stunkard, Stinnett, & Smoller, 1986). Among these studies, sexuality is frequently the main focus, where respondents invariably report an improved sexual life, after experiencing significant weight loss post gastric surgery. As Crisp et al (1977) demonstrated though, an increase in sexual function did not necessarily contribute to greater marital satisfaction. Rand et al. (1982) found in the relationships considered problematic before surgery improved after surgery albeit for a short period tending to return to the presurgical concerns. Reasons for these findings were akin to Ganley’s (1986) theory, that obesity previously played a stabilising role in the relationship. It is postulated that marked weight loss instigates role changes such as increased autonomy and improved social interactions, that may destabilise the
relationship, subsequently leading to marital conflict and discord. These findings suggest that marital stability and marital satisfaction are indeed two very different constructs. As a result, they ought to be thought of and treated separately, especially when dealing with distressed couples in a therapeutic setting.

In contrast, Dubovski et al, (1985) found improvements to both sexual and marital functioning. The authors speculated that once respondents no longer worried about being left by their partner, weight loss helped improve confidence in many facets of the individual’s life. This enabled respondents to be more assertive about what they wanted from a relationship and able to make changes within the relationship.

A limitation of some of these studies, however, was that relationship quality was frequently assessed without using psychometrically sound measures and reported retrospectively. This type of analysis is always fraught with validity and reliability issues (Bergman, Eklund, & Magnusson; 1991). Nonetheless, it was often speculated that weight loss alone contributed to the improvement in relationship quality. Alternative reasons for improved relationship quality such as improved self-esteem and body image were not explored, although assumed and consequently remain unclear.
1.11 *Self Esteem and Relationship Quality*

Rogers (1959) proposed that individuals who perceive themselves to be accepted and understood by their partners are likely to have positive self-evaluation. Thus the link between self-esteem and relationship quality is intuitive, an association that has been well documented both within quantitative and qualitative studies, in the general population (Culp & Beach, 1998; Lippes, 1999; Shackelford, 2001). Specifically, the evidence emerging from these findings has indicated individuals who have poor self-esteem perceive poorer relationship quality in comparison with individuals who have high self-esteem (Cramer, 2003).

In their examination of university students’ perception of self-esteem and relationship quality, Katz and Joiner (2002) reported an interaction among these two constructs. Specifically, participants with high self-esteem were more inclined to perceive their relationship as satisfactory. The authors surmised that subsequent positive implications for personal growth and development were more likely. Likewise, Cramer (2003) noted an interaction between self-esteem and relationship quality in his convenience sample of university students. This was particularly prevalent among students who required a high level of approval from their partner. Similar results were determined in a community sample involving older participants whose relationship length was longer (de Hart, Pelham, & Murray, 2004). However,
this study did not use a psychometrically tested scale to test relationship quality and consequently the results need to be cautiously reviewed.

Despite its intuitive logic, much less is known about the association between self-esteem and relationship quality in a population of obese individuals. If obesity is a potential stressor for contributing to marital and health issues, then research on body weight in relationships is important, especially since rising divorce rates in the Western world, and indeed Australia, continue to be a concern (ABS, 2004). There is a dearth of evidence that clearly demonstrates lower marital functioning is a sound indicator of divorce (Gottman, 1991; Pittman, 1993; Rogers & Amato, 1997; Walsh, Jacob, & Simons, 1995). These results taken together strongly suggest that perhaps self-esteem is consequential for both body image and relationship quality and therefore self-esteem plays a bigger role in the association between these two constructs than previously determined.

1.12 The Present Study

A considerable body of research has investigated the physiological effects of obesity. Although it is vital to understand the medical impact of obesity, it is equally essential to focus on the psychological and psychosocial consequences of obesity. While research is beginning to provide a basis for the psychological and psychosocial aspects related to obesity, these areas have yet to be studied as systematically or diligently as the physical aspects and
therefore remain to be fully understood. In general, this area of research is characterised by longitudinal, correlational, retrospective studies, is plagued by causality issues and commonly uses a convenience sample of predominately female subjects, often recruited from clinical settings. These investigations frequently produce inconsistent, conflicting results, complicated by confounding factors.

The literature addressing body image, self-esteem and relationship quality in an obese population is surprisingly scarce considering the intuitively reasonable assumption that these constructs would relate. With the increasing trend of obesity, coupled with the physical, psychological and economic effects associated with this complex condition for both the individual and society, it is imperative to study these constructs. Therefore, the current study attempted to confirm the relationships between body weight, body image, self-esteem and relationship quality, focusing particularly on obesity. This study also investigated the role of self-esteem in understanding how it may influence the association between body image and relationship quality. Securing an improved understanding of the various affects of obesity will contribute significantly to this area of psychosocial research and assist in improving the physical and psychological health and well-being of obese individuals. It is anticipated that the findings may contribute to research on developing a conceptual framework for the physical and psychological treatment of this heterogenous condition.
1.13 Aims and Hypotheses

Extending previous research, the aim of the proposed study was to examine the relationship between body image, self-esteem and relationship quality in a population of obese, overweight and healthy weight individuals in an attempt to better understand the effects body weight, in particular obesity, has on these constructs. More specifically, whether a satisfactory body image protects obese individuals from experiencing low self-esteem and poor relationship quality. In addition, the study aims to investigate if self-esteem plays a mediating role in the association between body image and relationship quality.

It was hypothesised that obese individuals will report poorer body image, experience lower self-esteem and perceive poorer quality in their romantic relationship compared to overweight and healthy weight individuals. In addition, overweight individuals will report poorer body image, experience lower self-esteem and perceive poorer quality in their romantic relationship than healthy weight individuals but report higher in these constructs than the obese weight group. Finally it was hypothesised that self-esteem will mediate the relationship between body image and relationship quality.
Chapter 2

Method

2.1 Participants

The sample consisted of 214 subjects, 162 of whom were female and 52 were male. Ages ranged from 18 to 72 years \((M = 36.22 \text{ years}, SD = 10.89 \text{ years})\). Fifty-five participants completed the paper version of the questionnaire (45 females and 14 males, ages ranging from 18 to 58 years, \(M = 35.68 \text{ years}, SD = 12.52 \text{ years}\)), and 155 participants the online version of the questionnaire (117 females and 38 males, ages ranging from 18 to 72 years, \(M = 36.45 \text{ years}, SD = 10.24 \text{ years}\)). The original sample comprised 392 participants, however 178 cases were excluded from the current study. The reasons for this were that missing data was greater than 30% for one or more of the scales \((n = 52)\), they were not in a current monogamous relationship \((n = 15)\), in a relationship for less than 6 months \((n = 14)\), they were under 18 years of age \((n = 12)\), or they were underweight \(\text{BMI}<18.5\text{kg/m}^2\) \((n = 23)\). In addition, confounding circumstances, which may have affected the participant’s self-esteem were also excluded. These were medical conditions \((n = 22)\), a current eating disorder \((n = 13)\), or currently involved in a weight management program for less than twelve months \((n = 21)\), or a combination of 2 or more of the latter \((n = 6)\).
Participants were recruited from a number of sources. First year psychological students from Swinburne University received course credit for participating in the study, or for passing the questionnaire onto another individual who met the criteria. The link to an online version of the survey was placed on various websites and internet groups, and a free advertisement displaying the online address was publicised in a volunteer register column of a Melbourne newspaper. To be eligible, participants were required to be aged 18 years or over and in a monogamous relationship for more than six months.

The majority of participants reported they reside in Australia (56.5%), with the remainder residing in America (21.5%), United Kingdom (9.8%), Asia (5.1%), Europe (4.7%), and other continents or regions (2.4%). The participants identified mostly with an Australian ethnic group (49.1%), American (15.9%), United Kingdom (16.4%), Asian (4.2%), European (7.5%), Mediterranean (4.2%), African (1.4%), or Middle Eastern (1.3%).

Of the sample 15% had attained postgraduate qualifications, 42.6% tertiary qualifications including university and TAFE, 20.1% were currently completing a tertiary qualification, and 21.9% had secondary qualifications (including partial secondary). In terms of primary occupation status, 47.2% were employed full time, 17.3% part-time, 4.2% casual, 7.5% engaged in home duties, 13.0% were students, 6.1% were self employed and the remaining 3.8% were either unemployed, retired or on a disability pension.
Most participants were in a married/defacto relationship 75.3%, while 19.6% were seriously dating, and the remaining 5.1% were engaged and living apart. The length of these relationships ranged between 6 months to 48 years ($M = 3.53, SD = 2.08$). The participants were mainly heterosexual 88.8%, while 6.5% were homosexual and 4.7% bisexual.

The vast majority of participants reported to they kept track of their weight (68.7%) and the weight measurement given was deemed accurate (86%). Body mass index (BMI) scores ranged from 19.57 to 60.49 ($M = 29.04, SD = 7.67$). The sample comprised of 76 healthy weight individuals (BMI 18.5-24.9), 53 were overweight (BMI 25-29.9), and 85 were obese (BMI $\geq 30$).

A large proportion of the sample reported they had a weight problem (62.1%). Fifty-two percent of the sample assessed what they ate, with most stating this was for a healthier lifestyle (31.3%). Over half of the sample (52.3%) had partaken in a weight management program in the past for the main purpose of losing or maintaining weight (33.6%).

2.2 Measures

An array of published, widely used and researched measurements were compiled to form a self-report questionnaire used to explore the relationships between body weight, body image, self-esteem and relationship quality. Demographic questions included age, gender, education, occupation,
relationship status, and height and weight were also included. An informed consent form accompanied both versions of the questionnaire. Refer to Appendix A for a full copy of the questionnaire and informed consent form.

2.2.1 Body Mass Index

Participants BMI (kg/m²) was calculated using self reported weight and height values. These were classified into three weight groups; a BMI between 18.5 and 24.9 is considered within the healthy weight range, a BMI between 25 and 29.9 is considered overweight, and a BMI ≥ 30 is considered obese (WHO, 2000; Weschler & Leopold, 2003). Research indicates that self reported height and weight is highly correlated with measured height and weight (Mendelson, Mendelson, & Andrews, 2000; Stevens, Keil, Waid, & Gazes, 1990; Stewart, 1982).

2.2.2 The Contour Drawing Rating Scale

The Contour Drawing Rating Scale (CDRS) (Thompson & Gray, 1995) was used to assess the respondents’ body image dissatisfaction. Subjects rated their current body size and their ideal body size according to a set of nine male and female figures graduating from small, anorexic body size, to large, obese body size. The difference between the current and ideal ratings provided an indication of their existing body image dissatisfaction. A score of zero indicates body satisfaction, a negative score indicates respondents’ preference for a larger body size and a positive score indicates respondents’
preference for a smaller body size. A high score represents greater body image dissatisfaction. Scores of zero and above were used in this study’s analysis. As a measure of test-retest reliability, the correlation coefficient reported by Thompson and Gray (1995), was $r = .78$ and highly significant $p < .0005$. Also, good construct validity was reported by Thompson and Gray (1995) and was therefore considered psychometrically sound.

2.2.3 The Rosenberg Self-Esteem Scale

The Rosenberg Self Esteem Scale (RSE) (Rosenberg, 1965) was used to assess the participant’s self-esteem. The RSE reflects a global sense of self-worth. The scale comprises a 10-item inventory, five positively worded and five negatively worded questions, such as “I certainly felt useless at times”. These items are measured using a 4-point Likert scale ranging from strongly disagree (1) to strongly agree (4). After reverse coding the five negatively worded items, items are keyed in a positive direction where scores can range from 10-40 with a high score representing high global self-esteem. Rosenberg (1979) reported a test-retest reliability of .88 and strong construct validity, thereby demonstrating sound psychometric properties for the self esteem scale.

2.2.4 The Relationship Assessment Scale

The Relationship Assessment Scale (RAS) (Hendrick, 1988) is a 7-item inventory measured using a 5-point Likert scale, ranging from (5) high
satisfaction to (1) low satisfaction. Items are keyed in a positive direction with scores ranging from 7–35 with a high score indicating high general relationship satisfaction. Due to the generic nature of Hendrick’s (1988) relationship scale, it can tap into the several dimensions of relationship quality while allowing it to be used across many relationship types and circumstances. For instance, the measure is appropriate for heterosexual and homosexual couples, married or dating. As a measure of scale reliability, the alpha coefficient reported by Hendrick (1988) was .86. The RAS has also demonstrated good test-retest reliability, and discriminant and convergent validity, and hence, is a psychometrically sound scale (Hendrick, 1988).

2.3 Procedure

All participants completed either the paper version or the online version of the questionnaire anonymously in their own time, taking approximately 30 minutes to complete. Participants were contacted through websites and internet groups that were linked to obesity and other related issues. Undergraduate psychology students were provided with an outline of the research prior to lecture commencement with the opportunity to take a questionnaire to complete in their own time. There was no monetary reward for participation.
Chapter 3

Results

3.1 Overview of Results

The main focus of the research investigated differences between body weight groups on the variables body image, self-esteem and relationship quality. In order to test the difference a between-groups multivariate analysis of variance (MANOVA) was conducted. To test the role self-esteem plays in the association between body image and relationship quality a mediation analysis was done.

3.2 Preliminary Data Analyses

The data was analysed using the Statistical Package for Social Sciences (SPSS) (Version 12). Initial data screening procedures were performed to ensure there were no errors in the data file. There were very few missing values in the data set, and these were in a random pattern, so after recoding negatively worded items, missing values were imputed by a mean substitution for that particular item. Study variables demonstrated adequate internal consistency and Cronbach’s alpha for each scale was body image $\alpha = .74$, self-esteem $\alpha = .88$, relationship quality $\alpha = .94$. 
3.2.1 Detecting Outliers

Initial data screening revealed a small number of univariate outliers on each of BMI, body image, self-esteem, and relationship quality variables. Given the scores appeared to be genuine and were likely to be a legitimate part of the target sample, all cases were retained for analysis.

3.2.2 Assessing Univariate Normality, Linearity and Homoscedasicity

Examination of the skewness and kurtosis statistics, plus inspection of histograms and normal probability plots revealed moderate violations of normality in the variables. The Kolmogorov-Smirnov statistic was significant, however, significant values of this statistic, indicating violations of normality, are quite common in larger samples (Pallant, 2001). Nevertheless, normality tests revealed body image dissatisfaction and BMI was positively skewed, and, self-esteem and relationship quality were negatively skewed, all of which seem to reflect the underlying clinical nature of these measures. Given that skewness rather than outliers were causing the non-normality, with reasonably large samples skewness does not make a substantive difference in analyses (Tabachnick & Fidell, 2001). For this reason, it was decided that transformation of data was not appropriate. Investigation of the scatterplots and standardised residual plots between each pair of dependent variables revealed evidence of linearity and homoscedasicity in all instances.
3.3 Data Analysis

3.3.1 Intercorrelations Between the Variables

Correlations and tolerance statistics indicated no evidence of multicollinearity. As expected, Table 1 demonstrates there was a moderate positive correlation between BMI and body image. Therefore, people with a high BMI are more likely to report greater body image dissatisfaction than individuals with lower BMI. BMI also had weak negative correlations with self-esteem and relationship quality. As BMI increases, an individual’s self-esteem and perception of relationship quality decreases. Also as expected, there was a negative moderate correlation between body image and self-esteem and a weak negative correlation between body image and relationship quality. Individuals with greater body image dissatisfaction tend to report poorer self-esteem and relationship quality than individuals who are more satisfied with their bodies. A moderate to strong positive correlation between self-esteem and relationship quality was present, as anticipated. People with high self-esteem tend to report better relationship quality compared to individuals whose self-esteem is low.
### Table 1

**Summary of Reliability Coefficients and Bivariate Correlations Between Study Variables.** *(N = 214)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Body Mass Index</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Body Image</td>
<td>.55**</td>
<td>.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Self-Esteem</td>
<td>-.24**</td>
<td>-.45**</td>
<td>.88</td>
<td></td>
</tr>
<tr>
<td>4. Relationship Quality</td>
<td>-.23**</td>
<td>-.28**</td>
<td>.57**</td>
<td>.94</td>
</tr>
</tbody>
</table>

*Note. *p < .05; **p < .01; *** p < .001 (2-tailed); Cronbach’s alpha values are italicised across the diagonal.*

3.3.2 _Differences on body image, self-esteem, and relationship quality constructs for body weight groups._

In order to test for differences between body weight groups in body image, self-esteem and relationship quality, a between-groups multivariate analysis of variance (MANOVA) was conducted. The independent variable BMI was entered after categorisation into the following three weight groups: healthy weight (BMI 18.5 – 24.9), overweight (BMI range 25 - 29.9) and obese (BMI range > 30). Body image, self-esteem and relationship quality were entered as the three dependent variables.

Further to the preliminary data analysis, the data for MANOVA was assessed for suitability. Observations were measured independently of each other, and the sample size was greater than 30 in each cell, which, according
to Pallant (2001) is sufficient. With the use of $p<0.001$, criterion for Mahalanobis distance, one multivariate outliers was identified. As the score was not too diverse, and not likely to make a substantive difference, the case was retained for analysis.

Levene’s test of equal variance demonstrated non-significant values for the body image measure only, while self-esteem, relationship quality and BMI indicated a violation of equal variance. Similarly, Box’s M was significant revealing a violation of the variance-covariance matrices. Consequently, Pillai’s Trace statistic was interpreted, as it is the most robust, given there were some assumption violation (Tabachnick & Fidell, 2001). An alpha level of .05 was used for all multivariate tests. While MANOVA is robust to assumption violation when sample sizes are equal, caution should be taken with the interpretation of this study’s results, as sample sizes were unequal. The means and standard deviations for BMI, body image, self-esteem, and relationship quality measures for each weight group are presented in Table 2.
Table 2

*Means and Standard Deviations of Body Mass Index, Body Image, Self-Esteem and Relationship Quality for Healthy, Overweight and Obese Weight Groups. (N = 214)*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Healthy n = 76</th>
<th>Overweight n = 53</th>
<th>Obese n = 85</th>
<th>Total Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Mass Index</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td></td>
<td>22.19 (1.58)</td>
<td>27.06 (1.53)</td>
<td>36.24 (6.49)</td>
<td>28.98 (7.51)</td>
</tr>
<tr>
<td>Body Image</td>
<td>2.29 (2.04)</td>
<td>4.15 (1.89)</td>
<td>5.54 (2.55)</td>
<td>4.04 (2.63)</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>31.51 (4.73)</td>
<td>30.25 (6.67)</td>
<td>27.99 (6.85)</td>
<td>29.80 (6.30)</td>
</tr>
<tr>
<td>Relationship Quality</td>
<td>28.11 (5.62)</td>
<td>27.32 (6.03)</td>
<td>24.75 (7.30)</td>
<td>26.58 (6.58)</td>
</tr>
</tbody>
</table>

*Note.* Body Mass Index (kg/m²); Body Image (scale 0-12); Self-Esteem (scale 10-40); Relationship Quality (scale 5-35).

The means shown in Table 2 clearly demonstrate with an increase in BMI, body image dissatisfaction worsens, self-esteem is lower and relationship quality is poorer. Obese individuals reported poorer body image, self-esteem and relationship quality compared to overweight and healthy weight individuals.

As expected, the results of the MANOVA indicated there was a significant difference among the variables body image, self-esteem and relationship quality for healthy, overweight and obese weight groups, \( (F (6, 420) = 12.50, \)
The main effects revealed significant differences in body image ($F(2, 211) = 42.98, p < .05, \text{partial } \eta^2 = .0.29$), self-esteem ($F(2, 211) = 6.82, p < .05, \text{partial } \eta^2 = .06$) and relationship quality ($F(2, 211) = 5.91, p < .05, \text{partial } \eta^2 = .53$) of the healthy, overweight and obese body weight groups.

3.3.3 Post Hoc Comparisons

Post hoc comparisons were performed using Tukey Honestly Significant Difference (HSD) to correct for type I error (Tabachnick & Fidell, 2001). Tukey HSD indicated obese individuals have greater body image dissatisfaction than overweight and healthy weight groups. Furthermore, as expected overweight individuals were found to have poorer body image than healthy weight groups but reported greater body image satisfaction than obese individuals.

Obese individuals reported lower self-esteem and perceived poorer relationship quality compared to healthy weight individuals. There was no significant difference of the self-esteem and relationship quality constructs between obese and overweight, and overweight and healthy weight individuals.
3.4 Mediation Analysis

To test the hypothesis that self-esteem mediates the relationship between body image and relationship quality, a series of three standard regression analyses were performed, as outlined by Baron and Kenny (1986). Squared semi partial correlation ($Sr^2$), standard ($\beta$) and unstandardised beta ($B$) coefficients, standard error (SE B) and significance with mediation of body image are shown in Table 3.

Table 3


($N = 214$)

<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>SE B</th>
<th>$\beta$</th>
<th>$Sr^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regression 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Image – Relationship Quality</td>
<td>-.68</td>
<td>.17</td>
<td>-.28***</td>
<td>-.27</td>
</tr>
<tr>
<td><strong>Regression 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Image – Self-Esteem</td>
<td>-1.06</td>
<td>.15</td>
<td>-.45***</td>
<td>-.42</td>
</tr>
<tr>
<td><strong>Regression 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body Image – Relationship Quality</td>
<td>-.07</td>
<td>.16</td>
<td>-.03</td>
<td>-.03</td>
</tr>
<tr>
<td>Self-Esteem – Relationship Quality</td>
<td>.58</td>
<td>.07</td>
<td>.55***</td>
<td>.52</td>
</tr>
</tbody>
</table>

Note. *p < .05; **p < .01; *** p < .001
Body image significantly predicts self-esteem, and alone significantly predicts relationship quality. However, when body image and self-esteem are both in the model, self-esteem significantly predicts relationship quality, but the effect of body image on relationship quality is no longer significant. Figure 1 presents a graphical description of the mediation analysis.

Figure 1. Mediation Model for Self-Esteem

Note. *p < .05; **p < .01 *** p < .001; ns = non-significant; a refers to the indirect effect when self esteem is included in the model. Numbers without a refers to the direct effect without self esteem in the model.

As demonstrated in Figure 1, the relationship between body image and relationship quality was mediated by self-esteem with an indirect effect of .25. Therefore, 25% of the variance in relationship quality can be explained by the combined influence of body image and self-esteem. Individuals with good body image are more likely to report higher self-esteem and therefore perceive better relationship quality.
Chapter 4
Discussion

4.1 Overview of Aims and Findings

This present study provides important insights about obesity and related constructs. The investigation was unique and has contributed to the literature, by means of examining the relationship between body image, self-esteem and relationship quality, in a community population of obese, overweight and healthy weight individuals, which had not been tested previously. The general aims of this research were to extend on previous research but also to take account for some of the limitations in past literature. This included the development of specific criteria to categorise individuals into weight groups, the selection of individuals whose relationship were greater than six months in duration, and excluding participants who had been diagnosed as having a current eating disorder, were underweight, currently in a weight loss program or had a medical condition. By accounting for these, the study addressed the limitations and decreased the possibility of confounding factors commonly associated with research in this area.

In addition, this study looked at whether a satisfactory body image protected obese individuals’ from experiencing poor self-esteem and relationship quality. It was hypothesised that obese individuals perceptions of body image, self-esteem and relationship quality would be lower than
overweight and healthy weight individuals. In addition, that overweight individuals, would report poorer body image, self-esteem and relationship quality compared to healthy weight individuals, but have higher body image and self-esteem, and better relationship quality than obese individuals. A further hypothesis was to examine whether self-esteem mediated the association between body image and relationship quality. The findings in relation to these specific hypotheses are examined in the following discussion.

4.2 Body Weight and Body Image

The results of the present study found a significant moderate positive association between body weight and body image dissatisfaction, in that as BMI increased, body image dissatisfaction increased. These findings support the hypothesis that obese individuals will report greater body image dissatisfaction than overweight and healthy weight individuals. Further, as predicted, overweight individuals perceived poorer body image than healthy weight individuals but higher body image than the obese weight group. This relationship is therefore congruent with prior research findings (Sarwer, Wadden & Foster, 1998; Wadden et al., 2002). Furthermore, the results overwhelmingly found that the majority of respondents, across all weight groups, were dissatisfied with their body. This finding simply highlights the widespread normative discontent with one’s body in Western society today.
One possible explanation for this phenomenon is perhaps the media’s influence. There is no doubt the media is a pervasive and powerful tool, that promotes and emphasises the sociocultural ideal of slimness as being normal, and well desired. The persistent reminder of the ideal body has also created the attitude that thinness equates to attractiveness. Consequently obese individuals are getting the message that not only is their body shape and weight unacceptable, but they are unattractive as well. It is not surprising then, that this negative attitude and bias has infiltrated the psyche of obese individuals and shaped their body image perceptions.

For this research sample, body image dissatisfaction appeared to influence eating habits, as just over half of all the respondents reported assessing what they ate. This implies that being unhappy with one’s body can influence particular behaviours. These results lend support to the assertion that dieting behaviour can alter in the pursuit of the thin ideal. Given that dieting behaviour has been implicated in disordered eating, this is important to consider, particularly in a population of obese individuals, as binge eating disorder is a known characteristic of obesity (Stunkard, 1959). Since obese people are more vulnerable to developing and experiencing binge eating disorder than other weight groups, it could therefore be argued disordered eating is a much larger problem in our community than previously known. In addition, the current sample comprised a good number of males, which if these assumptions are indeed true, the issue of disordered eating may well be
prevalent in both genders. This adds another dimension to this already troubling problem and the subsequent ramifications are yet to be understood. To put this into context though, none of these participants reported having a current eating disorder as those who did were excluded. However, this response may be explained by the possibility that there is a lack of knowledge within the general population, regarding disordered eating, particularly binge eating. The community is only just starting to acquire knowledge about this recently recognised disorder. Further research investigating disordered eating in a community sample of obese males and females needs to be accomplished to quantify these assertions.

Furthermore, while it was interesting to note eating behaviours were regularly assessed, very few respondents reported participating in exercise. Given a large proportion of the sample consisted of obese and overweight individuals this result is not surprising, as it is well acknowledged society’s obesity problem is, in part, a consequence of more sedentary behaviours (AIHW & NHFA, 2004; WHO, 2000). One possible explanation why obese individuals do not participate in exercise and sport is the potential embarrassment and ridicule that may confront them. As it is well acknowledged prejudice and discrimination towards obese individuals is still rife today. Exercise and sport generally requires a level of fitness and stamina. Obese people are less likely to be as fit as healthy weight individuals, which probably impedes their sporting attempts. This only
confounds the already difficult situation of weight loss. Nonetheless, understanding why some behaviours are altered and others are not as a consequence of body image dissatisfaction, is intriguing and requires more research to further evaluate the extent of this societal concern.

On the other hand, it could be asserted that the assessment of eating may be due to the preoccupation with food, a known characteristic of obesity (Wadden & Phelan, 2002). This lends support to the notion that eating is potentially problematic for this population. Future studies are needed, to further establish the dynamics of eating in this population and whether this behaviour is also regulated and monitored. Although speculative, it seems society that there is a broad acknowledgment of the obesity problem with little real effort to rectify the situation. In terms of this sample, this is surprising as the education level was of a high standard and is thought to be synonymous with a lower incidence of obesity. This implies that the obesity problem is a lot more complex than altering behaviour alone.

While behavioural etiology in relation to the obesity epidemic is definitely relevant, the role of cognitions and affect should also be considered in terms of these findings (Tiggermann, 2002). Cognitions and affective behaviour become particularly prevalent when considering the paradox that, despite society’s tendency to worship thinness, the incidence of obesity continues to rise (AIHW & NHFA, 2004; WHO, 2000). To illustrate, as individuals
become increasingly aware they are unable to realistically emulate current societal standards and expectations of the ideal body, they find comfort in food. The media frenzy surrounding body image may have indeed produced a population of emotional eaters. So, the shift in body weight comprises a much greater issue than the failure to eat less and exercise more. Cash et al. (2004), suggests the empowerment of individuals, particularly women, with greater media literacy in terms of body image and body acceptance, may help to generate a shift away from the current perceptions of body image dissatisfaction. However, it appears this development may be a long way off.

This information uniformly highlights the extent of the body image issues and the subsequent debate in our society today. The problem for the obese population appears to be of a greater magnitude than for other weight groups. Future research is undeniably important to further the understanding of other behavioural, cognitive and affective changes that might be occurring as a consequence of body image disturbances.

4.3 Body Weight and Self-Esteem

The investigation of the hypothesis that poorer self-esteem would be prevalent in individuals whose BMI was higher was supported by the results. There was a weak significant negative relationship between BMI and self-esteem, where participants with a higher BMI are characterised by experiencing lower self-esteem. Therefore, the hypothesis that obese
individuals would experience lower self-esteem compared to the other weight
groups was supported. This is in line with previous research (Manus &
Killeen, 1995; Wardle, Waller, & Fox, 2002). Post hoc comparisons
however, revealed the link between body weight and self-esteem was
significantly different between the obese and healthy weight groups but not
for the overweight groups. Therefore, trend results ought to be treated with
cautions. However, a larger sample size may be required to observe a
significant difference in the self-esteem of obese, overweight and healthy
weight groups.

Unlike all previous studies though (e.g., Kim & Kim, 2001; Manus &
Killeen, 1995), these findings offer further insight into the area of obesity and
self-esteem in a community sample of adult males and females. In this study
the association between these variables was established in a community
sample of adult men and women, rather than a clinical population of
predominately female participants seeking weight loss, or children. The
evidence clearly demonstrates that the effects of obesity are far greater
reaching than had been previously studied. This information is important to
consider in terms of the potential implications this heterogenous condition
encompasses.

Conceptually, the association between body weight and self-esteem seems
more complex, which suggests other factors, may be influencing this
relationship. In this study, the relationship between these variables was low, which implies a confounding factor may have impacted on this association. The intercorrelations demonstrated a stronger relationship between self-esteem and body image. It could therefore be speculated that body image may indeed play a greater role in the association between self-esteem and body weight. Past research has demonstrated a relationship between self-esteem and body image (Davison & McCabe, 2005; Furnham et al., 2002; Henriques & Calhoun, 1999; Kim & Kim, 2001; Mirza, Davis, & Yanovski, 2005). Consequently then, these results are not surprising. With this in mind, as obese individuals are susceptible to low body image they are consequently more likely to report poorer self-esteem. However, this study is unique in that few previous studies have observed this link in an obese population. These findings are important to consider, especially in terms of the development of depression. Obese individuals are prone to poor self-esteem and low body image and it would seem they are thus at greater risk of depression. As the study comprised of a community sample of males and females, the findings imply that this problem may not be restricted to clinical samples of females alone as shown in previous research.

Differences in self-esteem between obese and healthy weight individuals suggest healthy weight individuals encompass a more global interpretation of self-esteem than obese people. In that they generate a sense of self through many additional avenues, other than their body. This suggests that healthy
weight people have fewer tendencies to be preoccupied with their bodies and are able to make a clear distinction between the physical self and overall self.

In contrast, obese individuals’ body image evaluations have significant implications for more global evaluations of the self, and for self-esteem. It is likely negative attitudes, overt prejudice and discrimination, impacts and influences how they view their bodies. It is reasonable to assume, this external pressure becomes all encompassing and be the only means of self-definition.

Furthermore, there was a fair amount of variance for the self-esteem variable. Therefore, for each weight group, but particularly the obese and overweight individuals, there were varying levels of self-esteem. This suggests that not all obese people have poor self-esteem. This offers a possible explanation why traditional weight loss programs are successful for some individuals and not others, such that individuals with increased self-esteem had greater success with weight loss than those with low self-esteem (Johnson, 2002). Further exploration investigating the cognitions employed to enhance self-perceptions to maintain an adequate global self-esteem, may help to better understand why some individuals are susceptible to low self-esteem and some are not.
4.4 Body Weight and Relationship Quality

Similar results were demonstrated between the variables body weight and relationship quality. There was a significant main effect between these constructs, as BMI increased, perceptions of relationship quality worsened. The findings support the hypothesis that individuals with a greater BMI would perceive poorer relationship quality. However, caution should be taken when interpreting this trend, as this difference was only significant for the obese and healthy weight groups. Again, studies in the future should endeavour to use a larger sample size to assist in clarifying this issue. Nonetheless, these findings are consistent with previous research (Sobal et al., 1995; Stuart & Jacobson, 1987) and provide support to Sobal and colleagues (1995, 2003), assertion that obesity can be a source of conflict in a marriage, which may lead to marital unhappiness and potential cessation of the union.

The results showed some variance in relationship quality for the obese weight group, highlighting that not all obese individuals perceive poor relationship quality. There are several factors that might be contributing to this outcome such as better communication, preference for larger figures, similarity of attitudes, or both partners might be obese and as a result obesity is not an issue. However, this statistic does lend some support to the assertion that obesity may play a stabilising role in a relationship (Becker et al., 2003; Ganley, 1986; Makeri, Cummings, & Lees, 1997; de Zwann, 2001). However, as Ganley (1986) pointed out, the stabilising role of obesity may
help to disguise other problems in the relationship. So, the relationship may well be of poorer quality anyway. This is, however only speculation and future testing is required to see, if indeed, this occurs.

4.5 Mediation of Self-Esteem

Of particular interest to the current study was to ascertain the role of self-esteem on the relationship between body image and relationship quality. The hypothesis that self-esteem would mediate this relationship was supported. This implies that body image affects the level of self-esteem, which in turn has an effect on the degree of relationship quality perceptions. The mediation analysis finds strong support for the interpretation that self-esteem does play a larger and pivotal role in the association between body image and relationship quality. The idea that increasing self-esteem can reduce the effect of body image dissatisfaction on relationship quality is certainly appealing from a therapeutic perspective. It would be interesting for future research to test this link in specific populations where body image can be an issue, such as breast cancer patients or ballet dancers.

4.6 Implications

Obesity is simply not just a physical problem, but a complex one that entails psychological and psychosocial concerns as well. Currently the major focus of treatment for obese individuals is directed towards weight loss, through means of dieting and exercise (AIHW & NHFA, 2004; WHO, 2000).
This requires individuals to donate a considerable amount of time and effort, which may be partly responsible for poor compliance and weight cycling problems. Whilst it is generally acknowledged that alterations to behaviour are important in losing weight, such programs that focus exclusively on these functions may do so at the neglect of equally important affective and cognitive responses to obesity. The mediation analysis results suggest that improving self-esteem would in turn enhance perceptions of body image, which Johnson (2002) asserts substantially increases the success of losing weight. An improvement in self-esteem and ultimately body image, is an idea that is just beginning to gather momentum in the weight loss arena. An increasing body of evidence demonstrates support for programs, designed to incorporate methods that counteract poor self-esteem and body image in the treatment of obesity for both adults and children (Johnson, 2002; O’Dea, 2004). It seems the approach to the growing obesity problem must be radically changed if this complex condition is to be thwarted. Providing people with the necessary tools, will assist individuals to develop and maintain healthier lifestyles, which may well alter the course of obesity.

The results of this present investigation have far reaching implications, not simply for obese individuals but for the wider community. Overall these results are important because they give us access to a deeper understanding of the dynamics involved in romantic relationships. The significant mediation of self-esteem on the relationship between body image and relationship quality,
demonstrates that it may not be sufficient to focus on the general aspects of a relationship when working therapeutically with distressed couples. It is important to be mindful of other potential issues like obesity, poor self-esteem and body image dissatisfaction, and integrate these dimensions into relationship counselling.

These findings also have implications for the medical profession. General practitioners play an important role when dealing with obese patients, especially now they are becoming increasingly aware of the importance of holistic care and that an intact psychological status assists in enhanced well-being. The general practitioner frequently is the first person to review individuals in distress. Having a broader understanding of the psychological and psychosocial dimensions of obesity, will assist in prompt, appropriate treatment and referral.

An improved understanding of the vulnerabilities and nature of obesity, may also help in forming and executing preventative strategies earlier in its development, such as in adolescence or childhood. This is important, as obesity is becoming increasingly prevalent in the younger generation and subsequently can be more problematic as the child grows into an adult (WHO, 2000).
4.7 Further Limitations of the Present Study and Directions for Future Research

One limitation of the current study, not unlike many studies in this field, was that the sample consisted mainly of Caucasian participants. This issue limits the generalisability of the findings. Efforts to obtain a more global representation should be undertaken in future research as it is important to determine whether the pattern of relations generalises across a broader span of culture and ethnicity. Understanding the broader nature of body weight, body image, self-esteem and relationship quality from a global perspective is equally important. Nonetheless, the study does appear to provide useful information about the experiences of obese individuals.

A further limitation with the present study pertains to the exclusive reliance on self-reported methods. Therein lies the question of accuracy, as self-reporting can lead to problems such as social desirability, especially in terms of such personal issues as weight and to a lesser extent, height. While there is evidence to support the accuracy of self-reported height and weight, future studies should endeavour to obtain actual measurements of participants to avoid any discrepancies in these measures.

In addition, while BMI is considered a suitable and appropriate method of assessing body weight, it is not always an optimal technique for measuring body fat composition. For example, when considering an individual with a
muscular build, such as a body builder, the BMI method would overestimate body fat when the increased weight is actually due to muscle and not fat. Future studies may consider alternative assessment techniques to obtain more accurate measures of body fat rather than body weight per se, such as computed tomography or underwater weighing (Wechsler & Leopold, 2003).

Another limitation of the study was in relation to the scale used to measure body image dissatisfaction. It appears since the CDRS was first developed, the population may indeed have increased in size because the largest body picture does not accurately represent current obese body sizes. Further studies replicating the current design, using an updated version of the body size drawings or an alternate body image measure might be worthwhile.

While this study offered new insights into the area of obesity particularly in relation to relationship quality, a further limitation was the research focused on the perceptions of one person in the relationship and included no reports from the partners themselves. An important goal for future research will be to assess partners' perceptions directly and cross-reference the accuracy of these perceptions to those of the other party. Assessing the perceptions of both partners will undoubtedly add to the value of understanding the role body weight, body image and self-esteem have in terms of relationship quality. This undoubtedly would facilitate in gauging a broader knowledge of relationship quality, especially in an obese population.
A final limitation of the study, was majority of respondent’s relationships were in the early stages. Research using individuals, whose length of relationship was longer, may yield different findings especially as older people can tend to view their bodies differently to younger people. In addition, investigating specific aspects of relationship quality, such as sexual experience and intimacy, plus gender differences may contribute to the overall understanding of relationship quality in an obese population.

However, despite these limitations, this study provides further information regarding previously underemphasised relationships between body weight, body image, self-esteem and relationship quality, with particular emphasis on a community population of obese males and females.

4.8 Conclusion

It is well acknowledged that the prevalence of obesity is rapidly increasing throughout the developed world. An abundance of research exists pertaining to the physical issues related to obesity, but surprisingly comparatively fewer studies have investigated the psychological and psychosocial impacts of obesity. This study sought to examine whether there was a difference in body image, self-esteem and relationship quality between the three weight groups. More specifically, whether a satisfactory body image protected obese individuals from experiencing poorer self-esteem and relationship quality. The overall strengths of this study was the large community sample of males
and females, the specific criteria for categorisation of weight groups, strict exclusion criteria such as those who were underweight, currently in a weight loss program and who reported a current eating disorder to name a few. These addressed limitations identified in previous research in this area.

In summary, the results of the present study found support for the interrelationships between obesity and body image, self-esteem and relationship quality. As BMI increased perceptions of body image, self-esteem and poorer relationship quality worsened. The prediction these trends would be different for each weight groups were not supported and future research with a larger sample size may be required to observe a difference between these constructs. Nonetheless these findings demonstrate the complex nature of obesity and that this condition is not merely a physical problem, or one that can be fixed by altering behaviour alone, but that it incorporates psychological components as well. The results highlight the value of understanding the constructs of self-esteem and body image in the interpersonal context of an obese population.
Chapter 5

References


Chapter 6

Appendices

Appendix A

Informed Consent and Questionnaire
The Relationships between Body Weight, Body Image, Self Esteem and Relationship Quality.

Investigators: Ms Melinda Millard & Dr Simon Knowles

This project is part of an Honours degree in Psychology at Swinburne University. The project aims to examine the relationships between body weight, body image, self-esteem and relationship quality. We hope that the results of this study will help to better understand these relationships, and the possible impact that different body weights can have on body image, self-esteem and relationship quality.

We are seeking male and female participants, aged 18 years and over, who have been in a relationship and living together for more than 6 months. If you volunteer to participate, you will be asked to complete some questionnaires, which will take about 30 minutes. The questionnaires include questions about your age, gender, level of education, height, weight, and relationship status, as well as questions about how you feel about yourself and your body. You will also be asked to rate your body image, and to answer some questions about your current relationship.

No identifying information is needed and your responses will be treated with the strictest confidence. The results of this project may be used in scientific journals or at conference presentations. In this case, only group data will be analysed and presented and no individual person’s data will be able to be identified.

Your involvement in the study is voluntary and you are free to withdraw at any stage without prejudice. If you decide to participate, please try and answer all questions. If you are a student from Swinburne University, please return your completed questionnaire in the allocated box on the 7th Floor of the BA Building (Hawthorn) or the questionnaire return box Level 1 (Lilydale). If you are not a Swinburne University student, please return your completed questionnaire in the reply paid envelope provided. The return of the questionnaire will be taken as your informed consent to participate.

The research conforms to the principles set out in the Swinburne University Policy on Research Ethics and the NHMRC guidelines in the National Statement on Ethical Conduct on Research with Humans. Please consider the purposes and time commitment of this study before you decide whether or not to participate. Please retain this information for your own records. We do not anticipate any risk or negative effect to arise due to your participation in the study. However, in the event of you having concerns about certain issues raised by the current research, you can contact the Swinburne Psychology Centre on +61 3 9214 8653 (Hawthorn), or if a Swinburne student the Swinburne Counselling Services at either Hawthorn (+61 3 9214 8025) or Lilydale (+61 3 9215 7101).

If you have any queries or concerns about this study please contact, Melinda at melindamillard@optusnet.com.au or Simon Knowles (Senior Investigator) on +61 3 9214 8206. Melinda can also be contacted if you would like a summary report of the major findings.

If you have any queries or concerns, which Simon Knowles the senior investigator was unable to satisfy, contact: The Chair, SBS Research Ethics Committee, School of Behavioural Sciences, Mail H24, PO Box 218, Swinburne University of Technology, Hawthorn, 3122.

If you have a complaint about the way you were treated during this study, please write to: The Chair, Human Research Ethics Committee, Swinburne University of Technology, P O Box 218, Hawthorn, 3122.

Thank you for your time and interest in this study.
DEMOGRAPHIC QUESTIONS

1. What is your age in years? __________

2. What is your gender? (please circle)
   1. Male  2. Female

3. What is your sexual preference? (please circle one option only)
   i. Heterosexual
   ii. Bisexual
   iii. Homosexual

4. What country were you born in? ____________________________________________________

5. What country was your mother/guardian born? _________________________________________

6. What country was your father/guardian born? __________________________________________

7. Which ethnic/cultural background do you most strongly identify with? ______________________

8. What is your highest level of education? (please circle one option only)
   No formal education 1
   Completed Primary School 2
   Some Secondary School 3
   Completed Secondary School 4
   TAFE/Diploma/Apprenticeship/Trade 5
   Some University undergraduate study 6
   Completed University undergraduate degree 7
   Some University postgraduate study 8
   Completed University postgraduate degree 9
9. What is your main employment status? i.e. what do you spend most hours doing per week *(please circle one option only)*

- Full-time employment  
- Part-time employment  
- Casual employment  
- Unemployed  
- Self-employed  
- Part-time student  
- Full-time student  
- Pensioner (old age/disability)  
- Home duties  
- Retired  

10. What is your current occupation? ____________________________

11. What is your income category? *(please circle one option only)*

- Below $20,000  
- $20,001 – less than $30,000  
- $30,001 – less than $40,000  
- $40,001 – less than $50,000  
- $50,001 – less than $60,000  
- $60,001 – less than $70,000  
- $70,001 – less than $80,000  
- $80,001 – less than $90,000  
- Over $90,001  

12. What is your height? ________________________ *(please state the units of measurement you are using, e.g., cm or feet/inches)*

13. Please indicate on the scale below how accurate this measure is? *(please circle one option only)*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Accurate</td>
<td>Unsure</td>
<td>Very Accurate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
14. Do you keep track of your weight? (please circle)
   1. Yes  2. No

15. How often do you weigh yourself? (please circle one option only)
   - More than once a day  1
   - Once a day  2
   - Once a week  3
   - Three times per week  4
   - Twice a week  5
   - Once a fortnight  6
   - Once a month  7
   - Once every two months  8
   - Once every six months  9
   - Once a year  10
   - Never  11
   - Other (please specify) ______________________  12

16. What is your weight? ____________________ (please state the units of measurement you are using, e.g., kgs or stones/pounds)

17. Please indicate on the scale below how accurate this measure is? (please circle one option only)
   1  2  3  4  5  6  7
   Not Accurate  Unsure  Very Accurate

18. In your view, what is your ideal weight (i.e., the weight that you would like to be)?
   ____________________ (please state the units of measurement you are using, e.g., kgs or stones/pounds)

19. Do you feel you have a weight problem? (please circle)
   1. Yes  2. No
20. Are there any medical factors that are currently impacting on your weight? (please circle)

1. Yes  
2. No

If yes to q20, please describe these factors (e.g., thyroid problem, pregnancy, diabetes, hormonal irregularities such as Cushing’s disease

_______________________________________________________________________________________
_______________________________________________________________________________________

21. Are you actively assessing what you eat (e.g. nutritional, calorie and fat intake, portion size? (please circle)

1. Yes  
2. No

If yes to q21, is this active assessment for

- Dieting purposes
- Medical reasons
- Healthier lifestyle
- Other (please describe)

22. Have you ever participated in any of the following weight management programs? (please circle the most applicable option)

1. No
2. Weight Watchers
3. Gut Busters
4. Lite and Easy
5. Regular dieting (not healthy eating)
6. Exercise geared to lose weight
7. Sure Slim
8. Jenny Craig
9. Multiple programs
10. Other (please describe)
23. Are you currently participating in any of the following weight management programs? **(please circle the most applicable option)**

- No 1
- Weight Watchers 2
- Gut Busters 3
- Lite and Easy 4
- Regular dieting (not healthy eating) 5
- Exercise geared to lose weight 6
- Sure Slim 7
- Jenny Craig 8
- Multiple programs 9
- Other (please describe) ________________________ 10

24. Why did you get involved with a weight management program? **(please circle the most applicable option).**

- Not Applicable 1
- Healthier Lifestyle 2
- Lose weight 3
- Gain weight 4
- Ongoing weight Management 5
- Preparation for an event e.g. wedding, surgery 6
- Instructed by health professional 7
- Alter Eating Habits/Behaviour 8
- Other (please specify)______________________________9
25. How long have you been or are still involved with a weight management program? (please circle the most appropriate option)

- Never 1
- Less than one week 2
- One week 3
- A fortnight 4
- A month 5
- Two to three months 6
- Three to four months 7
- Four to five months 8
- Five to six months 9
- Six months to one year 10
- Greater than one year (please specify length of time) 11

26. If you answered ‘greater than a year’ to q25, why this length of time? (please circle the most appropriate option)

- Not Applicable 1
- Healthier Lifestyle 2
- Lose weight 3
- Gain weight 4
- Ongoing weight Management 5
- Preparation for an event e.g. wedding, surgery 6
- Instructed by health professional 7
- Alter Eating Habits/Behaviour 8
- Other (please specify) 9

27. Do you feel you have been successful at the weight management program? (please circle one option only - circle N/A if this question does not apply to you) N/A

- 1 Not Successful
- 2 Unsure
- 3 Very Successful
28. Have you ever been diagnosed with an eating disorder? (please circle)
   1. Yes  2. No

If yes to q28, what type of eating disorder? (e.g., Anorexia Nervosa, Bulimia, etc.)
________________________________________________________________________________
Who made this diagnosis? (e.g., GP, Psychiatrist, Psychologist, self etc.)____________________

29. Do you feel you may have an undiagnosed eating disorder? (please circle)
   1. Yes  2. No

If yes to q29, what type of eating disorder? (e.g., Anorexia Nervosa, Bulimia, etc.)
_________________________________________________________________________________

30. If you answered yes to questions 28 or 29, is this a current problem? (please circle)
   1. Yes  2. No

31. What is your current relationship status? (please circle one option only)
   Single, never married 1
   Casually dating (I date other people as well) 2
   Seriously dating (I do not date other people) 3
   Engaged, but not living together 4
   Married/DeFacto and living with your partner 5
   Married/DeFacto and living apart (not separated or divorced) 6
   Married/DeFacto and living apart (separated) 7
   Divorced 8
   Widowed 9
   Other (please specify) 10

32. If you are currently in a relationship, what is the length of this relationship?
   ________ years ________ months
33. How do you think your partner perceives your current body shape? (please circle one option only)

1        2        3        4        5        6        7
Extremely Negative          Neutral          Extremely Positive

34. Does your partner support your current body shape? (please circle one option only)

1        2        3        4        5        6        7
Not at all                 Moderately                 Very Much

35. Do you think your current body shape adversely affects your relationship? (please circle one option only)

1        2        3        4        5        6        7
Not at all                 Moderately                 Extremely

36. If you are dieting, does your partner support your dieting behaviours? (please circle one option only)

1        2        3        4        5        6        7
Not at all                 Moderately                 Extremely

37. Does your partner ask you to diet for other than medical reasons? (please circle one option only)

1        2        3        4        5        6        7
Never                 Sometimes                 Very Often

38. Does your partner diet for other than medical reasons? (please circle one option only)

1        2        3        4        5        6        7
Never                 Sometimes                 Very Often
CURRENT

Draw a mark below the drawing, which most accurately depicts your current body size. You may place the mark anywhere below the drawings, including between figures. Now place a mark on the line below the set of opposite sex figures that depict what you think is the average figure.
IDEAL

Draw a mark below the drawing, which most accurately depicts your ideal body size (the size you would like to be). You may place the mark anywhere below the drawings, including between figures. Next draw a mark below the drawing of the opposite sex figure which you believe is the ideal body size (again you may place the mark between figures).
Please answer the questions below which ask you how you generally felt about yourself over the last few months. Please circle the number which best describes that way you feel.

<table>
<thead>
<tr>
<th>1. I feel that I’m a person of worth, at least on an equal plane with others.</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. I feel that I have a number of good qualities.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>3. All in all, I am inclined to feel that I am a failure.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>4. I am able to do things as well as most other people.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>5. I feel that I do not have much to be proud of.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>6. I take a positive attitude toward myself.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>7. On the whole, I am satisfied with myself.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>8. I wish I could have more respect for myself.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>9. I certainly feel useless at times.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
<tr>
<td>10. At times I think that I am no good at all.</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>
Please answer the questions below which ask you how you generally felt about your relationship over the last few months. Please circle the number which best describes the way you feel.

1. How well does your partner meet your needs?


2. In general, how satisfied are you with your relationship?


3. How good is your relationship compared to most?


4. How often do you wish you hadn’t entered this relationship?


5. To what extent has your relationship met your original expectations?


6. How much do you love your partner?


7. How many problems are there in your relationship?