

THE RELATIONSHIP BETWEEN BODY IMAGE AND
MARITAL SATISFACTION

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Abstract

The effects of weight stigma and its internalized variation, body dissatisfaction, have been documented in many aspects of life, including economics, education, families and the media. Limited literature exists regarding the effects of body satisfaction within the marital dyad. This study attempted to explore the interaction of body image and marital satisfaction.

Participants were recruited using social media. Married heterosexual couples were asked to each complete an online survey regarding their own feelings about their bodies and their marriages. Answers for spouses were linked in the database, resulting in 64 couples who completed the survey. Body satisfaction was measured using the Body Appreciation Scale and the Body Shape Questionnaire. Marital satisfaction was measured using the Couples Satisfaction Index. Height and weight information was used to calculate Body Mass Index. Linear regression was used to explore significant correlations. Body Mass Index was more strongly correlated with husbands' body satisfaction than it was for wives. Husbands' body satisfaction was found to weakly but significantly correlate with marital satisfaction for husbands, wives and couples. Wives' body satisfaction was not found to correlate with marital satisfaction at a statistically significant level.

Chapter I

Introduction

The widespread concern about increasing obesity rates since 1980 (Gibbs, 2005) has led to increased focus on weight loss and the manipulation of body size which has resulted in guilt, shame, and anxiety in individuals (Andreyeva, Puhl, & Brownell, 2008). Stigma, specifically using disapproval and reproach to change social norms, has been used successfully in public health initiatives to reduce behaviors such as smoking or drunk driving (Bayer & Stuber, 2005; Kim & Shanahan, 2003), but weight stigma has not led to improved health or smaller body size (Muennig, 2008; Austin, 1999) even when used as part of a public health campaign (Vartanian & Smyth, 2012). Weight stigma has, however, resulted in increased body dissatisfaction, which is correlated with poorer health behaviors and reduced quality of life (Tylka et al., 2014; Puhl & Heuer, 2010). Body dissatisfaction has become common, especially in women, across the range of Body Mass Index (BMI) (Ackard, Croll, & Kearney-Cooke, 2002). Concerns about the deleterious effects of weight stigma and anti-fat bias usually focus on how it affects those who are overweight or obese (Azétsop & Joy, 2011; Griffin, 2007), but widespread body dissatisfaction affects individuals of normal weight and their relationships as well (Brown, 2006). Self esteem is an integral component in intimate relationships (Bellavia & Murray, 2003), so the impact of body dissatisfaction on the quality of the marital relationship is worthy of study.

Anti-fat bias and weight stigma are terms that refer to negative attitudes and perceptions regarding people who are fat or otherwise considered larger than

desirable (Puhl & Brownell, 2006). Weight stigma is unique in that it is expressed interpersonally as well as being internalized as shame for having an unacceptable body in addition to blame for unacceptable behavior (Goldberg, 2014; Levine & Schweitzer, 2015; Schafer & Ferraro, 2011). Internalized weight stigma becomes body dissatisfaction (Ernsberger, 2009). Studies have supported the idea that both internalized and interpersonal stigma are correlated with poorer health outcomes (Mond et al., 2013). The stress of weight based discrimination has been linked to overall declines in health (Sutin, Stephan, & Terracciano, 2015). Increasingly, people who have never been heavy are developing body anxiety in response to the fear of gaining weight (Reba-Harrelson et al., 2009). "...in a fat-hating society, everyone is fat." (Wann, 2009, p. xv). This may be related to public health messages that warn against weight gain in addition to recommending weight loss for those who are already large (Bombak, 2014). Body anxiety and body dissatisfaction is documented across a range of body sizes and BMI ranges, especially among women (Gortmaker et al., 1993; Mond, et al., 2013).

Health promotion programs, public health initiatives and health education curricula may inadvertently reinforce weight stigma by promoting weight loss approaches that do not work (Bombak, 2014; Macpherson-Sánchez, 2015; Tylka et al., 2014). Increased stigma has been recommended as a way to motivate people to lose weight (Callahan, 2013). This raises ethical concerns as well, ranging from issues related to self determination to questions about evidence based interventions. Weight stigma diminishes individual agency and damages the sense of identity,

violating the bioethical values of justice, autonomy and nonmaleficence (Abu-Odeh, 2014).

Increased body anxiety among women of all sizes potentially affects their relationships in negative ways. Physical intimacy is an important part of marital satisfaction, and shame and self-consciousness about one's body interferes with the ability to enjoy intimate interaction with a partner (Friedman et al., 1998). Self-esteem plays a role in the ability to reconnect with a partner after a relationship threat (Peterson & DeHart, 2013). Expressions of physical affection play an important role in connection and attachment between partners both on a regular basis and in reestablishing relationship after a disagreement (Peterson & DeHart, 2013). Body dissatisfaction in either or both partners hinders this process (Friedman et al., 1998).

Weight stigma in society is internalized as body dissatisfaction. Factors that influence marital satisfaction and dissatisfaction, such as communication, friendship, empathy, openness, and coping strategies have been extensively studied (Duba, Hughey, Lara & Burke, 2012). However, research on the effect of body dissatisfaction on the quality of marital relationships is limited. This study will begin to examine the relationship between body dissatisfaction and marital satisfaction.

Statement of the Problem

Most of the research on the impact of weight stigma has focused on how it directly affects people of larger size, especially women. Few, if any, studies have examined the indirect effect of internalized weight stigma and its associated body

dissatisfaction on the intimate partners of those affected. Body dissatisfaction in either partner affects marital satisfaction for both partners. This study examined two questions: (1) In both husbands and wives, what is the relationship between an individual's body image and their own marital satisfaction? (2) What is the relationship between an individual's body satisfaction and their partner's marital satisfaction?

Hypothesis

The purpose of the present study was to examine two main research questions: (1) In both husbands and wives, what is the relationship between an individual's body image and their own marital satisfaction? (2) What is the relationship between an individual's body satisfaction and their partner's marital satisfaction? Hypothesis statement: I predicted that a positive relationship would be found between individual, and couple body satisfaction with individual, spousal, and couple marital satisfaction. That is, higher body satisfaction in the wife or husband, and in the couple as a whole, would be associated with higher marital satisfaction.

Basic Assumptions

It was assumed that respondents will answer survey questions honestly, accurately and completely. It was also assumed that each participant would take the survey only once.

Delimitations

The relationship between body image and interpersonal interaction is enormous and a full exploration of all aspects is beyond the scope of this study. The

focus was narrowed to heterosexual married couples in order to limit the collected data to a manageable amount and to narrow the range of extraneous variables. The sample needed to be large enough to produce statistically valid results but still may not be representative of the population. Structuring the study as an online survey with no identifying information ensured anonymity and confidentiality. Previously validated measures were used.

Limitations

This study has a number of limitations. The convenience sample cannot be said to be representative of the general population, given that it is drawn from internet users who may have some direct or indirect connection with the researcher or the institution associated with the researcher. Several sub-groups are excluded from the data, such as same sex couples, couples who are committed to each other but are not legally married, and divorced couples. Evaluation of marital satisfaction can be skewed by situational distress unrelated to body image concerns that may resolve over time.

Definitions

Body image is the inner view a person has regarding the outer self. It includes visual, mental, emotional, kinesthetic and historical aspects (Freedman, 2002).

Body loathing is a feeling of dissatisfaction and preoccupation with the body. It encompasses guilt, shame, anxiety, and self-consciousness (Freedman, 2002).

Body image dysfunction relates to a negative evaluation of body size, shape, tone and weight, and usually involves a perceived disparity

between the current body and the desired body (Cash, 2012). Body image dysfunction encompasses two largely separate components: perceptual body-size distortion and cognitive–evaluative dissatisfaction (commonly referred to as body dissatisfaction) (Polivy, Herman, & Pliner, 1990; Thompson, 1990, 1996).

Body dissatisfaction includes body weight dissatisfaction (BWD), which is a discrepancy between current and desired weight (Coker & Abraham, 2014).

Dieting refers to the deliberate restriction of intake in an attempt to reduce weight.

Stigma is a negative view of oneself or another based on a characteristic or trait that is considered to be negative or a disadvantage.

Discrimination is negative treatment of a person based on a personal characteristic or trait.

Abbreviations:

BAS, Body Appreciation Scale

BMI, Body Mass Index, defined as weight in kilograms divided by the square of height in meters

BD, body dissatisfaction

BSQ, Body Shape Questionnaire

BWD, body weight dissatisfaction

CRF, cardiorespiratory fitness

CSI, Couple Satisfaction Index

For purposes of this study, continuous data will be used to examine the

magnitude of body satisfaction/dissatisfaction and marital satisfaction. More generally, body dissatisfaction can be defined as lower scores on the Body Appreciation Scale or the Body Shape Questionnaire. Positive body satisfaction can be higher scores on the Body Appreciation Scale or the Body Shape Questionnaire. Positive marital satisfaction can be defined as higher scores on the Couples Satisfaction Index.

Significance of the Study

Health educators and public health professionals are currently struggling with how to respond to the growing concern about obesity and weight in American society (Gibbs, 2005). Many well-meaning interventions not only fail to reduce weight in individuals but also backfire in unexpected ways (Bombak, 2014; Tylka et al., 2014). Weight stigma leads to increased body dissatisfaction in people both thin and heavy. This can lead to problems in interpersonal relationships.

Some research has been done on the harmful sequelae of weight stigma and body dissatisfaction (Cardinal, Whitney, Narmatsu, Hubert, & Souza, 2014; Saguy, 2013; Schafer & Ferraro, 2011; Sutin, Stephan, Luchetti, & Terracciano, 2014; Tylka et al., 2014; Wang, Brownell, & Wadden, 2004), but little of it has focused specifically on the marital relationship. Interventions that focus on weight loss perpetuate the problems of body dissatisfaction and internalized weight stigma (Bombak, 2014; Goldberg, 2014; Tylka et al., 2014). Dyadic studies, which consider the data for husbands and wives in relation to each other, on this topic are very limited. Studies that consider the husband's body image within the marital framework are even more limited. If the relationship between body dissatisfaction and marital

dissatisfaction can be better understood, then better interventions can be developed by couples counselors, psychotherapists, health educators and public health professionals. Improved body satisfaction will likely lead to improved marital satisfaction and overall improved life satisfaction for both husbands and wives.

Chapter II

Review of the Literature

The current widespread concern about obesity has led to increased focus on the manipulation of body size, which has resulted in guilt, shame, and anxiety in individuals (Andreyeva, Puhl & Brownell, 2008). Stigma has been used successfully in public health initiatives to reduce behaviors such as smoking or drunk driving (Bayer, 2008; Kim & Shanahan, 2003; Struber, Galea, & Link, 2008), but weight stigma has not led to improved health or smaller body size (Muennig, 2008) despite some recommendations to increase weight stigma (Callahan, 2013). Sutin and Terracciaon (2013) found that weight discrimination not only does not motivate people in their weight loss attempts but is, instead, correlated with an increased risk for obesity. Weight stigma has also been shown to result in increased body dissatisfaction, which is correlated with poorer health behaviors and reduced quality of life (Puhl & Heuer, 2010; Tylka et al., 2014). Internalized weight bias has been shown to be correlated with reduced health related quality of life in individuals with high BMI scores (Latner, Barile, Durso, & O'Brien, 2014). Self-compassion interventions, on the other hand, have shown promise in improving eating regulation (Adams & Leary, 2007). Repeated encouragement to lose weight can result in low self-esteem and a constant sense of shame (Lewis, 2015). Body dissatisfaction has become common, especially in women, across the range of Body Mass Index (BMI) (Ackard, Croll, & Kearney-Cooke, 2002). Concerns about the deleterious effects of weight stigma and anti-fat bias usually focus on how it affects those who are overweight or obese (Azétsop & Joy, 2011; Gortmaker et al., 1993),

but the resulting body dissatisfaction impacts individuals of normal weight and their relationships as well. Self-esteem is an integral component in intimate relationships, so the impact of body dissatisfaction on the quality of the marital relationship is worthy of study.

A wealth of documentation exists to support the fact that attempts at individual weight loss generally fail (Bombak, 2014; H. N. Brown, 2015; Campos, 2004; Garner & Wooley, 1991; Leibel, Rosenbaum, & Hirsch, 1995; Mann, 2015; Mann, Tomiyama, & Ward, 2015; Robison & Carrier, 2004; Stunkard & McLaren-Hume, 1959; Tomiyama, Ahlstrom, & Mann, 2013; Troy et al., 1996; Tylka et al., 2014; Wooley & Wooley, 1982). Indeed, there is evidence that those who attempt to lose weight actually gain more weight over time than those who do not (Bacon & Aphramor, 2011; Bacon, Stern, Van Loan, & Keim, 2005; Kater, 2010; Mann, Tomiyama, Westling, Lew, Samuels, & Chatman, 2007; Neumark-Sztainer et al., 2006; Tsai & Wadden, 2005). Defining dieting as a voluntary, self-imposed famine, Macpherson-Sánchez (2015) makes a compelling argument that dieting, supported by public policy, the medical community and the \$60 billion per year weight-loss industry, is a major cause of the obesity epidemic. Focus on the undesirability of heavier weight is linked to weight stigma in the culture and internalized body dissatisfaction in people of all sizes. Certain ethical issues arise when health educators, medical professionals and public health policy makers continue to promote an approach that is iatrogenic. Less information is available regarding the impact on internalized weight stigma on interpersonal relationships than on other

aspects of weight stigma (Chen & Brown, 2005; Fikkun & Rothblum, 2012; Friedman et al., 1998).

The failure of weight loss approaches.

As long ago as 1959, Stunkard and McLaren-Hume documented the pervasive lack of success in weight loss treatment programs and pointed out that doctors often dismissed patients who failed to lose weight as uncooperative and gluttonous. They also stated that weight loss treatments were potentially dangerous and should not be undertaken lightly, if at all. In 1982, Wooley and Wooley expressed concerns that eating disordered behavior was being touted as a weight loss approach despite evidence that thin people were not healthier than heavy people, that weight is much more complicated than energy balance, and that the prevailing belief was that thinness is worth any price, including health.

Research from 1995 and earlier documented that the human body will adapt metabolically to maintain weight when intake is restricted in an attempt to lose weight (Garner & Wooley, 1991; Leibel, Rosenbaum, & Hirsch, 1995). The human body responds with biological adaptations to maintain weight when intake is restricted (Ochner, Tsai, Kushner, & Wadden, 2015). As energy expenditure falls, hunger increases, making sustained weight loss all but impossible (Garner & Wooley, 1991; Leibel, Rosenbaum, & Hirsch, 1995; Macpherson-Sánchez, 2015). Individuals with a BMI above 30 rarely can maintain a weight loss of five percent and have an extremely low possibility of achieving normal weight (Fildes et. al., 2015). Bombak (2014) provides a comprehensive review of the failures of multiple weight loss interventions to improve health. At the same time, individuals who are attempting

to achieve a narrow range of body size in the pursuit of health are valorized even as they engage in disordered eating practices. The iatrogenic effects of health promotion programs that focus on weight loss include body dissatisfaction, disordered eating, discrimination, and death (O'Hara & Gregg, 2006). Cognitive impairment associated with restrictive eating in attempted weight loss is well documented (Shaw & Tiggeman, 2004). Dieting appears to increase stress and cortisol levels, which are associated with a list of negative health outcomes, including weight gain, coronary heart disease, hypertension, impaired immune function, cancer, and diabetes (Tomiya et al., 2010).

Tomiya, Ahlstrom and Mann (2013) reviewed twenty-one randomized controlled trials of weight loss interventions with at least a two-year follow-up period. They found no clear relationship between health outcomes and weight loss and concluded that weight is not an adequate proxy for health. Psychosocial distress, such as depression, poor body image, and low self-esteem are frequently seen in women who perceive themselves as too heavy. This may be reinforced in fitness centers with a focus on weight loss rather than health. An opportunity to exercise in a setting that supports body diversity has been shown to improve psychosocial health when weight does not change (Watkins, Ebbeck, & Levy, 2014). However, fitness opportunities tend to focus on people who are already thin and/or fit, discouraging participation by fat people (Schuster & Tealer, 2009).

In 2005, Bacon, et al., documented that a majority of US women were dieting and engaging in weight control behaviors, and that the inability to maintain weight loss was associated with a decrease in self-esteem and an increase in depressive

symptoms. Bacon and Aphramor (2011) reviewed seven randomized controlled trials and five studies without control groups to compare weight loss groups with weight neutral health interventions. They found that the size acceptance approaches had better outcomes regarding health behaviors, physiological measures, psychological outcomes, self-esteem, eating behaviors and participant retention. They also addressed the ethical concerns of weight loss recommendations that can have iatrogenic consequences, including increased psychological distress. They emphasize that the people making health promotion policies have an ethical responsibility to implement strategies that reduce psychological stress.

The relationship between weight and health is complicated, unclear, and highly debated. Many researchers in the obesity field have financial support from the dieting industry (The Center for Consumer Freedom, 2005; Lyons, 2009). Physicians have been targeted by sophisticated advertising campaigns that focus on the supposed dangers of fat, in order to make the dangers of weight loss pharmaceuticals seem acceptable (Mundy, 2002). A review of research raised the concern that the dominant view that weight loss is synonymous with improved health is so widely accepted that publications are immune from scrutiny and accepted without scientific rationale (Aphramor, 2010). The process of reinforcing the view that weight is ideologically neutral, without examining it in the context of accepted standards of evidence based practice, limits new ways of exploring health (Aphramor, 2012). Despite literature that supports weight-neutral interventions in areas of improved metabolic as well as psychological measures (Tylka, Calogero, &

Danielsdottir, 2015), research funding is difficult to obtain if it is not couched in terms of "obesity prevention" (Clifford et al., 2015). Research findings that run counter to the dominant view (Koster-Rasmussen et al., 2016) may have difficulty finding a journal to publish the results (Salomonsen, 2016). Even professionals who work in the field of eating disorder treatment hold negative bias about obese people and often perceive them as non-compliant with treatment recommendations (Puhl, Latner, King, & Luedicke, 2014).

Campos et al. (2006), raise some very important questions about concerns focused on body size, specifically the assumptions that higher than average levels of adiposity cause disease and that long term weight loss is possible and advisable. Given the limited scientific evidence for these assumptions, they posit that concerns are more cultural and political than health related. They point out that most epidemiological studies about weight and health do not control for fitness, weight cycling, use of diet drugs or socioeconomic status. They attribute the increase in mass media attention to obesity as a moral panic related to rapid social change and projection of social anxieties onto a marginalized group. Increased numbers of women in the work force is related to blaming mothers for the rise in children's weight (Boero, 2009). Similarly, Schwartz (1986) draws a parallel between the increased fear of obesity in the early twentieth century with anxieties over an increasing influx of immigrants, especially Jews and Italians.

Concerns about the rising levels of obesity have contributed to decreased trust in individuals regarding dietary choices. Many people, including nutrition experts, believe that some form of external control is necessary to manage adequate

intake. The focus on restriction of caloric intake, especially for overweight individuals, has been incorporated into sociocultural values of thinness and internalized by normal weight people as well. This pressure is greater on women than on men (Brunson, Øverup, Nguyen, Novak, & Smith, 2014). A focus on an internal locus of control, as in intuitive eating, however, has been shown to be associated with healthier eating behaviors and greater diversity in food choices (Smith & Hawks, 2006).

The "calories in, calories out" paradigm continues to be widely accepted even though a substantial body of evidence indicates that weight is determined primarily by genetics and that individuals have limited control of size. A study of adoptees and their parents, both adoptive and biological, concluded that genetics play a large role in determining body size while family environment has no impact (Stunkard, Soronsen, Hanis, Teasdale, Chakraborty, Schull, & Schulsinger, 1986). The body has a number of ways of compensating for reduced intake or increased output in order to maintain the "set point" or the genetically determined individual weight. The "calories in, calories out" paradigm is potentially counterproductive, as numerous studies have shown that weight cycling, or yo-yo dieting, is implicated in long term weight gain (Bacon & Aphramor, 2011; Bacon, Stern, Van Loan, & Keim, 2005; Kater, 2010; Mann, Tomiyama, Westling, Lew, Samuels, & Chatman, 2007; Siahpush et. al., 2015; Tsai & Wadden, 2005). Restrictive eating for weight control is a robust predictor of weight gain, especially in those who are already in the BMI category of normal weight and are trying to avoid gaining weight (Dulloo, Jacquet, Montani, & Schultz, 2015). Dieting has also been linked to depression, disordered eating

(including binge eating), increased blood pressure, impaired insulin response, increased mortality, reduced self-esteem, and poor health behaviors (O'Hara & Gregg, 2006; Pietiläinen, Saarni, Kaprio, & Rissanen, 2012; Spear, 2006; Tribole, 2012). People unhappy with their weight, regardless of if they are thin or large, are more likely to have health related illnesses (Bacon & Aphramor, 2011; Muennig, 2008; Saguy, 2013).

The unexamined assumption that weight loss equals health affects medical professionals as well, which impacts medical care (Puhl & Brownell, 2006). When weight management is a focus of primary treatment, the attitudes and practices fostered in health care professionals can result in size discrimination (Aphramor, 2012). Women of larger sizes delay cancer screenings, in part because they have experienced negative attitudes and disrespectful treatment from providers and women who have experienced more failed weight loss attempts are more likely to delay screening (Amy, Aalborg, Lyons, & Keranen, 2006). Medical professionals may attribute all health problems to weight, which both impacts quality of care and causes individuals to avoid seeking medical attention when appropriate (Aphramor, 2012; Pause, 2014; Wann, 1998). Weight bias in medical professionals may lead to errors in diagnosis and care (deShazo, Hall, & Skipworth, 2015). Public health organizations perpetuate stigma when they exaggerate both the risks of overweight and the advisability of weight loss attempts (Gibbs, 2005). Ingram and Mussolino (2010) found that moderate weight loss of more than five percent was associated with increased risk of death regardless of maximum BMI. A correlation has also

been found between dieting for weight loss and reduced bone mass in premenopausal women (Bacon, Stern, Keim, & Van Loan, 2004).

Weight does not equal health (Mann, Tomiyama, & Ward, 2015). Use of the BMI as an individual medical screening tool risks misdiagnosis in people of all sizes. Wildman et al., (2008) evaluated data from the National Health and Nutrition Surveys 1999-2004 for cardiometabolic abnormalities including blood pressure, cholesterol levels, insulin resistance and C-reactive protein. They found that 23.5% of normal weight adults had metabolic abnormalities, while 51.3% of overweight and 31.7% of obese adults were metabolically healthy. Using a guideline of BMI categories as 18.5 to 25 as normal, 25 to 30 as overweight, 30 to 35 as grade one obesity and above 35 as grade two or three obesity, Flegal, Kit, Orpana, and Graubard (2013) found that, when compared to normal weight, grade one obesity was not associated with higher all-cause mortality and overweight was associated with significantly lower mortality. Normal weight patients with acute coronary syndrome had a higher mortality rate than the overweight and obese patients (Angeras et. al., 2013). A review of international research raises the question that increased risk of cardiovascular disease associated with higher weights may be a function of societal stigma rather than weight (Ernsberger, 2009).

"Cardiorespiratory fitness (CRF) is a health-related component of physical fitness defined as the ability of the circulatory, respiratory, and muscular systems to supply oxygen during sustained physical activity" (Lee, Artero, Sui, & Blair, 2010, p. 27). CRF is often overlooked as a risk factor but studies show that it is at least as important as obesity in predicting all-cause mortality (Barry, Baruth, Beets, Durstine,

Lui, & Blair, 2104; Wickramasinghe et al., 2014). CRF can be improved through regular physical activity. Blair and La Monte (2006) conclude that measures of obesity-related health risk are over-inflated if CRF is not taken into account and go on to say that a focus on weight loss is often unnecessary, unsuccessful and counterproductive. They encourage an alternate approach of focusing on improved diet and increased physical activity, even if it does not result in weight loss. Studies that have linked fitness with depression did not account for cardiorespiratory fitness. Higher levels of CRF were associated with lower risk of depressive symptoms, regardless of weight (Becofsky, Sui, Lee, Wilcox, Zhang, & Blair, 2015). A 7.4 year study suggested that metabolic syndrome in women has a reciprocal relationship with psychological attributes and that interventions that focus on reducing psychological distress may lower the risk of developing metabolic syndrome (Raikkonen, Matthews, & Kuller, 2002). Weight discrepancy, the difference between actual weight and an individual's desired weight, is associated with an increase risk of metabolic syndrome (Wirth, Blake, Hebert, Sui, & Blair, 2015). Weight dissatisfaction was found to be associated with higher glucose, cholesterol and risk of type 2 diabetes, and fewer positive health behaviors (Wirth, Blake, Hebert, Sui, & Blair, 2014).

In 1991, Garner and Wooley documented the failure of weight loss attempts, the growing financial influence of the dieting industry, the bias and stigma directed at people of size, the belief that obesity is caused by personal laziness and lack of self-control, the connection between dieting and increased metabolic efficiency leading to weight gain, the health risks associated with weight cycling, the

controversial nature of the alleged relationship between obesity and health risks, and the use of shaming techniques to motivate weight loss. Despite a quarter of a century of additional research that supports their arguments documented above, the prevailing attitudes about weight remain unchanged.

Weight stigma and psychosocial distress.

When both the prevalence of BD (body dissatisfaction) and the degree of associated impairment are considered, it is apparent that there is a very substantial public health burden of BD at the population level. Hence, the present findings suggest that greater attention may need to be given to BD as a public health problem in its own right. ... An additional implication of the present findings is that the fact that dissatisfaction with weight or shape is “normative” in industrialized nations should not be taken to infer that it is benign. (Mond et al., 2013 p. 6)

Austin (1999) addressed the relationship between public health initiatives and the increased self-scrutiny that can result in disordered attitudes toward food and the body. "We are inundated with entreaties to diet, to lose weight, and to keep weight off. Our media is saturated with images of the slender ideal, the fantastical promises of what rewards are bestowed on the thin and warnings of what misery and contempt awaits those who fail to control their weight" (Austin, 1999, p. 245). Thus, obsessive focus on food, body size and diet becomes normalized. Perception of body weight status is based on interaction with others as well as on physiology. Internalized stigma is a result of attribution of discrimination to one's weight. Heavy weight is considered a negative aspect of self-concept. The perception of

mistreatment that is understood to be related to weight is absorbed into the sense of identity. Social relationships and context influence the effect that weight stigma has on health (Schafer & Ferraro, 2011).

Discrimination based on weight, and its negative impact on physical and emotional health as well as social well-being, is widely documented (Schafer & Ferraro, 2011; Sutin, Stephan, Luchetti, & Terracciano, 2014; Sutin, Stephan, & Terracciano, 2015). Internalized weight stigma has been shown to be related to poorer health related quality of life (Lillis, Levine, & Hayes, 2011). Men experience anti-fat discrimination to a lesser extent than women. (Brunson, Øverup, Nguyen, Novak, & Smith, 2014; O'Brien et al., 2007).

Women who are or have been in committed relationships or marriage were more likely to perceive themselves as overweight and they were more likely to desire to lose weight than never married women, while relationship status was unrelated to weight perception in men (Klos & Sobal, 2013). Weight bias and associated stigma are increasing (Andreyeva, Puhl, & Brownell, 2008) and can have adverse impact on emotional health, which affects relationships. O'Hara (2014) has suggested the term "adipophobicogenic environment" to describe an environment that produces weight stigma and fat hatred.

It is understandable that fatness is seen as something to be avoided, especially by women (Farrell, 2009). In an extensive review of the literature, Fikkun and Rothblum (2012) document the numerous ways that weight bias and discrimination result in deleterious outcomes for women to a much greater extent than men, highlighting the gendered nature of weight based stigma. Average wages

for women decline with increasing size, with very thin women earning more than those in the normal range of BMI. Weight has been shown to affect economic, employment, educational and romantic opportunities, as well as access to health care. The greater price that women pay for being large reflects the cultural value of thinness for women while men are allowed much more deviation from the aesthetic ideal. The resulting cultural pressures for thinness result in body dissatisfaction in almost all women. Women are held to a higher standard of thinness than men, suffering more from weight based discrimination and consuming more weight loss interventions (Saguy & Gruys, 2010). Heavier women do less well in relationships, while men's BMI is usually unrelated to relationship functioning (Boyes & Latner, 2009).

Focusing on weight loss avoids the real issue that a characteristic does not cause stigma: the attitudes of people cause stigma (Goldberg, 2014). Stigma is a phenomenon based in a social context that changes over time, the product of reactions to a person's membership in a stigmatized group rather than to the characteristics of the person. Internalized stigma is when the individuals blame themselves for discrimination (Escalera, 2009). Weight stigma is considered socially acceptable, leading to internalized weight bias across weight categories (Pearl & Puhl, 2014). Despite evidence that weight loss efforts almost always fail, weight is seen as controllable, which reinforces the internalization of weight stigma (Logel, Stinson, & Brochu, 2015; Pearl & Lebowitz, 2014; Wang, Brownell, & Wadden, 2004). This personal blame framework associates obesity with sloth, gluttony, lack of self-control, irresponsibility and ignorance, "while slenderness is

the embodiment of virtue" (Saguy, 2013, p. 89). Daníelsdóttir, O'Brien, and Ciao (2010) found a paucity of research efforts exploring ways to reduce anti-fat prejudice, which may reflect a tacit acceptance of weight stigma, despite the evidence for the negative effects of anti-fat sentiments on social equality.

When mass media frames obesity as a personal responsibility issue, weight stigma increases (Andreyeva, Puhl, & Brownell, 2008; Saguy, 2013). When incidents of weight stigma are seen in television programs, they are more likely to be accepted as normal behavior, which may result in fear of weight gain in normal weight youth, increased disordered eating behaviors, negative body image and poor self-esteem (Eisenberg et al., 2014). The content in popular media, television in particular, conveys social norms and acceptable behavior (Fikkun & Rothblum, 2012). A 2003 study of television characters found that negative characteristics were associated with being overweight or obese. Additionally, characters in television programs were much more likely to be underweight and much less likely to be overweight than in the general population. Larger characters were less likely to have positive interactions, romantic interactions and be judged as attractive while being more likely to be the object of humor (Greenberg, Eastin, Hofschire, Lachlan & Brownell, 2003; Giovanelli & Ostertag, 2009). Shows such as *The Biggest Loser* reinforce negative stereotypes about large people and promote negative depictions of health behaviors such as exercise (Berry, McLeod, Pankratow, & Walker, 2013) and increase anti-fat attitude in viewers (Domoff et. al., 2012). As long as the media as well as public health messages promote exercise for weight loss rather than its general health benefits, people become discouraged when their exercise does not

result in weight loss and they give up. A more useful approach would reduce stigma and promote enjoyable physical activity for bodies of all sizes (Meadows, 2015).

Characterizing obesity as "epidemic" reinforces the moral panic and justifies intervention that would not otherwise be tolerated, giving permission for ridicule, harassment and public monitoring (Gard & Wright, 2005). A qualitative review by Saguy & Gruys (2010) examined the way the media frames public discourse about eating and body size, which can influence public policy and individual behavior. Looking at publications in the United States, they draw a comparison between the American ideal of self-reliance and self-sufficiency with the cultural belief that body size is under personal control and a reflection of one's moral fiber. Thus, slenderness is associated with firm character while heaviness is associated with gluttony, sloth and stupidity. They point out that mass media is a barometer of social values. When overweight is blamed on personal choices, then larger people are perceived as unable to make good choices about food and exercise, resulting in educational programs that ignore the social determinants of health. At the same time, anorexia nervosa is framed as a normal consequence in a society that considers watching one's weight as a moral obligation, thus normalizing the culture of dieting. Meanwhile, fatness takes on a negative moral valence while news reports convey disdain and contempt for those unable to achieve thinness.

Public health campaigns that focus on obesity may be a source of stigma as well, given that they may be formulated around the idea that shaming obese people will motivate them to lose weight. Weight stigma does not motivate people to engage in healthy behaviors and is more likely to backfire (H. N. Brown, 2015; Mann,

Tomiyama & Ward, 2015). Puhl, Peterson and Luedicke (2012), found that shame and stigma in public health programs result in poorer health behaviors, including avoidance of exercise, and cause more harm, while an approach that fosters confidence and self-efficacy is more effective. People who feel negatively about themselves because of their size are less likely to engage in healthy behaviors when those behaviors do not lead to sustained weight loss, even if they do lead to improved health (Rosenthal et al., 2013). Experiences of size discrimination have been linked to exercise avoidance (Aphramor, 2012). At the same time, size and body acceptance have been shown to correlate with improved health outcomes (Bacon, Stern, Van Loan, & Keim, 2005; Blake, Hebert, Lee, Adams, Steck, Sui, Kuk, & Blair, 2013; Eisenberg, Berge, & Neumark-Sztainer, 2013; Kater, Rohwe, & Londre, 2002; Kelly, Wall, Eisenberg, Story, & Neumark-Sztainer, 2002; Neumark-Sztainer, 2009; Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006; Neumark-Sztainer, Wall, Guo, Story, Haines, & Eisenberg, 2006; Sonnevile, Calzo, Horton, Austin, & Field, 2012). Meanwhile, the weight loss industry continues to benefit from weight stigma (Lyons, 2009).

Stigma results in weight-based discrimination (O'Hara, Taylor & Barnes, 2015). Puhl and Heuer (2009) systematically reviewed existing literature regarding weight stigma and anti-fat bias. They found evidence to challenge the concept that stigma positively motivate improved health behavior, that it instead is associated with poor body image, low self-esteem, exercise avoidance, poor eating choices and an increased vulnerability to depression. They observed that weight bias appears to be increasing and that it is very resistant to change in response to new information.

In their review of weight bias in the media, they comment that overweight people continue to be targets of ridicule and humor, being associated with socially disapproved traits in television, movies, cartoons, children's books and reality shows. This perpetuates the social acceptability of weight stigma. Overweight characters are significantly underrepresented in media, such that the only time the two thirds of the population who are overweight or obese see anyone with similar bodies on television it is when they are being bullied into losing weight. Advertisers continue to promote the idea that weight is easily changeable through personal effort. "Given the mass consumption of media in our culture, it is not surprising that stigmatizing attitudes toward overweight people are so common in our society." (Puhl & Heuer, 2009, p. 952).

Body image distortion is usually associated with eating disorders, especially anorexia nervosa, but Coker and Abraham (2014) found that women of all weights, with and without eating disorders, have a high prevalence of body dissatisfaction (BD). In developed countries, the majority of women experience BD and even women of normal weight believe they need to lose weight. This dissatisfaction is not simply associated with a perception of oneself as fat, but rather in the divergence from "ideal." The promotion of a thin body ideal, even as average size increases, results in pressure to achieve an unrealistic goal. Mass media provides daily exposure to the ideal beauty as thin, and this plays a role in the development of body dissatisfaction (Munsch, 2014). Media conveys powerful social norms that value a largely unattainable ideal of thinness and beauty, which can undermine competence and body autonomy (Whale, Gillison, & Smith, 2014). Stereotypical

portrayals of obesity and obese people in the media focus on derogatory humor and the assumption that overweight is unattractive, making weight bias socially acceptable (Kushner, 2014). Meanwhile, eating disorders are affecting children at younger ages, with a 119% increase in hospitalizations of children under the age of 12 from 1999 to 2006 (Rosen, 2010). Weight bias in children has increased from 1961 to 2001 (Latner & Stunkard, 2003). The slender ideal promulgated by mass media increases negative emotions and the frequency with which women feel badly about their bodies and about themselves (Groesz, Levine, & Murnen, 2002). Time spent reading fashion magazines was positively related to anti-fat attitudes (Lin & Reid, 2009). Unavoidable, repeated exposure to the impossible feminine ideal has a fundamental impact on women's feelings of self-worth and value (Gimlin, 2001; Shields, 2002). Weight change does not necessarily resolve the concern. Weight stigma is unique in that it is expressed interpersonally as well as being internalized as blame for having an unacceptable body (Goldberg, 2014, Levine & Schweitzer, 2015; Schafer & Ferraro, 2011). Vartanian, Herman and Polivy (2005) found that most people have internalized negative implicit attitudes toward fatness in response to social and cultural attitudes. A belief that body weight can and should be controlled was related to body dissatisfaction and poor self-esteem. (Laliberte, Newton, McCabe, & Mills, 2007). Implicit and internalized weight bias have been found to be related to body image disturbance, depression and binge eating (Carels, Wott, Young, Gumble, Koball, & Oehlhof, 2010). Greater levels of internalized weight bias correlated with greater negative impact on depression, anxiety, body image concern and self-esteem, independent of BMI (Durso & Latner, 2008).

Internalized negative stereotypes about weight may result in anticipation of negative treatment, leading to chronic stress and hyper vigilance, which contribute to poor health outcomes (Stuber, Meyer & Link, 2008). Weight stigma results in increased stress, which is related to increased cortisol, resulting in increased eating behavior, creating a feedback loop in which weight stigma results in weight gain and/or difficulty in weight loss (Tomiyama, 2014).

Body dissatisfaction is considered by many to be an effective motivation for weight loss (Heinberg, Thompson, & Matzon, 2001) but internalized weight stigma does not lead to improved health behaviors (Puhl, Moss-Racusin, & Schwartz, 2007). In fact, lower body satisfaction may lead to poorer self-care in terms of health behaviors such as less physical activity and less healthy eating behaviors (van den Berg & Neumark-Sztainer, 2007). Weight stigma was found to be related to exercise avoidance, even when controlling for BMI and body dissatisfaction (Vartarian & Shaprow, 2008). Weight related peer victimization and bullying in youth is related to non-adherence with physical activity recommendations (Storch et al., 2007). Jackson, Beeken, and Wardle (2014) found that, rather than leading to motivation for weight loss, weight discrimination was associated with weight gain. Public health strategies that embrace weight stigma to address concerns about obesity are based on the two assumptions that body weight is under individual control and that stigma will motivate people to change their behavior. Neither of these assumptions is supported by empirical evidence (Vartanian & Smyth, 2013). Higher body dissatisfaction and lower self-esteem have been linked with weight stigma, even after controlling for BMI (Vartanian & Novak, 2011).

Mond et al. (2013) used the term "normative discontent," originally coined by Rodin, Silberstein, and Striegel-Moore (1985), to describe the pervasiveness of body dissatisfaction among women. They showed a marked impairment in quality of life, physical health status, mental health and psycho-social functioning associated with body dissatisfaction. They suggested that BD should be evaluated as a public health burden in its own right and they emphasize that, just because it is "normative," it should not be considered benign. The pervasiveness of body dissatisfaction was explored by Reba-Harrelson et al. (2009) in a study that found that three out of four women age 25-45 report unhealthy relationships with food or their bodies and that more than half of dieters were already considered to be at a healthy weight. Symptoms of disordered eating were considered normal by many of the respondents. Weight stigma may be more harmful when it comes from family members, according to Puhl et al., (2008). Weight acceptance messages from friends, parents and romantic partners can lead to improved outcomes, especially among women with high levels of weight concern (Logel, Stinson, Gunn, Wood, Holmes, & Cameron, 2014). Perceptions and stereotypes about obesity and stigma were similar regardless of BMI. Puhl and Heuer (2010) identify weight stigma as a social justice issue that poses serious psychological and physical health risks and point out that it is not a useful public health tool for improving health or reducing obesity.

Tylka et al. (2014), present a number of concerns about the negative outcomes of focusing on weight loss. The societal weight stigma implicit in public and private health settings result in internalized weight stigma that is not related to

body size. Body loathing and shame is associated with lower self-esteem and reduced self-care. Women who experience shame about their bodies have difficulty with self-compassion (Goss & Allan, 2014). An editorial in the *Journal of Physical Education, Recreation and Dance* (Cardinal, Whitney, Narmatsu, Hubert, & Souza, 2014) addresses concerns about obesity bias as it related to social justice and diversity. The ideal body image promoted by social context and the media is increasingly distorted by airbrushing and other image manipulation techniques, resulting in increased body dissatisfaction among both men and women. Rodriguez, Tomiyama and Ward (2015) found that implicit negative weight bias may be greater than was previously thought, showing that stigma can even extend to unrelated sensory judgment.

Muennig (2008) examined the connections among stress, increased body weight, body dissatisfaction, health and public health initiatives that emphasize thinness. He found that body dissatisfaction, as measured by a desire to lose weight, is a stronger predictor of morbidity than actual body weight, as measured by BMI. In a study of college females that controlled for BMI, frequency of dieting behaviors was found to correlate with depression, low self-esteem and problems with interpersonal relationships. Many of the dieters in the study were of normal weight (Ackard, Croll, & Kearney-Cooke, 2002). Muennig, Jia, Lee and Lubetkin, (2008) discuss the pervasive weight stigma in social settings, the workplace and home and suggest that the stigma becomes internalized, increasing chronic stress. Negative body image concerns, measured by percentage of desired weight loss, was more highly correlated with unhealthy days than was BMI, especially for women. They go

on to suggest that public health messages should encourage healthy behaviors, such as exercise, without reference to obesity because idealizing certain body types may be harming the target audience. Jackson, Beeken and Wardle (2015) found that a substantial proportion of the impact of obesity on psychological well-being was correlated with weight stigma. They express concern that public health campaigns that focus on volitional control of body weight may inadvertently reinforce weight stigma.

Greenhalgh (2012) raises several important concerns about the current discourse about weight and its effect on the well being of young people. When authority figures, such as parents, teachers, coaches and doctors, routinely berate young people about their weight in the context of expressing concern for the target's health, these comments may be perceived as vicious personal attacks. Abusive fat-talk is considered acceptable and required. Subjects then perceive themselves as "biologically flawed, morally irresponsible or unworthy, or aesthetically unappealing, or some combination of the three" (p. 483). She goes on to say "...the nationwide campaign to banish obesity and make people healthy seems to be producing anything but thinness, health, and happiness....Far from producing thin, fit, happy young people, the war on fat is producing a generation of tormented selves, heart-rending levels of socioemotional suffering, and disordered bodily practices that pose dangers to their health" (p 484).

The goal of health education is higher levels of population health which is seen as a benefit to individuals, society and national prosperity, according to Thompson and Kumar (2011). They go on to express concern about the

pathologizing of weight which leads to ideas of deserving versus undeserving people, with an emphasis on individual responsibility as a moral issue. Stigma is then associated with the appearance of non-compliance. Public health agencies should be aware of the harmful consequences of paternalistic social marketing campaigns that promote feelings of guilt and shame by focusing on body weight as easily changeable (O'Hara, Taylor, & Barnes, 2015). The concept that people need education and guidance from professionals about what to eat instead of trusting their own judgment leads to disrupted appetite and food dread (Aphramor & Gingras, 2009).

The concept of "normative discontent" (Rodin, Silberstein, & Striegel-Moore, 1985) regarding body dissatisfaction has far reaching implications. One expression of "normative discontent" has been identified as "fat talk" in which women engage in disparaging comments about their own body shape and weight. This normative discontent affects how women do feel and also dictates how they should feel. In a study of college students, fat talk was found to correlate with increased body dissatisfaction and an internalized thin ideal, but it was not related to actual BMI. Overhearing fat talk also was related to increased body dissatisfaction (Salk & Engeln-Maddox, 2011). The call-and-response of fat talk has become a ritual among American women (H.N. Brown, 2015). While social support is generally considered to contribute to psychological health, fat talk with friends reinforces normative discontent, body dissatisfaction and the internalized thin ideal. Women may have many body related concerns, but weight issues are more likely to be implicated in feelings of guilt and lack of self-control and self-discipline. Engeln and Salk (2014)

surveyed adult women and found fat talk to be common in many ages and body sizes and appeared to peak around a BMI of 25. They go on to address the idea that fat talk and body dysphoria may be considered motivation to lose weight or to maintain a healthy weight but instead is pernicious in its effect of increasing body related distress and other negative psychological consequences. There is a correlation between frequency of fat talk and body dissatisfaction (Engeln-Maddox, Salk, & Miller, 2012). Fat talk among family members can even affect academic performance (H. A. Brown, 2015).

Fat talk is often perceived as a desire for reassurance, e.g., "No, you're not fat, I'm fat," but engaging in fat talk increases body dissatisfaction and guilt. At the same time, challenging fat talk, e.g., "I don't like to hear you talk badly about your body," or "I wish women didn't talk badly about their bodies," may be protective against negative consequences (Salk & Engeln-Maddox, 2012). Peer pressure to be thin, even when it is only implicit such as in fat talk, appears to promote body dissatisfaction (Stice, Maxfield, & Wells, 2003). Internalization of a thin body ideal is correlated with increased body surveillance (Kim & Jarry, 2014).

Ethical concerns

Weight stigma in society, especially when it appears in health promotion and public health settings, presents certain ethical concerns. The Code of Ethics of the Society for Public Health Education (n.d.) emphasizes the importance of interventions in which benefits outweigh harm as well as accurate communication of potential benefits and consequences. The Code also requires health educators to "do no harm" and to be informed about latest research. The Code of Ethics for the

National Association of Social Workers (1999) affirms the primary responsibility to the well-being of the client, and also the responsibility to work for social justice. Interventions that stress individual weight loss, when considerable evidence contradicts the possibility of success, violate these ethics.

Ethics in health promotion must address the balance between what is good for the individual and what is best for the community. This often involves value judgments about what is important and where resources should be allocated (Levin & Fleischman, 2002). Public health officials have a responsibility to address the way stigma affects the human right to dignity (Bayer, 2008). Public health ethics also involves advocacy for social justice, given the significance of social determinants of health. Public health professionals have more responsibility than other professionals given the legal power available to public health to coerce citizens into behaving in an approved way (Callahan & Jennings, 2002). The tension between civil liberties and the coercive powers of health promotion can be seen in the debates about weight based interventions (Thompson & Kumar, 2011). Promoting one body shape as good tends to imply that other shapes are bad, which can lead to a link between bad body shape and personal, moral badness in general thought (Holm, 2006). The precautionary principle holds that the burden of proof that an intervention is not harmful falls on those taking the action (Wynia, 2005). Stressing individual weight loss can distract from the importance of social determinants of health (Bacon & Aphramor, 2014; Campos, Saguy, Ernsberger, Oliver & Gaesser, 2006). When health professionals and policy makers treat body weight as a barometer of public health, they risk causing immense damage to the people who

are blamed and stigmatized (Campos et al., 2006). Continuing to promote weight loss in medical care when it has been linked to adverse outcomes raises ethical implications regarding the values of beneficence and nonmaleficence (Aphramor, 2008). Weight stigma diminishes individual agency and damages the sense of identity, violating the bioethical values of justice, autonomy and nonmaleficence (Abu-Odeh, 2014). The importance of the ethical issue of informed consent to treatment is routinely disregarded when medical professionals and public health personnel recommend attempts at weight loss without explaining the lack of success and possible iatrogenic results (Aphramor, 2012). The lack of legal protections that prohibit discrimination based on body size amounts to institutionalized bias, which is a public health issue as well as a social injustice (Puhl, Heuer, & Sarda, 2011). Obesity stigma violates the ethical norms of social justice and may increase health inequities (Goldberg & Puhl, 2013). The focus on weight loss dieting to promote health may be an iatrogenic disaster (Burgard, 2009).

Concerns have been expressed about BMI screening in schools, asserting that such screenings increase the belief that having a fat body is unacceptable, that they increase discriminatory attitudes about heavy children, and that they result in concerned parents limiting food intake for both normal weight and overweight children despite anti-diet information included in letters home. This is an example of attempts to improve one aspect of health while harming another (Ikeda, Crawford, & Woodward-Lopez, 2006). BMI is easily computed and convenient, making it an appealing measure. However, BMI reporting by schools is questionable in a number of ways. There are concerns that it will harm children's self-esteem, that it will

negatively impact the nutrition that is essential for growth and health, that it is not supported by research, that it could increase disordered eating, that it may lead to increased bullying and teasing, that it places unrealistic expectations on school personnel, and that it perpetuates weight stigma (Cogan, Smith, & Maine, 2008). Children who are not fat are sometimes described as "at risk of becoming overweight," a category invented to scare parents (Wann, 2009).

Approaches for addressing the concerns about increases in average weight in individuals and in the community are imbedded in different frameworks, such as personal responsibility and blame, societal factors or biology, for understanding the causes of weight and health (Saguy, 2013). Stigma about weight and eating disorders may be related to a belief in a just world where people get what they deserve. This attitude attributes problems to a lack of self-discipline while individuals who attributed obesity to biological causes had less stigmatizing attitudes (Ebner, Latner, & O'Brien, 2011). The pursuit of health in the guise of weight loss has taken on a moralistic tone, despite the fact that health is multi-dimensional, not guaranteed, not entirely within our control, not an obligation and not a barometer of worth (Chastain, 2012). Health educators have an obligation to understand the controversy in this area in order to avoid inadvertently causing harm (Buchanan, 2000; Campos et al., 2006; Saguy, 2013). This requires a thorough and often uncomfortable examination of personal beliefs and biases (Matz, 2014).

Although public health initiatives that stigmatize the behavior of smoking have been linked with a decrease in the behavior (Kim & Shanahan, 2003) ethical questions remain. The process of stigmatization raises concerns about human

rights issues, especially the human right to dignity (Bayer, 2008; Struber, Galea, & Link, 2008). Stigmatization unequally impacts those who are already vulnerable and may erect barriers to access to health care. If the purpose is to stigmatize the behavior of smoking rather than the smoker, it also evades addressing the responsibility of the industry that promotes smoking (Bayer & Stuber, 2006), much as the focus on individual responsibility for weight loss ignores the part played by the dieting industry. The fact that weight is a characteristic rather than a behavior further confuses the conversation (Aphramor, 2008). Employee wellness programs, which ostensibly promote the well being of participants, also risk penalizing those who are most vulnerable, introducing substantial inequity into the health care system. Requirements may be unattainable and not under individual control, and therefore, asking for exceptions may seem humiliating or degrading (Schmidt, Voigt, & Wikler, 2010).

Brown and Allison (2103) highlight several ethical concerns about public health policies regarding obesity and point out that good intentions often have unintended consequences. They recommend that policy be based on high quality evidence that is shared honestly, thoughtful evaluation of possible harm and choosing policies that least compromise ethical values. Well-intentioned policy can have unintended consequences: legislation that increases requirements for dietary education in schools has been linked to increased weight stigma without decreasing obesity rates (Yeh, 2013). Salas (2015) criticizes public health obesity prevention initiatives, saying that they fail to account for the over 300 interconnections of over 100 identified drivers of weight. Obesity prevention policies lack evaluations and

scientific evidence, resulting in the unintended consequences of increased body dissatisfaction, discrimination, weight-based bullying and death. She encourages public health practitioners to examine both evidence and ethics, and consider changing the target to healthy behaviors. Unquestioned assumptions about the commonly accepted beliefs that weight is determined by lifestyle choices leads to a policy focus only on evidence that supports the assumption, raising ethical concerns about ignoring potential harm (Aphramor,2015). Once policies and programs are in place, other points of view are silenced or ignored (H. N. Brown, 2015; Gaard & Wright, 2005; Mann, 2015). If health promotion professionals are to uphold its ethical values of commitment to social justice and challenging dominant discourses, critical reflection about evidence-based practice, as well as oppressive power and social structures, is necessary (Tretheway, Taylor, O'Hara, & Percival, 2015). In particular, public health initiatives that focus on the "war on obesity" need to be carefully critiqued for possible iatrogenic effects (O'Hara, Taylor, & Barnes, 2015). "If stigmatizing fat people worked, it would have done so by now" (Tomiyaama & Mann, 2013, p. 4).

Relationship issues.

The benefits of marriage have been widely studied in terms of health and longevity. In particular, having a marriage partner during middle age is especially protective (Siegler, Brummett, Martin, & Helms, 2013). The complex, mutual relationship that is marriage is characterized by interdependence of the spouses. Additionally, there is a correlation between a satisfying sexual relationship and overall relationship satisfaction (Yucel & Gassanov, 2010).

Marital satisfaction and relationship happiness have been shown to be correlated with subjective well-being (Dush & Amato, 2005). Grover and Helliwell (2014) document the positive, protective relationship between marital satisfaction and personal well-being, especially during middle age when most people experience a dip in well-being. Self-esteem, which includes body image, is related to the ability to preserve connection in relationship (Peterson & De Hart, 2013). Individuals with low self-esteem tend to expect their partner's love and regard to be conditional, based on the ability to live up to certain standards (Bellavia & Murray, 2003). Body dissatisfaction involves a sense of not being able to achieve an ideal body shape, which can then lead to an expectation of less acceptance from the partner (Coker & Abraham, 2014). Intimacy is a way for partners to express commitment to each other; when vulnerability is met with emotional validation, intimacy improves (Duba, Hughey, Lara, & Burke, 2012).

Optimism, which is linked to perception of partner supportiveness, is associated with increased romantic satisfaction. Expecting the best within a relationship facilitates positive engagement during conflict. Life events and the successful pursuit of goals may influence optimism (Assad, Donnellan & Conger, 2007). Failure at weight loss attempts could impact optimism.

Baumeister and Leary (1995) posit a fundamental human need to belong, characterized by lasting, positive relationships including frequent interaction, persistent caring and intimacy. This need is often met through marriage, accounting for some of the greater measures of life satisfaction found in married people.

Body dissatisfaction and relationship quality.

Few studies have been done to examine the role of body size, weight stigma or body dissatisfaction in couple relationships. In a study of undergraduate students and their preferences when making a choice of sexual partner, Chen and Brown (2005) found that weight stigma had a significant impact, with men more likely than women to make choices based on weight. A study of marital status, marital satisfaction and body image dissatisfaction in individuals by Friedman et al. (1998), suggested that increased eating pathology was associated with lower marital satisfaction, and that the relationship between marital status and body dissatisfaction did not differ across weight. Results also suggested that the correlation between marital satisfaction and body dissatisfaction was significant even when controlling for effects of BMI, self-esteem, age and gender. In other words, they found a significant relationship between marital discord and body image disturbance that was unrelated to actual weight.

Fisher et al., (2014) found that sexual satisfaction and relationship happiness contribute to each other in reciprocal ways. They also comment on the importance of dyadic studies of relationship satisfaction, despite the preponderance of research based on individual responses and information. A dyadic study of attachment style and relationship satisfaction (Butzer & Campbell, 2008) found that individuals with higher levels of anxiety and avoidance and their spouses reported lower levels of sexual satisfaction.

Satinsky et. al. (2012), found a strong connection between positive body appreciation and sexual function for women. Encouraging women to improve body appreciation may improve sexual function while focusing on weight loss may run

counter to promoting healthy sexuality. Significant others who communicate unconditional acceptance of appearance instead of encouraging weight loss may help women resist self-objectification (Avalos & Tylka, 2006). An increase of .70 in scores on the Body Assessment Survey, a realistic treatment goal, was related significantly less risky sexual behavior in non-monogamous women (Ramseyer Winter & Satinsky, 2014). All of these findings have relevance for couples counseling.

The sense of shame that results from an internalized feeling of failing to meet cultural expectations impacts relationships and feelings of connection. Shame is a construct with psycho-social-cultural components, often rooted in rigid and unrealistic expectations reinforced by media culture. Women struggle with feelings of shame connected to several categories including body image, appearance, sexuality and family. The feeling of isolation caused by shame is particularly poignant since a woman's sense of worth is often tied to the quality of relationships that she can maintain (Brown, 2006). At the same time, interpersonal relationships are not necessarily impaired for obese people, even though negative attitudes about weight may have been internalized (Carr & Friedman, 2006).

The concept of challenging fat talk (Salk & Engeln-Maddox, 2012) has implications for marital relationships. When a woman says "I'm so fat," a husband might attempt to be helpful by responding with "No, you're not" or "Maybe we could eat better and go to the gym," when "I don't like to hear you disparage yourself" would be better. Calogero, Herbozo and Thompson (2009) explored the concept that they labeled "complimentary weightism" in which positive comments about

appearance and/or weight were related to an increase in body surveillance and body dissatisfaction.

Women with higher levels of body dissatisfaction respond in ambivalent and contradictory ways to feedback from intimate partners. If a woman's partner agrees with a negative comment about her body, she may feel emotionally negative but also understood. If her partner reacts with a positive view of her appearance, she may feel increased positive emotion while simultaneously feeling that her partner does not understand her accurately. This double bind for the partner could have implications for the relationship (Brown, Stukas, & Evans, 2013). Compliments from a husband about appearance may counter intuitively contribute to a woman's self-objectification by reinforcing the idea that her worth is based on her appearance and how closely she resembles the thin ideal. Compliments about weight loss reinforce weight stigma. This concept of self-objectification is based on Fredrickson and Roberts (1997) seminal work with objectification theory. They posit that the culture in general and visual media in particular encourages women and girls to internalize an observer's perspective, which leads to habitual body monitoring and its associated anxiety and shame. This self-objectification, shame and anxiety are correlated with poorer sexual functioning, as self-surveillance correlates with increased self-consciousness during sexual activity (Steer & Tiggeman, 2008).

Body dissatisfaction has negative consequences for several important aspects of women's lives, including social and intimate relationships as well beliefs about their own sexual selves. The ability to be in satisfying intimate relationships

is associated with better life satisfaction, and poor body image may restrict the ability to be comfortable in such relationships (Donaghue, 2009). Greater satisfaction with body image has been found to be correlated with higher frequency of sexual behavior, greater comfort in undressing in front of one's partner, leaving the lights on during sex, initiating sexual activity, and giving and receiving pleasure (Ackard, Kearney-Cooke, & Peterson, 2000).

Given the interdependence within family relationships, dyadic research is well suited to the study of marital satisfaction and the examination of within-dyad and between-dyad similarities and differences (Wittenborn, Dolbin-MacNab, & Keiley, 2013). Dyadic research focuses on the relationship between two people which is acknowledged as complex, involving interdependence, mutuality and reciprocity (Thompson & Walker, 1982). A literature search of "dyadic research" produced over 300 results, most of which were about parenting and attachment, response to illness, trust, sales and marketing, workplace relationships, mentoring, leadership or research methods such as interviewing, response rates or congruence of raters. Only a handful of articles concerned marital or couple relationships and some did not meet the above criteria for dyadic research. Few of them addressed body image issues.

One person's relatedness fulfillment was found to predict the partner's increased satisfaction over time and was mediated by compassion (Hadden, Smith, & Knee, 2014). Helms, et al., (2006) used a dyadic approach to capture both the marital experiences and the individual attributes of each spouse when studying the link between marital quality and gender-typed attributes. Another dyadic study

evaluated sexual satisfaction in newlywed couples (Lykins, et al., 2012). A link was found between emotional intelligence and relationship quality using actor-partner interdependence mediation model (Schröder-Abé & Schütz, 2011). A study of over 500 dating couples found that low self esteem was related to lower satisfaction with and commitment to a relationship, but that self esteem had an additive quality, such that the combined self esteem contributed to improved relationship satisfaction (Robinson & Cameron, 2012). Another dyadic study examined leisure time preferences by gender and relationship satisfaction (Berg, Trost, Schneider, & Allison, 2001). Dyadic coping was found to be related to relationship satisfaction, with females' dyadic coping strongly related to males relationship satisfaction while males dyadic coping was only related to their own relationship satisfaction (Herzberg, 2013). A dyadic study of midlife couples found that both individual and partner characteristics influenced both sexual satisfaction and relationship happiness which then contributed to each other (Fisher et al., 2015).

Boyes and Latner (2009) studied 57 couples and found that men's body size was not associated with relationship quality, but women's was. They raised concerns about women's internalized weight stigma and how doubt about a partner's regard may limit the ability to commit to a relationship, thus reducing the chances to experience the increases in self esteem that come from being positively perceived by a partner in a satisfying relationship. A study of 53 recently married couples found a relationship between the wife's perception of her own sexual attractiveness and marital satisfaction for both husband and wife (Meltzer & McNulty, 2010).

Dyadic studies have also been used in the area of promoting safer sexual behavior. Mitchell (2013) used dyadic research to evaluate relationship characteristics in gay couples and the association with agreement to safe sex commitments. Better dyadic sexual communication was related to higher levels of dyadic adjustment for both members of the couple (Pazmany et al., 2015). Starks, Millar and Parsons (2015) used an online dyadic survey to evaluate aspects of recruitment involved in research with same sex male couples.

When weight stigma is experienced in society, culture and the media, it can become internalized as body dissatisfaction. The concept of body image includes many aspects of living in a body, including actual appearance, perceived appearance, function, history and cultural expectations. Body dissatisfaction, more specifically, reflects the difference between the perception of the body and the ideal. Considering the above research on the relationships among the focus on weight loss, body dissatisfaction, relationship quality, and quality of life, the following study is proposed to explore the relationship of body dissatisfaction and marital satisfaction.

Chapter III

Methods

Hypothesis statement

The purpose of the present study was to examine two main research questions: (1) In both husbands and wives, what is the relationship between an individual's body image and their own marital satisfaction? (2) What is the relationship between an individual's body satisfaction and their partner's marital satisfaction? Hypothesis statement: A positive relationship will be found between individual, and couple body satisfaction with individual , spousal, and couple marital satisfaction. That is, higher body satisfaction in the wife or husband, and in the couple as a whole, will be associated with greater self-, spousal- and joint marital satisfaction.

Procedures

Using the couple as the unit of analysis produces dyadic data, which maintains and links individual measures while evaluating the interdependence between spouses. There is usually a high degree of correlation between variables from both members of the dyad and the data cannot be considered independent (Yucel & Gassanov, 2010). Using the dyad as the unit of analysis allows the researcher to draw conclusions about the relationship itself (Maguire, 1999). Wittenborn, Dolbin-MacNab, and Keiley (2012) address a number of advantages and concerns regarding dyadic data, which I have attempted to use in the design of this study. Dyadic data can capture relational processes; interdependence and influence within couples while collecting data from only one partner would provide an

incomplete view. The standard dyadic design is reciprocal, with both members providing data for the same variables. It can also capture the effect of a predictor variable in one partner and outcome variable in the other partner. Sampling needs to include a critical distinguishing variable, in this case, whether the person answering is the husband or wife, because those roles are theoretically relevant (Malloy & Albright, 2001). The possibility that dyads with positive relationships may be more likely to participate can be partially addressed by ensuring that the data collection is separate and confidential. Gathering dyadic data presents logistical challenges, which is why the survey was designed to be as easy and brief as possible with clear instructions. Wittenborn, Dolbin-MacNab, and Keiley (2012) raise some concerns about compensation, in that a participant may coerce a reluctant partner to participate in order to receive compensation, which is not a concern in this survey because participants were not compensated.

The study used a correlational explanatory design (Cresswell, 2012). Information was gathered via the online survey platform Qualtrics. Participants were recruited using a snowball sampling approach starting from a convenience sample recruited by social networks. Eligibility was limited to married heterosexual cisgender couples in which both husband and wife were willing to answer the survey questions. Recruitment was limited to married, heterosexual couples to narrow the range of extraneous variables and to include the critical distinguishing variable, whether the person answering was the husband or wife (Malloy & Albright, 2001). The survey was made available and recruitment began after approval was received from the Institutional Review Board. All documentation was submitted to

the University of Missouri Institutional Review Board and approval was received June 11, 2015. Data were collected from June 30 to November 6, 2015 using email and other social media sites through snowball sampling to maximize recruitment (Balter & Brunet, 2012).

The survey link took participants to the consent form, which included information about online resources in the event that participation resulted in emotional distress. The recruitment script included a link to the informed consent form which, when accepted, linked to the survey. The survey began after the participant clicked a button indicating agreement. Detailed instructions were included explaining the process and the confidentiality of the responses, including the fact that the spouses would not be able to see each other's answers. The first spouse to complete the survey was prompted to send a request to the other spouse with a url address that had an embedded code that matched the answers for the two participants while maintaining confidentiality. The goal was to obtain responses from at least one hundred couples. All answers were anonymous. The survey can be seen in Appendix D.

Surveys were identical for husbands and wives with one exception: when "wife" was selected, an additional question appeared, asking "How many biological children do you have?" Data was collected from June 30 to November 6, 2015 using email and other social media sites through snowball sampling to maximize recruitment (Balter & Brunet, 2012). The recruitment script was sent to several hundred people using personal email addresses, professional online groups and Facebook groups. The script included a request to forward it to anyone else who

might be interested. A total of 233 responses were collected. Eighteen percent (42) of the respondents did not complete the survey. An additional twenty seven percent (63) of the responses were not able to be linked into couples. The final sample contained 64 paired cases in which information was complete and linked, representing 128 individual responses.

Instrumentation

Demographic data were collected on respondents. Resulting data were evaluated for correlations and patterns. Demographic data were collected via drop-down menus to increase accuracy and minimize anxiety for the participants. Data included the following information: age, number of years married, husband or wife, state or country of residence, area of residence (urban or rural), race, number of children living with the couple, number of biological children of the wife, ages of oldest and youngest child, number of years of education, average family income, height (in inches or centimeters) and weight (in pounds or kilograms) for a total of fourteen items. In an attempt to collect data from as diverse a population as possible, participants were recruited in other countries, such as the United Kingdom and Australia, in addition to the United States. Demographic questions included drop down menus for height and weight in both metric and pounds and inches. The term "African descent" is used instead of "African American."

Marital satisfaction and body satisfaction for both husband and wife were measured using instruments that have been previously developed and validated. The instruments were chosen based on their brevity, sensitively worded questions and their ability to accurately estimate the data being sought (Tury, Gulec & Kohls,

2010). The survey included thirteen questions about demographics and socioeconomic status. Two additional questions asked for height and weight, which were used to calculate body mass index (BMI). Forty-two questions were used to evaluate body image and marital satisfaction. (See appendix A for the 16 question Couples Satisfaction Index, appendix B for the 10 question Body Appreciation Scale and appendix C for the 16 question Body Shape Questionnaire. See appendix D for the survey.) A comment box was included for participants who wanted to provide additional feedback. No material incentives were offered.

Marital satisfaction was assessed using the Couples Satisfaction Index (CSI), a 16 item self-report questionnaire that has been extensively validated (Funk & Rogge, 2007). Body satisfaction was measured using the 16-item, scale 2 version of the Body Shape Questionnaire (BSQ) developed by Evans and Dolan (1993) and the 10-item Body Appreciation Scale 2 (BAS-2) (Avalos, Tylka & Wood-Barcalow, 2005). The three combined surveys include forty-two items.

The Body Shape Questionnaire, which measures body dissatisfaction, consists of 34 items, each with a 6 point Likert response scale. It was developed using information derived from semi-structured interviews with groups of women, some with anorexia nervosa and bulimia nervosa (Tury, Gulec & Kohls, 2010). The BSQ has been shown to have high consistency on reliability studies, with a Cronbach's α of .97. The test-retest reliability showed a correlation of .88 in a 3-week span. When compared to other body image measures, the BSQ showed a correlation of .61-.81 (Tury, Gulec & Kohls, 2010). The shortened form of the BSQ had alpha values ranging from .93 to .96 (Evans and Dolan, 1993, Evans, 2003). The

BSQ-16 was altered slightly, with permission from the authors (personal correspondence, May 10 and June 8, 2015) to use the word "people" in question 4, as the original versions were intended for men or women, not both.

The BSQ items ask for a response ranging from "Never" to "Always" on a 6 point Likert scale with "Never" indicating positive body feelings and "Always" indicating high levels of body dissatisfaction. The instructions request answers based on the previous four weeks. Questions include "Has thinking about your shape interfered with your ability to concentrate (e.g. while watching television, reading, listening to conversations)?" and "Have you worried about other people seeing rolls of fat around your waist or stomach?" The BSQ can be seen in Appendix C.

The Body Appreciation Scale is a 16 item, 5 point Likert scale questionnaire that measures positive aspects of body image and is relatively gender neutral (Avalos, Tylka & Wood-Barcalow, 2005). Cronbach's α of .94 shows good internal consistency with adequate stability over a 3-week period (Tury, Gulec & Kohls, 2010). An improved version, the BAS-2, eliminates sex-specific and body dissatisfaction language and adds items based on newer body image research. The newer version was evaluated using both exploratory factor analysis and confirmatory factor analysis, resulting in a psychometrically sound body image measure. The BAS-2 showed good validity and internal consistency, with a Cronbach's α of .97 (Tylka & Wood-Barlow, 2015).

The BAS-2 includes 10 questions, with no time frame indicated, on a 5 point Likert scale from "Never" to "Always" with 5 indicating high levels of body

satisfaction and 1 indicating negative feelings about the body. Questions include "I am attentive to my body's needs" and "My behavior reveals my positive attitude toward my body; for example, I hold my head high and smile." The BAS-2 can be seen in Appendix B.

The Body Satisfaction Questionnaire focuses more on psychopathology and body, shape and weight concerns, making it useful for detecting eating disorder risk. The Body Appreciation Scale evaluates a favorable opinion of and respect for the body.

The Couples Satisfaction Index consists of 32 items scored on a 6 point Likert scale. The CSI was developed using eight previously validated measures of relationship satisfaction and additional satisfaction items, given to 5,315 online participants. Item response theory and principle component analysis were used to develop the CSI scales. Compared to previously used scales, the CSI showed greater precision and power for detecting levels of satisfaction as well as construct and convergent validity. The CSI(16) produces similar information to the CSI(32) and was used because of its brevity (Funke & Rogge, 2007).

The CSI(16) does not indicate a time frame and utilizes five different Likert scales. The first question, "Please indicate the degree of happiness, all things considered, of your relationship" has answers ranging from 0, "Extremely Unhappy" to 6, "Perfect". The question "In general, how often do you think that things between you and your partner are going well?" has answers ranging from 0, "Never" to 5, "All the time". Four questions, including "My relationship with my partner makes me happy" are rated from 0, "Not at all TRUE" to 5, "Completely TRUE". Four

questions, including "To what extent has your relationship met your original expectations?" has answers ranging from 0, "Not as all" to 5, "Completely". The last six questions ask for a rating between two descriptors, such as "Discouraging/Hopeful" with a range of 0 to 5. The CSI can be seen in Appendix A.

Data analysis

Height and weight responses were recoded into metric measurements and used to calculate Body Mass Index using the formula $BMI = (\text{weight in kilograms}) / (\text{height in meters})^2$. Income and number of years of education were used to estimate socioeconomic status. Answer values for items on the BAS-2, BSQ and CSI were averaged separately to obtain scores that could then be used for analysis. When used for clinical purposes, cutoffs are often used to indicate individual concerns, but the use of continuous scores for research is a better practice psychometrically (Tylka, private communication). The three scales were evaluated for reliability. Regression analysis was performed to find correlations for wives', husbands', and couples' body satisfaction and wives', husband's and couples' marital satisfaction. BMI, socioeconomic status, race, area of residence, age, number and ages of children living with the couple, number of biological children of the wife and number of years married were evaluated as possible confounders. Correlations of individual survey items were also explored.

Statistical analysis

Statistical analyses was conducted using SPSS23 (Statistical Package for the Social Sciences). Descriptive statistics were calculated for all participants in the final sample for age, body mass index, number of years married, number of children in the household, race, country or state of residence, highest level of education and combined household income. For wives, descriptive statistics were calculated regarding number of biological children. Likert questions that were backward-coded (questions 18, 27, 29, 30, 32 and 44-59) were recoded so that the highest number was positive for all questions in all measures. Mean scores on the measures of marital and body satisfaction were calculated separately for husbands and wives, and spousal differences were tested using paired sample *t*-tests. Additionally, for each couple, the answers for each measure (CSI, BAS and BSQ) for both partners were combined to provide a mean couple score on each variable. The highest possible score for the CSI was 6.25, for the BAS was 5 and for the BSQ was 6. Cronbach's alpha was calculated for each of the three measures (BAS, BSQ, and CSI) for wives, husbands and combined responses to explore the internal consistency of the scale items. Two-tailed Pearson's correlations were calculated between the main study outcomes, and significant findings were further explored using linear regression. Histograms were generated for each of the four measures for husbands and wives separately. Demographic, anthropometric, and marital situation variables (years married, number of children, children living in household) were explored as possible confounding variables.

Chapter IV

Results

Hypotheses

The purpose of the present study was to examine two main research questions: (1) In both husbands and wives, what is the relationship between an individual's body image and their own marital satisfaction? (2) What is the relationship between an individual's body satisfaction and their partner's marital satisfaction? Hypothesis statement: A positive relationship will be found between individual, and couple body satisfaction with individual, spousal, and couple marital satisfaction across BMI ranges. That is, higher body satisfaction in the wife or husband, and in the couple as a whole, will be associated with greater self-, spousal- and joint marital satisfaction, regardless of weight.

Data cleaning

Data were downloaded from the Qualtrics website in long format, with each person's response as a case. Incomplete responses, including responses from only one member of a couple, lacking a matching identifier code, were deleted. One couple was deleted because both respondents checked "wife." Two data sets were then generated, one in a long format in which each individual was listed separately, the other in a wide format in which the responses were linked for each husband and wife so that each couple could be considered a case.

Demographic data

Sixty-four couples were included in the analysis. Ages ranged from 21 to 82, with a mean of 45 and a standard deviation of 15.3. The number of years married

ranged from less than a year to 50 years, with a mean of 15 and a standard deviation of 13.6. Fifty-six percent of the households had no children currently living in them; 19% had one, 14% had two, and 8% had three or more children. The ages of children ranged from newborns to 30 years old.

Fifty-one percent of the participants lived in big cities (more than 100,000 people), 37% lived in small cities (15,000-100,000 people) and the remaining 12% lived in rural areas or small towns. The education level of the sample contained 4% of people with only high school completion, 9% with some college, 6% with a two-year degree, 30% with a college degree, 35% with a master's degree, and 16% with a doctoral or professional degree. Eighteen percent of people had an annual income of less than \$40,000, 18% fell between \$40,000 and \$70,000, 39% fell between \$70,000 and \$110,000, 10% between \$110,000 and \$150,000, and 15% above \$150,000.

Two participants identified as Asian, one each as Native American and of African descent, and 121 as White/Caucasian. Residents of the United States accounted for 116 people from the sample. Residents from other countries include 4 from both Canada and the United Kingdom, and 2 from New Zealand. Of the United States residents, 47% were from Missouri, and about 5% were from each of the following states: California, Illinois, Pennsylvania and Washington. The remaining participants were from Colorado, Florida, Indiana, Kansas, Kentucky, Minnesota, Montana, New Mexico, New York, Ohio, Tennessee and Texas.

The sample was predominantly White, urban, highly educated, and affluent. Over 80% held a 4-year college degree or higher and two-thirds were earning over

\$70,000 per year. Approximately one-third of the female respondents were nulliparous, and over half of the couples did not have children currently living with them.

Reliability and descriptive statistics

Reliability was assessed using Cronbach's alpha for each of the three survey instruments and a combination of the two scales for body image for husbands, wives, and the total sample, using the data in both long and wide formats. Results, shown in Table 1, indicated alpha levels ranging from 0.943 to 0.975, which are within the acceptable levels of reliability (Fields, 2013). This is consistent with other studies that found a Cronbach's alpha for the CSI of 0.98 (Funke & Rogge, 2007), for the BAS of 0.94 (Avalos, Tylka & Wood-Barcalow, 2005) and for the BSQ of 0.97 (Tury, Gulec & Kohls, 2010). The means and standard deviations for the three measures are also shown in Table 1.

Table 1

Descriptive Statistics and Cronbach's alphas									
Survey measure	Wives			Husbands			Total		
	M	SD	<i>A</i>	M	SD	<i>a</i>	M	SD	<i>a</i>
CSI	4.9509	1.008	0.975	5.0109	0.8959	0.966	9.9618	1.815	0.971
BAS	3.6760	0.6944	0.946	3.6453	0.7998	0.943	7.3214	1.090	0.943
BSQ	4.1631	1.0377	0.958	4.682	0.9381	0.957	8.8451	1.4969	0.960
BAS/BSQ			0.967			0.966			0.967

Note. CSI=Couple Satisfaction Index; BAS=Body Appreciation Scale; BSQ=Body Shape Questionnaire

Table 2 shows the descriptive statistics comparing the BMI scores for husbands and wives. The means were similar (29.34 and 30.33, respectively), but the range was larger for the wives (18.8-75.5) than for the husbands (20.2-42.4).

This results in a wider spread of the standard deviation about the mean for the wives, and therefore the wives have a much larger standard deviation (10.01) than the husbands (5.40). These were also compared graphically in Figures 1 and 2. Figure 3 allows a comparison to a much larger sample for contrast. Figures can be seen in Appendix F.

Table 2

Descriptive Statistics of BMI					
	N	Minimum	Maximum	Mean	SD
BMI Wife	64	18.82	75.47	30.33	10.01
BMI Husband	63	20.24	42.37	29.34	5.40

Statistical analysis

Age, number of years married and income all increased together at a significant level for individuals. No significant relationship was found for where people lived (urban, big city, small town, rural) and scores for BMI, CSI, BAS or BSQ. No significant relationship was found between any of the three measures for body or marital satisfaction and age, education level, household income, number of children in the household or years married. Using linear regression, no significant relationship was found between age and BMI or between number of children living in the household and couple satisfaction. Because of the limited range and sample size, correlations were not explored for the state or country of residence or for race.

The correlation of the four measures between wives and husbands is shown in Table 3. The correlation between the BMI measures of the husbands and wives was significant, $r=0.405$, $p=0.001$, $t(62)=0.893$, and the correlation between husbands' and wives' CSI measures was significant at 0.817 , $p<0.001$, $t(63)=-0.819$.

Neither the correlation between the couples' BAS measures nor BSQ measures was significant. This suggests that husbands and wives were similar in regard to BMI and CSI but not in regard to BAS or BSQ. These relationships can also be seen graphically in Figures 5, 6, 7 and 8.

Table 3

Paired Sample Correlations		
	Correlation	<i>p</i>
BMI	0.4050	0.0010
CSI	0.8170	0.0000
BAS	0.0600	0.6390
BSQ	0.1460	0.2500

Note. BMI=Body Mass Index; CSI=Couple Satisfaction Index; BAS=Body Appreciation Scale; BSQ=Body Shape Questionnaire

In order to investigate whether the average difference between spouse's responses for the various measures differed significantly over couples, each couple was considered a paired sample. The couples' paired difference was calculated by subtracting the husband's response from that of the wife. The summary statistics are presented in Table 4. There was no significant difference in the means for BMI measurements or scores for the CSI or BAS, but there was a significant difference between the means for the BSQ, with the mean for husbands higher than for the wives.

Table 4

Paired Samples Test		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
BMI	Wife - Husband	1.04732	9.31122	1.1731	-1.29768	3.39232	0.893	62	0.375
CSI	Wife - Husband	-0.06003	0.58605	0.07326	-0.20642	0.08637	-0.819	63	0.416
BAS	Wife - Husband	0.03073	1.02736	0.12842	-0.2259	0.28736	0.239	63	0.812
BSQ	Wife- Husband	-0.51892	1.29333	0.16167	-0.84199	-0.19586	-3.21	63	0.002

Note. BMI=Body Mass Index; CSI=Couple Satisfaction Index; BAS=Body Appreciation Scale; BSQ=Body Shape Questionnaire

Wives were asked how many biological children they had. Thirty-six percent had none, 20.3% had one, 23.4% had two, 14.1% had three and 1.6% had four. The number of children was not significantly related to BSQ scores, but it was related to BAS scores, thus accounting for 7% of the variance in BAS scores; each additional child predicted a -0.18 change in BAS score, adjusted $R^2=.074$, $F(1, 59)=5.762$, $p=0.02$, 95% CI (-0.33, -0.030), as seen in Table 5. The number of children was not related to BMI.

Table 5

Number of children and Wives' BAS									
Dependent variable	Predictor	Adjusted R2	df	F	sig.	B	t	95% CI	
								lower	upper
Wives' BAS	number of children	0.074	60	5.762	0.02	-0.180	-2.4	-0.33	-0.03

Analysis of Results

Findings

The Pearson correlation coefficient (2-tailed) was calculated for the relationships among husband and wife scores for Body Mass Index, Couple Satisfaction Index, Body Shape Questionnaire and Body Appreciation Scale. Bivariate correlation was used to compare the combined scores for couples with the scores for husbands and wives. Correlations among the four measures are in Tables 6 and 7. When examining for correlations among the husbands, wives, and couples with the four measures reported above, several significant findings emerged. The strongest correlation was between CSI scores for husbands and wives ($r=.817$, $p<.001$). Higher CSI scores for husbands were associated with higher CSI scores for wives, seen in figure 9. There was also a strong correlation between BAS and BSQ scores for wives ($r=.758$, $p<.001$) and for husbands ($r=.732$, $p<.001$). BMI scores were more strongly correlated for BAS and BSQ scores for husbands than wives, with BMI negatively correlated to BAS ($r=-.585$, $p<.001$) and to BSQ ($r=-.581$, $p<.001$) for husbands and negatively correlated for wives to BSQ ($r=-.433$, $p<.001$) and not significantly correlated with BAS, seen in figures 9, 10, 11 and 12. There was also a small, but significant, correlation between the BMI for couples ($r=.405$,

$p < .001$). There was a small but significant correlation between wives' CSI and husbands' BMI ($r = .261, p = .037$).

Table 6

Correlations for Wives and Husbands' for BMI, CSI, BAS, and BSQ

	Wife				Husband			
	BMI	CSI	BAS	BSQ	BMI	CSI	BAS	BSQ
BMI Wife	1	-0.042	-0.234	-.433**	.405**	-0.018	-0.073	-0.108
CSI Wife	-0.042	1	0.160	0.029	-0.094	.817**	0.191	.261*
BAS Wife	-0.234	0.160	1	.785**	0.045	0.085	0.06	0.174
BSQ Wife	-.433**	0.029	.785**	1	-0.099	0.060	0.023	0.146
BMI Husband	.405**	-0.094	0.045	-0.099	1	-0.139	-.585**	-.581**
CSI Husband	-0.018	.817**	0.085	0.060	-0.139	1	0.216	.266*
BAS Husband	-0.073	0.191	0.060	0.023	-.585**	0.216	1	.732**
BSQ Husband	-0.108	.261*	0.174	0.146	-.581**	.266*	.732**	1

Note. BMI=Body Mass Index; CSI=Couple Satisfaction Index; BAS=Body Appreciation Scale; BSQ=Body Shape Questionnaire

* $p < .05$

** $p < .01$

Table 7

Correlations for combined scores

	Wives			Husbands			Combined		
	CSI	BAS	BSQ	CSI	BAS	BSQ	BAS	BSQ	CSI
Combined BAS	0.242	.681**	.517**	0.213	.772**	.648**	1	.764**	0.239
Combined BSQ	0.184	.653**	.785**	0.209	.475**	.728**	.764**	1	0.205
Combined CSI	.959**	0.131	0.046	.947**	0.213	.276*	0.239	0.205	1

Note. CSI=Couple Satisfaction Index; BAS=Body Appreciation Scale; BSQ=Body Shape Questionnaire

* $p < .05$

** $p < .01$

Hypothesis testing

No significant relationship was found between the wives' BAS or BSQ scores with individual or combined CSI scores. Table 8 explores the significant relationships between husbands' BSQ (maximum score of 5) and CSI (maximum score of 6.25) in more detail. It shows that the BSQ score for the husband accounted for 6% of the variance of the combined CSI score, adjusted $R^2=0.062$, $F(1,62)=5.132$, $p=0.027$, $B=0.267$, 95%CI (0.063, 1.007); for each unit increase in husbands' BSQ, combined CSI increased by 0.27. The husbands' BSQ score was correlated to the wives' CSI. The husbands' BSQ score accounted for 5% of the variance of the wives' CSI, adjusted $R^2=0.053$, $F(1,62)=4.544$, $p=0.037$, $B=0.281$, 95% CI (0.017, 0.544).; for each unit increase in husbands' BSQ, the wives' CSI increased by 0.28. The husbands' BSQ was also correlated with the husbands' marital satisfaction. The husbands' BSQ score accounted for 6% of the variance of his marital satisfaction, adjusted $R^2=0.056$. $F(1,62)=4.725$, $p=0.034$, $B=0.254$, 95% CI (0.020, 0.488); for each unit increase in husbands' BSQ, his CSI increased by 0.25. This can be seen graphically in figures 13, 14 and 15.

Table 8

Linear regression results using husbands' BSQ as the predictor variable								95% CI	
Dependent variable	Adjusted R ²	df	F	p	B	t	lower	upper	
CSI combined Wives'	0.062	62	5.132	0.027	0.267	2.265	0.031	0.504	
CSI Husbands'	0.053	62	4.544	0.037	0.281	2.132	0.017	0.544	
CSI	0.056	62	4.725	0.034	0.254	2.174	0.020	0.488	

Note. CSI=Couple Satisfaction Index; BSQ=Body Shape Questionnaire

Given the relationship between BSQ and BMI for husbands, BMI was examined as a possible confounding factor, seen in Table 9. BMI was found to be unrelated to the relationship between husbands' BSQ and measures of CSI.

Table 9

Husbands' BSQ controlling for BMI									
Predictor variable	Dependent variable	Adjusted R ²	df	R ² change	Sig F change	Correlations		Collinearity statistics	
Husband						partial	part	tolerance	VIF
	Husbands'								
BSQ	CSI	0.039	62	0.070	0.115	0.227	0.224	0.663	1.508
BMI						0.018	0.017		
BSQ	Wives' CSI	0.040	62	0.071	0.109	0.251	0.249	0.663	1.508
BMI						0.070	0.068		
	Combined								
BSQ	CSI	0.046	62	0.077	0.091	0.251	0.249	0.663	1.508
BMI						0.048	0.046		

Note. CSI=Couple Satisfaction Index; BSQ=Body Shape Questionnaire

The hypothesis that a positive relationship will be found between individual and joint body satisfaction with individual, spousal, and joint marital satisfaction across BMI ranges was partially supported, in that an increase in the husbands'

body satisfaction was correlated with an increase in marital satisfaction for husbands, wives, and couples on one measure, the BSQ, but not on the other, the BAS. There was no significant relationship between wives' body satisfaction and marital satisfaction for wives, husbands, or couples. This part of the hypothesis was not supported.

Chapter V

Summary

Discussion

The outcome measures of this study include two different scores of body satisfaction and one for marital satisfaction for husbands, wives and couples. Positive body image was measured using the Body Appreciation Scale (BAS), body dissatisfaction was measured using the Body Shape Questionnaire (BSQ) and marital satisfaction was measured using the Couples Satisfaction Index (CSI). Cronbach's alpha indicated a high level of reliability for all three measures. The effect of body mass index (BMI) was considered as a possible confounder.

Husbands and wives experienced a high level of agreement regarding marital satisfaction within couples while between couples measures had a wide range. Contentment in marriage tends to be reciprocal and reinforcing; happy wives make their husbands happier and vice versa, while displeased spouses diminish satisfaction in each other. Agreement about marital satisfaction is a sign of strength in the relationship.

There was no significant correlation between body image measures for husbands and wives within couples. Body image does not appear to be reciprocal in couples in the same way that marital satisfaction is. Attitudes about one's body, positive or negative, may have minimal effect on the body image of the partner. Generally, women are more valued for appearance and men are more valued for achievement, but positive comments about a woman's appearance reinforce objectification (Calogero, Herbozo & Thompson, 2009). Women with higher levels

of body dissatisfaction respond in ambivalent and contradictory ways to feedback from intimate partners. If a woman's partner agrees with a negative comment about her body, she may feel emotionally negative but also understood. If her partner reacts with a positive view of her appearance, she may feel increased positive emotion while simultaneously feeling that her partner does not understand her accurately. This can result in a double-bind situation for husbands, when compliments about physical attributes result in temporary feelings of improved attachment followed by insecurity about self worth. (Brown, Stukas & Evans, 2013).

Husbands had a higher mean score on the BSQ than wives, indicating that wives had higher levels of body dissatisfaction, overall, than husbands. This implication that husbands have better body satisfaction than wives is consistent with other research supporting the idea that women have more difficulty with body image and body dissatisfaction than men do (Saguy & Gruys, 2010).

Simultaneously, body mass index was more strongly negatively correlated to body image for husbands than for wives; while higher BMI was associated with lower levels of body satisfaction for both, this was more marked for husbands. In other words, body satisfaction for husbands appeared to be influenced more by actual body size while wives' body satisfaction appeared more likely to be determined by additional factors not examined in this study. Women's body image may be more complicated, incorporating variables such as unreasonable expectations and comparisons, while men's body image may be more straightforward (Fikkun & Rothblum, 2012). It is unclear whether the impact of a man's BMI on his body satisfaction is related more to appearance or to the effect of

higher weight on functional capacity.

No significant correlation was found in this study between the wives' body satisfaction and marital satisfaction for husbands, wives, or couples. A weak but significant positive correlation was found between the husbands' body satisfaction and marital satisfaction for husbands, wives, and couples. While the relationship between women's body image and relationship quality has been previously studied, this unexpected finding indicates that the husband's body satisfaction plays an important role in relationships as well. At the same time, researchers have studied the impact on the relationship of men's comments regarding women's appearance (Brown, Stukas & Evans, 2013) but little attention has focused on men's responses to women's comments about their appearance.

The original hypothesis, that there would be a positive relationship between body image and marital satisfaction for husbands, wives and spouses, was only partially supported. This study did not find a relationship between wives' body satisfaction and marital satisfaction for themselves or for their husbands. This may be due to the sample size; in a larger, more representative sample, a relationship might be found between women's body satisfaction and marital satisfaction. The the sample consists primarily of highly educated women, and it may be that they value themselves for other characteristics than appearance, such as earning potential, professional credentials or intelligence. A larger sample size that is more representative might also reveal a stronger relationship between husbands' body image and marital satisfaction for husbands and wives.

Limitations

The sample size used in this study is small ($n = 64$) and not representative of the population. In particular, the socioeconomic status of the sample is much higher than the general population in terms of both income and education level. The sample is also predominately Caucasian and from the American Midwest. The sample includes only married couples who identify as heterosexual. Thus, the results are not generalizable. Additionally, the current study utilized a cross-sectional design so causality cannot be inferred.

The variables that contribute to relationship satisfaction are numerous and diverse. It was beyond the scope of this study to control for them beyond measuring for body satisfaction.

Recommendations

Future research implications.

The interaction between body satisfaction and marital happiness is largely unexplored. Existing literature about body image and relationships primarily focuses on women and their experiences. The effect on and interaction with a partner offers a rich area of possible study. The use of the dyadic design, in which both members of a couple are involved and the couple is considered the unit for evaluation, presents unique possibilities.

As with most research, this study raises more questions than it answers. What influences men's body image? How is it developed? How is that process different from the way women develop body image? Are there differences in body image across different socioeconomic statuses? How does SES influence body image for both men and women? Is it possible to make body image more reciprocal within

the marital dyad and, if so, how would it change marital satisfaction? How is internalized weight stigma expressed within marriage?

If the current study were repeated with a much larger data base that is more representative of the general population, especially regarding socio-economic status, additional results might emerge. This would require a broader recruitment effort as well as revised instructions about survey completion to increase the number of usable, linked cases. The study could also be expanded to committed couples who are not married. Using the combined couple measures for body and relationship satisfaction could be applied to same sex couples, although that might require an arbitrary assignment of "distinguishing characteristic" (Malloy & Albright, 2001) such as "first person to complete the survey" or "older partner" or even "person whose birthday occurs first in the calendar year".

Given the multiple variables that have an impact on marital satisfaction, a study that controlled for commonly identified possibilities for conflict, such as finances or housework, might find stronger evidence for the role of body image.

The dyadic design lends itself better, in some ways, to qualitative rather than quantitative research designs. Interviewing couples separately and together to evaluate themes about marital and body satisfaction could produce additional variables for study. Group interviews with just husbands, just wives, and couples together could add additional levels of richness.

While considerable attention has been paid to the factors that influence body image in women, such as media depictions, social interactions, family expectations and objectification, it is not reasonable to assume that men's body image is

developed in the same way. Given the finding that men's body satisfaction influences marital satisfaction, additional qualitative and quantitative studies focusing on the factors that contribute to body image for men would be helpful.

Future practice implications.

Relationship counseling interventions tend to focus on conflict resolution and interaction patterns (Gottman, 1995), but interventions for couples regarding body image are lacking. This study found a correlation between body satisfaction, especially for husbands, and marital satisfaction. Improving body image scores by 0.7 could be clinically significant regarding relationship behaviors (Ramseyer Winter & Satinsky, 2014) and it would be very interesting to compare a traditional program of couples counseling with one that included a body image improvement component.

In counseling for both couples and individuals, questions about body image could be routinely included in assessment interviews. Assessing for and treating body image concerns could be included in training of mental health therapists. Encouraging spouses to give positive feedback to one another is a common recommendation for improving connection and communication for couples in counseling. Specific suggestions for comments about admirable aspects other than appearance could help couples avoid further objectifying each other while encouraging them to expand the ways they express appreciation. Guidelines for activities that increased the reciprocal nature of body image could be evaluated.

Public health interventions sometimes target the family as the unit of change. Public health programs focusing on improving healthy lifestyles with and without a

component addressing body image improvement for couples could also be evaluated. Given the evidence that attempts at weight loss are unlikely to succeed and may increase health risks (Bombak, 2014; Fildes et al., 2015; Macpherson-Sánchez, 2015; Tylka et al., 2014) and literature that links positive body image with improved health behaviors and measures (Bacon, Stern, Van Loan, & Keim, 2005; Blake, Hebert, Lee, Adams, Steck, Sui, Kuk, & Blair, 2013; Eisenberg, Berge, & Neumark-Sztainer, 2013; Kater, Rohwe, & Londre, 2002; Kelly, Wall, Eisenberg, Story, & Neumark-Sztainer, 2002; Neumark-Sztainer, 2009; Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006; Neumark-Sztainer, Wall, Guo, Story, Haines, & Eisenberg, 2006; Sonnevile, Calzo, Horton, Austin, & Field, 2012), interventions to promote healthy behavior may do better to focus on improving body image rather than on losing weight. Weight stigma, specifically, should be avoided in public health interventions.

Conclusions

Body dissatisfaction has been associated with poorer health outcomes and poorer quality of life for individuals, and higher levels of marital satisfaction are known to correlate with better health, longevity and quality of life, but few studies examine the role of body image in relationships.

Dyadic research, in which the interaction of two or more individuals is investigated as well as the responses of individuals themselves, is well suited for research concerning marital satisfaction but few, if any, dyadic studies have focused on body image. In research regarding body image in general, the role of the husband's body image is commonly overlooked. Dyadic research has rarely been

done using online surveys. This study was an attempt to explore the relationship between body satisfaction and marital satisfaction for individuals and their spouses using a dyadic approach with an online survey.

Although the small sample size limits the generalizability of the data, there is a positive correlation between a husband's body satisfaction and marital satisfaction for himself, his wife and the couple as a dyad. The importance of body image issues for both men and women should be considered in couples counseling, health care and public health interventions.

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Appendix A

Couples Satisfaction Index (CSI-32)

1. Please indicate the degree of happiness, all things considered, of your relationship.

Extremely Unhappy	Fairly Unhappy	A Little Unhappy	Happy	Very Happy	Extremely Happy	Perfect
0	1	2	3	4	5	6

Most people have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Agree	Almost Always Agree	Occa- sionally Disagree	Fre- quently Disagree	Almost Always Disagree	Always Disagree	
2. Amount of time spent together	5	4	3	2	1	0	
3. Making major decisions	5	4	3	2	1	0	
4. Demonstrations of affection	5	4	3	2	1	0	
		All the time	Most of the time	More often than not	Occa- sionally	Rarely	Never
5. In general, how often do you think that things between you and your partner are going well?		5	4	3	2	1	0
6. How often do you wish you hadn't gotten into this relationship?		0	1	2	3	4	5
	Not at all TRUE	A little TRUE	Some- what TRUE	Mostly TRUE	Almost Completely TRUE	Completely TRUE	
7. I still feel a strong connection with my partner	0	1	2	3	4	5	
8. If I had my life to live over, I would marry (or live with / date) the same person	0	1	2	3	4	5	
9. Our relationship is strong	0	1	2	3	4	5	
10. I sometimes wonder if there is someone else out there for me	5	4	3	2	1	0	
11. My relationship with my partner makes me happy	0	1	2	3	4	5	
12. I have a warm and comfortable relationship with my partner	0	1	2	3	4	5	
13. I can't imagine ending my relationship with my partner	0	1	2	3	4	5	
14. I feel that I can confide in my partner about virtually anything	0	1	2	3	4	5	
15. I have had second thoughts about this relationship recently	5	4	3	2	1	0	
16. For me, my partner is the perfect romantic partner	0	1	2	3	4	5	
17. I really feel like <u>part of a team</u> with my partner	0	1	2	3	4	5	
18. I cannot imagine another person making me as happy as my partner does	0	1	2	3	4	5	

	Not at all	A little	Some-what	Mostly	Almost Completely	Completely
19. How rewarding is your relationship with your partner?	0	1	2	3	4	5
20. How well does your partner meet your needs?	0	1	2	3	4	5
21. To what extent has your relationship met your original expectations?	0	1	2	3	4	5
22. In general, how satisfied are you with your relationship?	0	1	2	3	4	5

	Worse than all others (Extremely bad)					Better than all others (Extremely good)					
	0	1	2	3	4	5	6	7	8	9	10
23. How good is your relationship compared to most?											

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
24. Do you enjoy your partner's company?	0	1	2	3	4	5
25. How often do you and your partner have fun together?	0	1	2	3	4	5

For each of the following items, select the answer that best describes *how you feel about your relationship*. Base your responses on your first impressions and immediate feelings about the item.

26.	INTERESTING	5	4	3	2	1	0	BORING
27.	BAD	0	1	2	3	4	5	GOOD
28.	FULL	5	4	3	2	1	0	EMPTY
29.	LONELY	0	1	2	3	4	5	FRIENDLY
30.	STURDY	5	4	3	2	1	0	FRAGILE
31.	DISCOURAGING	0	1	2	3	4	5	HOPEFUL
32.	ENJOYABLE	5	4	3	2	1	0	MISERABLE

The CSI(16) consists of items 1, 5, 9, 11, 12, 17, 19, 20, 21, 22, 26, 27, 28, 30, 31, and 32.

Appendix B

BODY APPRECIATION SCALE (BAS)

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Directions for participants: for each item, please circle the number that best characterizes your attitudes or behaviors.

		1 never	2 seldom	3 sometimes	4 often	5 always
1	I respect my body.	1	2	3	4	5
2	I feel good about my body.	1	2	3	4	5
3	On the whole, I am satisfied with my body.	1	2	3	4	5
4	Despite its flaws, I accept my body for what it is.	1	2	3	4	5
5	I feel that my body has at least some good qualities.	1	2	3	4	5
6	I take a positive attitude towards my body.	1	2	3	4	5
7	I am attentive to my body's needs.	1	2	3	4	5
8	My self-worth is independent of my body shape or weight.	1	2	3	4	5
9	I do not focus a lot of energy being concerned with my body shape or weight.	1	2	3	4	5
10	My feelings toward my body are positive, for the most part.	1	2	3	4	5
11	I engage in healthy behaviors to take care of my body.	1	2	3	4	5
12	I do not allow unrealistically thin images of women presented in the media to affect my attitudes toward my body.	1	2	3	4	5
13	Despite its imperfections, I still like my body.	1	2	3	4	5

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TOTAL SCORE: _____

BAS - 2

1. I respect my body.
2. I feel good about my body.
3. I feel that my body has at least some good qualities.
4. I take a positive attitude towards my body.
5. I am attentive to my body's needs.
6. I feel love for my body.
7. I appreciate the different and unique characteristics of my body.
8. My behavior reveals my positive attitude toward my body; for example, I hold my head high and smile.
9. I am comfortable in my body.
10. I feel like I am beautiful even if I am different from media images of attractive people (e.g., models, actresses/actors).

Appendix C

BSQ-16B

We should like to know how you have been feeling about your appearance over the **PAST FOUR WEEKS**. Please read each question and circle the appropriate number to the right. Please answer all the questions.

	Never		Rarely		Sometimes		Often		Very often		Always
OVER THE PAST <u>FOUR WEEKS</u>:											
1. Have you been so worried about your shape that you have been feeling you ought to diet?.....	1	2	3	4	5	6					
2. Have you been afraid that you might become fat (or fatter)?.....	1	2	3	4	5	6					
3. Has feeling full (e.g. after eating a large meal) made you feel fat?.....	1	2	3	4	5	6					
4. Have you noticed the shape of other women and felt that your own shape compared unfavourably?.....	1	2	3	4	5	6					
5. Has thinking about your shape interfered with your ability to concentrate (e.g. while watching television, reading, listening to conversations)?.....	1	2	3	4	5	6					
6. Has being naked, such as when taking a bath, made you feel fat?.....	1	2	3	4	5	6					
7. Have you imagined cutting off fleshy areas of your body?.....	1	2	3	4	5	6					
8. Have you not gone out to social occasions (e.g. parties) because you have felt bad about your shape?.....	1	2	3	4	5	6					
9. Have you felt excessively large and rounded?.....	1	2	3	4	5	6					
10. Have you thought that you are in the shape you are because you lack self-control?.....	1	2	3	4	5	6					
11. Have you worried about other people seeing rolls of fat around your waist or stomach?.....	1	2	3	4	5	6					
12. When in company have your worried about taking up too much room (e.g. sitting on a sofa, or a bus seat)?.....	1	2	3	4	5	6					

- | | | | | | | |
|---|---|---|---|---|---|---|
| 13. Has seeing your reflection (e.g. in a mirror or shop window) made you feel bad about your shape?..... | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. Have you pinched areas of your body to see how much fat there is?..... | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths)?..... | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. Have you been particularly self-conscious about your shape when in the company of other people?..... | 1 | 2 | 3 | 4 | 5 | 6 |

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Appendix D

Body Image and Marital Satisfaction

Q1 Thank you for participating in this research study "Body Image and Marital Satisfaction." It will probably take you about twenty minutes to complete. All answers will be anonymous. Because the study is about married couples, only information gathered from both wife and husband can be used, so please follow the directions carefully. When the first person has completed the survey, a link will be generated with instructions to copy and paste the link into an email or message for the spouse, who can then complete the survey. This way the answers will be linked together even though you will not be able to see each other's answers. Married couples have not been studied this way previously. Your participation will benefit researchers and clinicians who deal with body image issues and marital counseling. You will be asked to complete a questionnaire which will ask for demographic information, followed by a series of questions about how you feel regarding your marriage and your body. The process should take about thirty minutes. Being involved in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as becoming upset. As a result of completing this survey you may learn more about yourself and how you feel about your relationship and your body, which could be uncomfortable. However, being in this study would not pose a risk to your safety or wellbeing. If you become upset and feel you need someone to talk to please contact one of the following confidential hotlines: SAMHSA's National Helpline: 800-662-HELP (800-662-4357) TTY: 800-487-4889. Crisis hotline: 800-273-8255 National Eating Disorders Association Information and Referral Helpline 800-931-2237 Samaritans (UK) 08457 90 90 90 Lifeline (Australia) 13 11 14 This study is being conducted by Nancy Ellis-Ordway in partial completion of a doctoral degree in Health Education and Promotion at the University of Missouri, USA. Questions or concerns can be directed to her at 573-635-8668 or neomsw@mindspring.com or to Alex Waigandt, PhD, at WaigandtA@missouri.edu. If you have any questions regarding your rights as a participant in this research and/or concerns about the study, or if you feel under any pressure to enroll or to continue to participate in this study, you may contact the University of Missouri Campus Institutional Review Board (which is a group of people who review the research studies to protect participants' rights) at (573) 882-9585 or umcresearchcirb@missouri.edu. When you are invited to participate in research, you have the right to be informed about the study procedures so that you can decide whether you want to consent to participation. You have the right to know what you will be asked to do so that you can decide whether or not to be in the study. Your participation is voluntary. You do not have to be in the study if you do not want to. You may refuse to be in the study and nothing will happen. If you do not want to continue to be in the study, you may stop at any time without penalty or loss of benefits to which you are otherwise entitled. There is no compensation for this study; however, I am grateful for your

participation. All information will be kept on a password protected computer. Participants will only be identified by a randomly generated code. If you are interested in seeing the final report, please email Nancy Ellis-Ordway at neomsw@mindspring.com. At the end of the survey you will be giving the opportunity to make comments. By clicking on "continue," you are verifying that you are a married, heterosexual individual, that you consent to participate and you are consent to allow any comments you make to be used in reporting the outcome of the study.

Q2 Are you the

- Wife (1)
- Husband (2)

Q3 How old are you?

Q4 How many years have you been married?

Answer If Are you the Wife Is Selected

Q77 How many biological children have you had?

- 0 (1)
- 1 (2)
- 2 (3)
- 3 (4)
- 4 (5)
- 5 (6)
- 6 or more (7)

Q5 How many children live in your household?

- 0 (1)
- 1 (2)
- 2 (3)
- 3 (4)
- 4 (5)
- 5 or more (6)

Q6 How old is the oldest child living in your household?

Q7 How old is the youngest child living in your household?

Q8 Where do you live?

- Urban/big city (more than 100,000 people) (1)
- Small city/big town (15,000 to 100,000 people) (4)
- Small town less than (15,000 people) (2)
- Rural (3)

Q9 In which country do you reside?

- Please select below... (1)
- Afghanistan (2)
- Albania (3)
- Algeria (4)
- Andorra (5)
- Angola (6)
- Antigua and Barbuda (7)
- Argentina (8)
- Armenia (9)
- Australia (10)
- Austria (11)
- Azerbaijan (12)
- Bahamas (13)
- Bahrain (14)
- Bangladesh (15)
- Barbados (16)
- Belarus (17)
- Belgium (18)
- Belize (19)
- Benin (20)
- Bhutan (21)
- Bolivia (22)
- Bosnia and Herzegovina (23)
- Botswana (24)
- Brazil (25)
- Brunei (26)
- Bulgaria (27)
- Burkina Faso (28)
- Burma/Myanmar (29)
- Burundi (30)
- Cambodia (31)
- Cameroon (32)
- Canada (33)
- Cape Verde (34)
- Central African Republic (35)
- Chad (36)

- Chile (37)
- China (38)
- Colombia (39)
- Comoros (40)
- Congo (41)
- Congo, Democratic Republic of (42)
- Costa Rica (43)
- Cote d'Ivoire/Ivory Coast (44)
- Croatia (45)
- Cuba (46)
- Cyprus (47)
- Czech Republic (48)
- Denmark (49)
- Djibouti (50)
- Dominica (51)
- Dominican Republic (52)
- East Timor (53)
- Ecuador (54)
- Egypt (55)
- El Salvador (56)
- Equatorial Guinea (57)
- Eritrea (58)
- Estonia (59)
- Ethiopia Fiji (60)
- Finland (61)
- France (62)
- Gabon (63)
- Gambia (64)
- Georgia (65)
- Germany (66)
- Ghana (67)
- Greece (68)
- Grenada (69)
- Guatemala (70)
- Guinea (71)
- Guinea-Bissau (Bissau) (AF) (72)
- Guyana (73)
- Haiti (74)
- Honduras (75)
- Hungary (76)
- Iceland (77)
- India (78)
- Indonesia (79)

- Iran (80)
- Iraq (81)
- Ireland (82)
- Israel (83)
- Italy (84)
- Jamaica (85)
- Japan (86)
- Jordan (87)
- Kazakstan (88)
- Kenya (89)
- Kiribati (90)
- Korea, North (91)
- Korea, South (92)
- Kuwait (93)
- Kyrgyzstan (94)
- Laos (95)
- Latvia (96)
- Lebanon (97)
- Lesotho (98)
- Liberia (99)
- Libya (100)
- Liechtenstein (101)
- Lithuania (102)
- Luxembourg (103)
- Macedonia (104)
- Madagascar (105)
- Malawi (106)
- Malaysia (107)
- Maldives (108)
- Mali (109)
- Malta (110)
- Marshall Islands (111)
- Mauritania (112)
- Mauritius (113)
- Mexico (114)
- Micronesia (115)
- Moldova (116)
- Monaco (117)
- Mongolia (118)
- Montenegro (119)
- Morocco (120)
- Mozambique (121)
- Namibia (122)

- Nauru (123)
- Nepal (124)
- Netherlands (125)
- New Zealand (126)
- Nicaragua (127)
- Niger (128)
- Nigeria (129)
- Norway (130)
- Oman (131)
- Pakistan (132)
- Palau (133)
- Panama (134)
- Papua New Guinea (135)
- Paraguay (136)
- Peru (137)
- Philippines (138)
- Poland (139)
- Portugal (140)
- Qatar (141)
- Romania (142)
- Russian Federation (143)
- Rwanda (144)
- Saint Kitts and Nevis (145)
- Saint Lucia (146)
- Saint Vincent and the Grenadines (147)
- Samoa (148)
- San Marino (149)
- Sao Tome and Principe (150)
- Saudi Arabia (151)
- Senegal (152)
- Serbia (153)
- Seychelles (154)
- Sierra Leone (155)
- Singapore (156)
- Slovakia (157)
- Slovenia (158)
- Solomon Islands (159)
- Somalia (160)
- South Africa (161)
- Spain (162)
- Sri Lanka (163)
- Sudan (164)
- Suriname (165)

- Swaziland (166)
- Sweden (167)
- Switzerland (168)
- Syria (169)
- Taiwan (170)
- Tajikistan (171)
- Tanzania (172)
- Thailand (173)
- Togo (174)
- Tonga (175)
- Trinidad and Tobago (176)
- Tunisia (177)
- Turkey (178)
- Turkmenistan (179)
- Tuvalu (180)
- Uganda (181)
- Ukraine (182)
- United Arab Emirates (183)
- United Kingdom (184)
- United States (185)
- Uruguay (186)
- Uzbekistan (187)
- Vanuatu (188)
- Vatican City (189)
- Venezuela (190)
- Vietnam (191)
- Yemen (192)
- Zambia (193)
- Zimbabwe (194)
- Other (195)

Q10 If USA, in which state do you reside?

- Alabama (1)
- Alaska (2)
- Arizona (3)
- Arkansas (4)
- California (5)
- Colorado (6)
- Connecticut (7)
- Delaware (8)
- District of Columbia (9)
- Florida (10)
- Georgia (11)
- Hawaii (12)
- Idaho (13)
- Illinois (14)
- Indiana (15)
- Iowa (16)
- Kansas (17)
- Kentucky (18)
- Louisiana (19)
- Maine (20)
- Maryland (21)
- Massachusetts (22)
- Michigan (23)
- Minnesota (24)
- Mississippi (25)
- Missouri (26)
- Montana (27)
- Nebraska (28)
- Nevada (29)
- New Hampshire (30)
- New Jersey (31)
- New Mexico (32)
- New York (33)
- North Carolina (34)
- North Dakota (35)
- Ohio (36)
- Oklahoma (37)
- Oregon (38)
- Pennsylvania (39)
- Rhode Island (40)
- South Carolina (41)
- South Dakota (42)

- Tennessee (43)
- Texas (44)
- Utah (45)
- Vermont (46)
- Virginia (47)
- Washington (48)
- West Virginia (49)
- Wisconsin (50)
- Wyoming (51)
- I do not live in the continental United States (52)

Q11 What is your race?

- White/Caucasian (1)
- African descent (2)
- Hispanic (3)
- Asian (4)
- Native American (5)
- Pacific Islander (6)
- Other (7)
- prefer not to answer (8)

Q12 What is the highest level of education you have completed?

- Less than High School (1)
- High School / GED (2)
- Some College (3)
- 2-year College Degree (4)
- 4-year College Degree (5)
- Masters Degree (6)
- Doctoral Degree (7)
- Professional Degree (JD, MD) (8)

Q13 6. What is your combined annual household income?

- under \$20,000 (1)
- 20,000-29,999 (2)
- 30,000-39,999 (3)
- 40,000-49,999 (4)
- 50,000-59,999 (5)
- 60,000-69,999 (6)
- 70,000-79,999 (7)
- 80,000-89,999 (8)
- 90,000-99,999 (9)
- 100,000-109,999 (10)
- 110,000-119,999 (11)
- 120,000-129,999 (12)
- 130,000-139,999 (13)
- 140,000-149,999 (14)
- 150,000+ (15)

Q14 How tall are you?

- less than 59 inches/150 cm (28)
- 59 inches/150 cm (1)
- 60 inches (5 feet) 152 cm (2)
- 61 inches/155 cm (3)
- 62 inches/157 cm (4)
- 63 inches/160 cm (5)
- 64 inches/163 cm (6)
- 65 inches/165 cm (7)
- 66 inches/168 cm (8)
- 67 inches/170 cm (9)
- 68 inches/173 cm (10)
- 69 inches/175 cm (11)
- 70 inches/177 cm (12)
- 71 inches/ 180 cm (13)
- 72 inches (6 feet) 183 cm (14)
- 73 inches/185 cm (15)
- 74 inches/188 cm (16)
- 75 inches/190 cm (17)
- 76 inches/193 cm (18)
- 77 inches/196 cm (19)
- 78 inches/198 cm (20)
- 79 inches/200 cm (21)
- 80 inches/203 cm (22)
- 81 inches/206 cm (23)
- 82 inches/208 cm (24)
- 83 inches/210 cm (25)
- 84 inches (7 feet) 213 cm (26)
- More than 7 feet (27)

Q15 How much do you weigh?

- less than 90 lb/40.8 kg (1)
- 90-100 lb/40.8-45.4 kg (4)
- 100-110 lb/45.4-49.9 kg (5)
- 110-120 lb/49.9-54.4 kg (8)
- 120-130 lb/54.4-59 kg (6)
- 130-140 lb/59-63.5 kg (7)
- 140-150 lb/63.5-68.3 kg (9)
- 150-160 lb/68.3-72.6 kg (10)
- 160-170 lb/72.6-77 kg (11)
- 170-180 lb/77-81.6 kg (12)
- 180-190 lb/81.6-86.2 kg (13)
- 190-200 lb/86.2-90.7 kg (14)

- 200-210 lb/90.7-95.3 kg (15)
- 210-220 lb/95.3-99.8 kg (16)
- 220-230 lb/99.8-104.3 kg (17)
- 230-240 lb/104.3-108.9 kg (18)
- 240-250 lb/108.9-113.4 kg (19)
- 250-260 lb/113.4-118 kg (20)
- 260-270 lb/118-122.5 kg (21)
- 270-280 lb/122.5-127.6 kg (22)
- 280-290 lb/127.6-131.5 kg (2)
- 290-300 lb/131.5-136.8 (23)
- 300-310 lb/136.8-140.6 kg (24)
- 310-320 lb/140.6-145 kg (25)
- 320-330 lb/145-149.7 kg (26)
- 330-340 lb/149.7-154.2 kg (27)
- 340-350 lb/154.2-158.7 kg (28)
- 350-360 lb/158.7-163.3 (29)
- 360-370 lb/163.3-167.8 kg (30)
- 370-380 lb/167.8-172.4 kg (31)
- 380-390 lb/172.4-176.9 kg (32)
- 390-400 lb/176.9-181.4 kg (33)
- 400-410 lb/181.4-186 kg (3)
- 410-420 lb/186-190.5 (35)
- 420-430 lb/190.5-195.4 kg (36)
- 430-440 lb/195.4-199.6 kg (37)
- 440-450 lb/199.6-204 kg (38)
- 450-460 lb/204-208.7 kg (39)
- 460-470 lb/208.7-213 kg (40)
- 470-480 lb/213-217.7 kg (41)
- 480-490 lb/217.7-222.2 kg (42)
- 490-500 lb/222.2-226.8 kg (43)
- More than 500 lb/226.8 kg (44)

Q16 Please think about your relationship with your spouse when answering the following questions:

Q17 Please indicate the degree of happiness, all things considered, of your relationship.

- Extremely Unhappy (1)
- Fairly Unhappy (2)
- A Little Unhappy (3)
- Happy (4)
- Very Happy (5)
- Extremely Happy (6)
- Perfect (7)

Q18 In general, how often do you think that things between you and your partner are going well?

- All the time (1)
- Most of the time (2)
- More often than not (3)
- Occasionally (4)
- Rarely (5)
- Never (6)

Q19 Our relationship is strong

- Not at all TRUE (1)
- A little TRUE (2)
- Somewhat TRUE (3)
- Mostly TRUE (4)
- Almost Completely TRUE (5)
- Completely TRUE (6)

Q20 My relationship with my partner makes me happy

- Not at all TRUE (1)
- A little TRUE (2)
- Somewhat TRUE (3)
- Mostly TRUE (4)
- Almost Completely TRUE (5)
- Completely TRUE (6)

Q21 I have a warm and comfortable relationship with my partner

- Not at all TRUE (1)
- A little TRUE (2)
- Somewhat TRUE (3)
- Mostly TRUE (4)
- Almost Completely TRUE (5)
- Completely TRUE (6)

Q22 I really feel like part of a team with my partner

- Not at all TRUE (1)
- A little TRUE (2)
- Somewhat TRUE (3)
- Mostly TRUE (4)
- Almost Completely TRUE (5)
- Completely TRUE (6)

Q23 How rewarding is your relationship with your partner?

- Not at all (1)
- A little (2)
- Somewhat (3)
- Mostly (4)
- Almost Completely (5)
- Completely (6)

Q24 How well does your partner meet your needs?

- Not at all (1)
- A little (2)
- Somewhat (3)
- Mostly (4)
- Almost Completely (5)
- Completely (6)

Q25 To what extent has your relationship met with your original expectations?

- Not at all (1)
- A little (2)
- Somewhat (3)
- Mostly (4)
- Almost Completely (5)
- Completely (6)

Q26 In general, how satisfied are you with your relationship?

- Not at all (1)
- A little (2)
- Somewhat (3)
- Mostly (4)
- Almost Completely (5)
- Completely (6)

Q27 For each of the following items, select the answer that best describes how you feel about your relationship. Base your responses on your first impressions and immediate feelings about the item.

	Interesting			Boring		
	5 (1)	4 (2)	3 (3)	2 (4)	1 (5)	0 (6)
(7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q28

	Bad			Good		
	0 (1)	1 (2)	2 (3)	3 (4)	4 (5)	5 (6)
(7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q29

	Full			Empty		
	5 (1)	4 (2)	3 (3)	2 (4)	1 (5)	0 (6)
(7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q30

	Sturdy			Fragile		
	5 (1)	4 (2)	3 (3)	2 (4)	1 (5)	0 (6)
(7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q31

	Discouraging			Hopeful		
	0 (1)	1 (2)	2 (3)	3 (4)	4 (5)	5 (6)
(7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q32

	Enjoyable			Miserable		
	5 (1)	4 (2)	3 (3)	2 (4)	1 (5)	0 (6)
(7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q33 The following questions evaluate how you feel about your body

Q34 I respect my body

- never (1)
- seldom (2)
- sometimes (3)
- often (4)
- always (5)

Q35 I feel good about my body

- never (1)
- seldom (2)
- sometimes (3)
- often (4)
- always (5)

Q36 I feel that my body has at least some good qualities.

- never (1)
- seldom (2)
- sometimes (3)
- often (4)
- always (5)

Q37 I take a positive attitude towards my body

- never (1)
- seldom (2)
- sometimes (3)
- often (4)
- always (5)

Q38 I am attentive to my body's needs.

- never (1)
- seldom (2)
- sometimes (3)
- often (4)
- always (5)

Q39 I feel love for my body.

- never (1)
- seldom (2)
- sometimes (3)
- often (4)
- always (5)

Q40 I appreciate the different and unique characteristics of my body.

- never (1)
- seldom (2)
- sometimes (3)
- often (4)
- always (5)

Q41 My behavior reveals my positive attitude toward my body; for example, I hold my head high and smile.

- never (1)
- seldom (2)
- sometimes (3)
- often (4)
- always (5)

Q42 I am comfortable in my body.

- never (1)
- seldom (2)
- sometimes (3)
- often (4)
- always (5)

Q43 I feel like I am beautiful even if I am different from media images of attractive people (e.g., models, actresses/actors).

- never (1)
- seldom (2)
- sometimes (3)
- often (4)
- always (5)

Q44 Have you been so worried about your shape that you have been feeling you ought to diet?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q45 Have you been afraid that you might become fat (or fatter)?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q46 Has feeling full (e.g. after eating a large meal) made you feel fat?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q47 Have you noticed the shape of other people and felt that your own shape compared unfavorably?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q48 Has thinking about your shape interfered with your ability to concentrate (e.g. while watching television, reading, listening to conversations)?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q49 Has being naked, such as when taking a bath, made you feel fat

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q50 Have you imagined cutting off fleshy areas of your body?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q51 Have you not gone out to social occasions (e.g. parties) because you have felt bad about your shape ?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q52 Have you felt excessively large and rounded?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q53 Have you thought that you are in the shape you are because you lack self-control?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q54 Have you worried about other people seeing rolls of fat around your waist or stomach?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q55 When in company have your worried about taking up too much room (e.g. sitting on a sofa, or a bus seat)?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q56 Has seeing your reflection (e.g. in a mirror or shop window) made you feel bad about your shape?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q57 Have you pinched areas of your body to see how much fat there is?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q58 Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths)?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q59 Have you been particularly self-conscious about your shape when in the company of other people?

- never (1)
- rarely (2)
- sometimes (3)
- often (4)
- very often (5)
- always (6)

Q60 Is there anything you would like to add? I appreciate any comments.

Appendix E

Hello,

I am currently engaged in research to complete a PhD in Health Education and Promotion at the University of Missouri. My research topic concerns the relationship between body image and marital satisfaction, drawing on information gathered using a survey to be completed by both husband and wife. The information will be the most useful if it comes from people of many different ages and backgrounds.

If you are part of a heterosexual married couple and your spouse is willing to participate, I invite you to take the survey. It will probably take you twenty minutes or less to complete. You may go to the link below and it will take you to your part of the survey. When you finish, it will generate a code to send to your spouse to take the survey so that your answers will be linked in the database. You will not be able to see each other's answers and all information will be anonymous.

The questions will include some background information about you and a series of questions regarding how you feel about your body and how you feel about your marriage. Some sensitive topics may be discussed. Participation is voluntary. Please talk with your spouse before beginning to be sure that she/he agrees to participate. Feel free to forward this message as an explanation.

Whether you chose to participate or not, I appreciate your time. If you are willing, I would also appreciate it if you would forward this message to any married people you know who might be interested in participating. Thank you.

To take the survey, click here:

https://missouri.qualtrics.com/SE/?SID=SV_efcMKNJhU5jvFHL

If you are interested in the outcome of the research, I will post it on my website at www.neomsw.com

Appendix F

Figure 1, Wives BMI

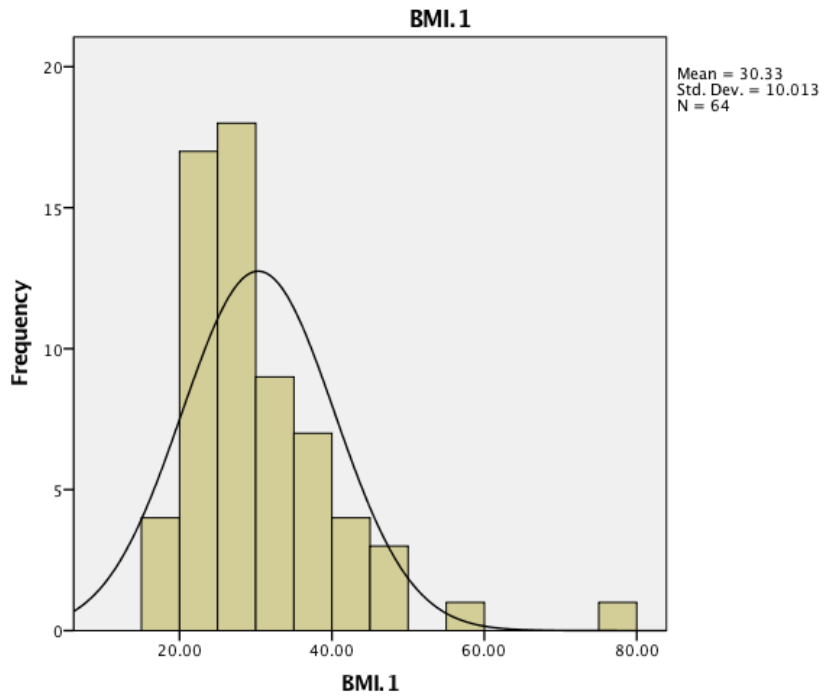


Figure 2 Husbands BMI

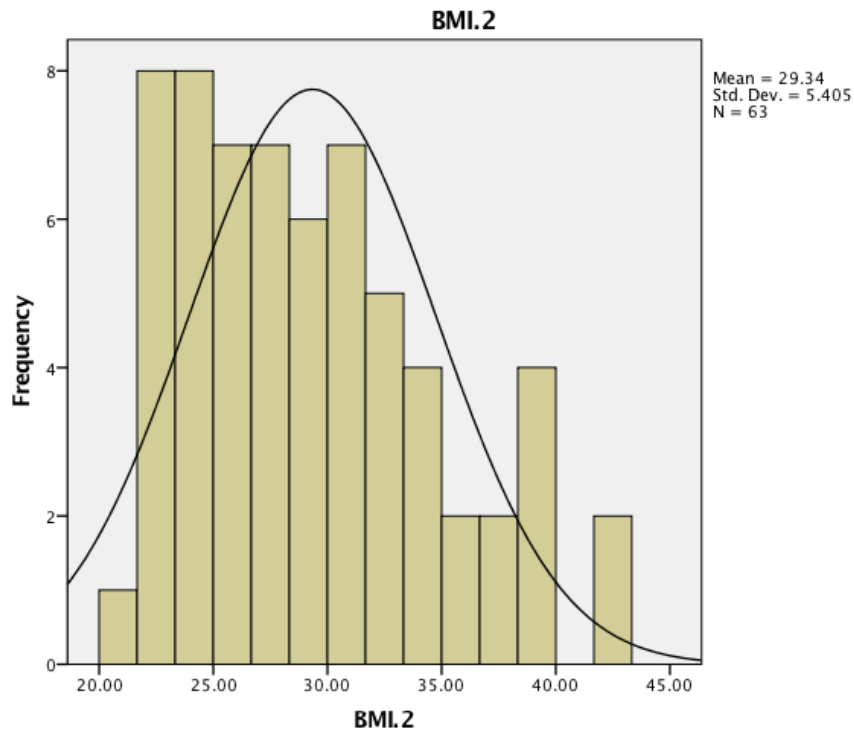
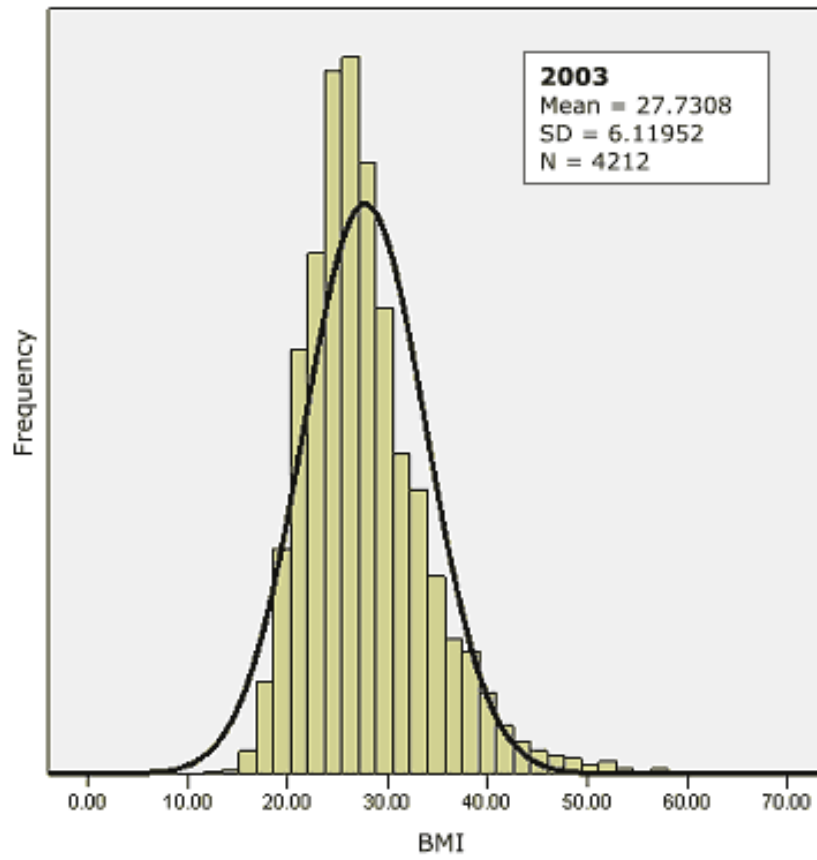


Figure 3 Population Distribution of Body Mass



(Penman & Johnson, 2006).

Figure 4 Wife and Husband BMI

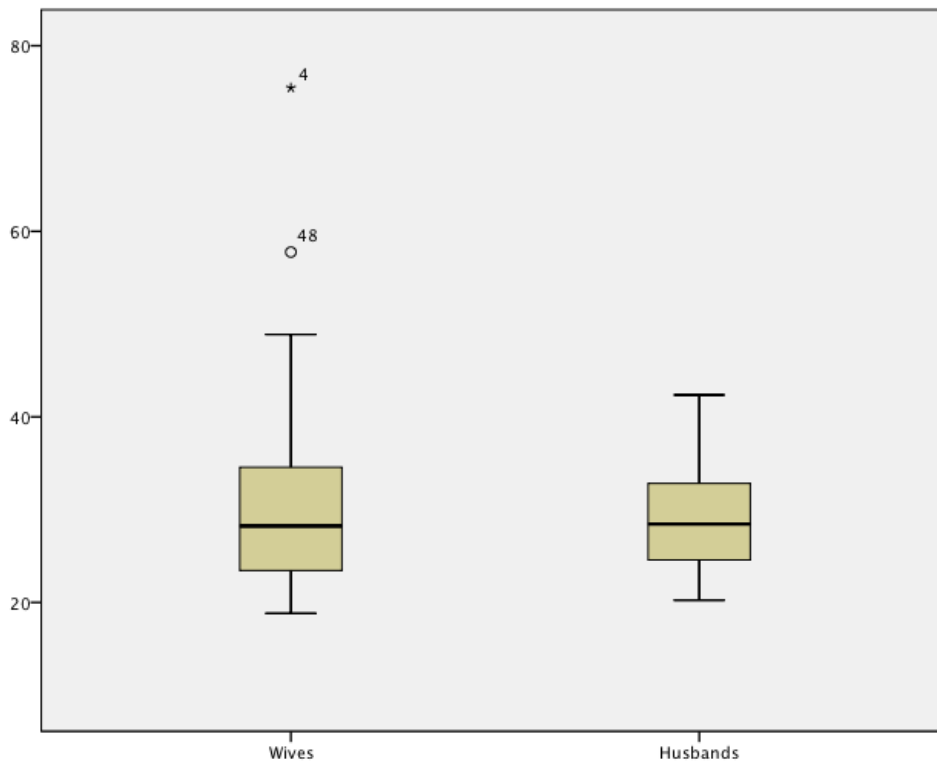


Figure 5 CSI scores

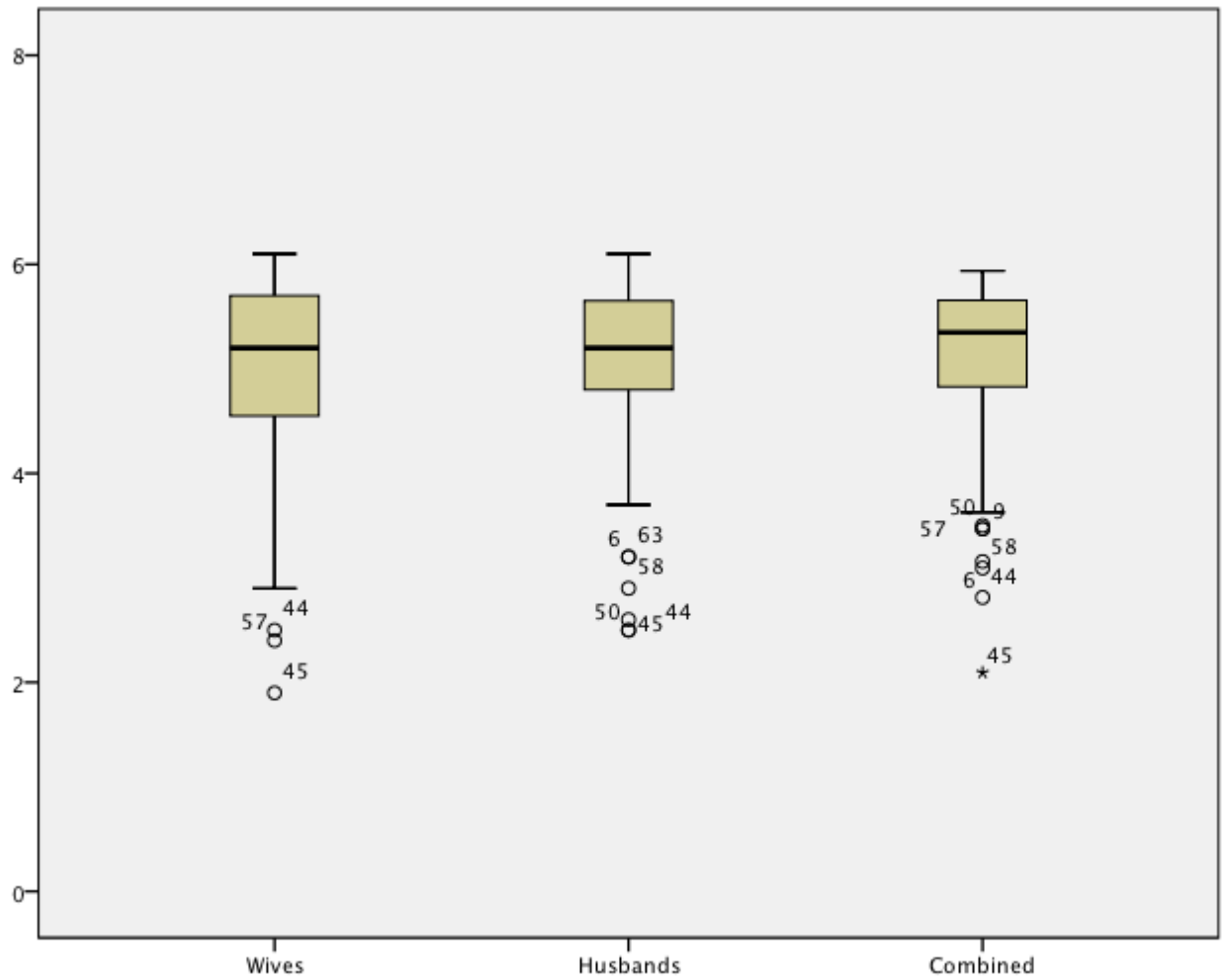


Figure 6 BSQ scores

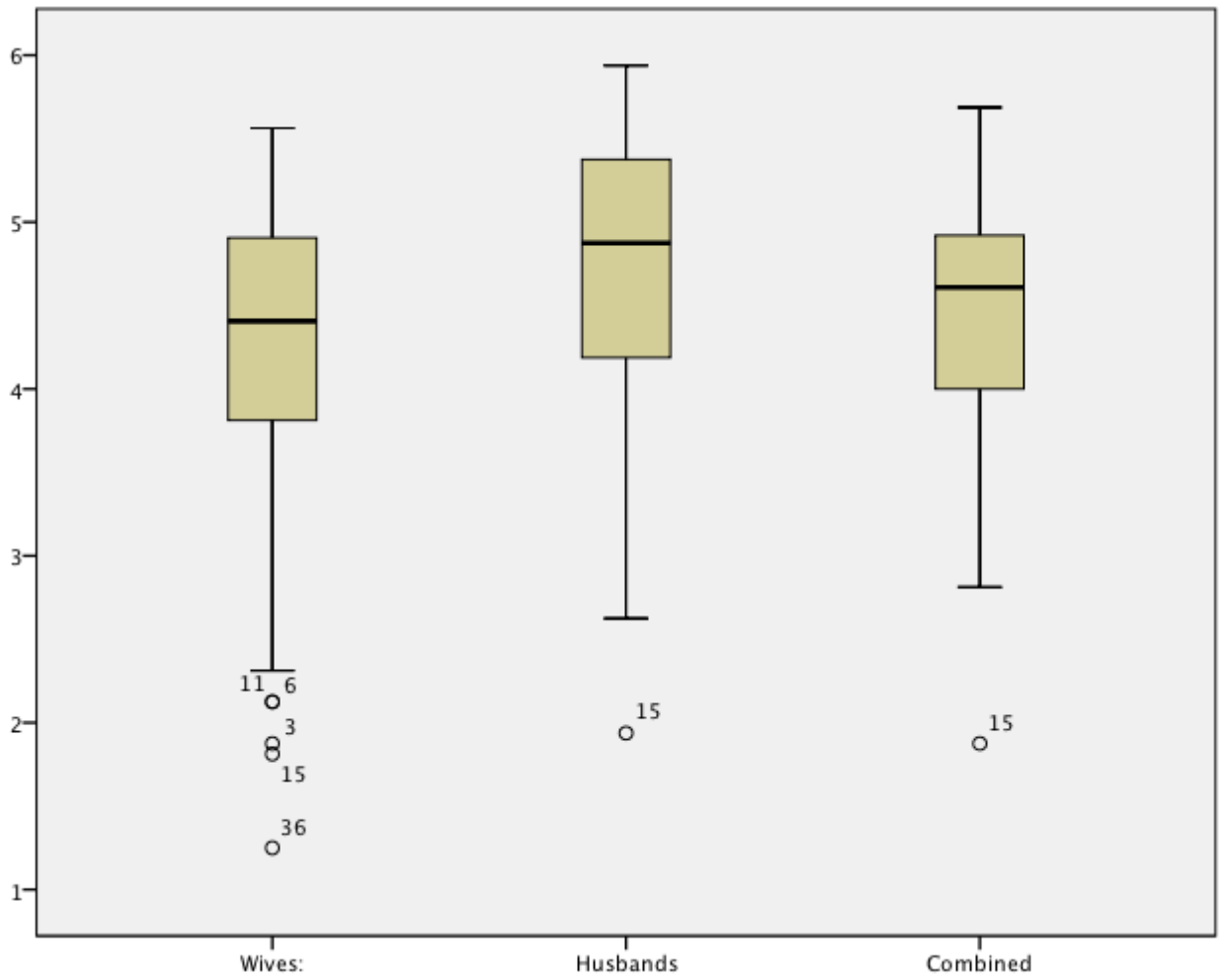


Figure 7 BAS scores

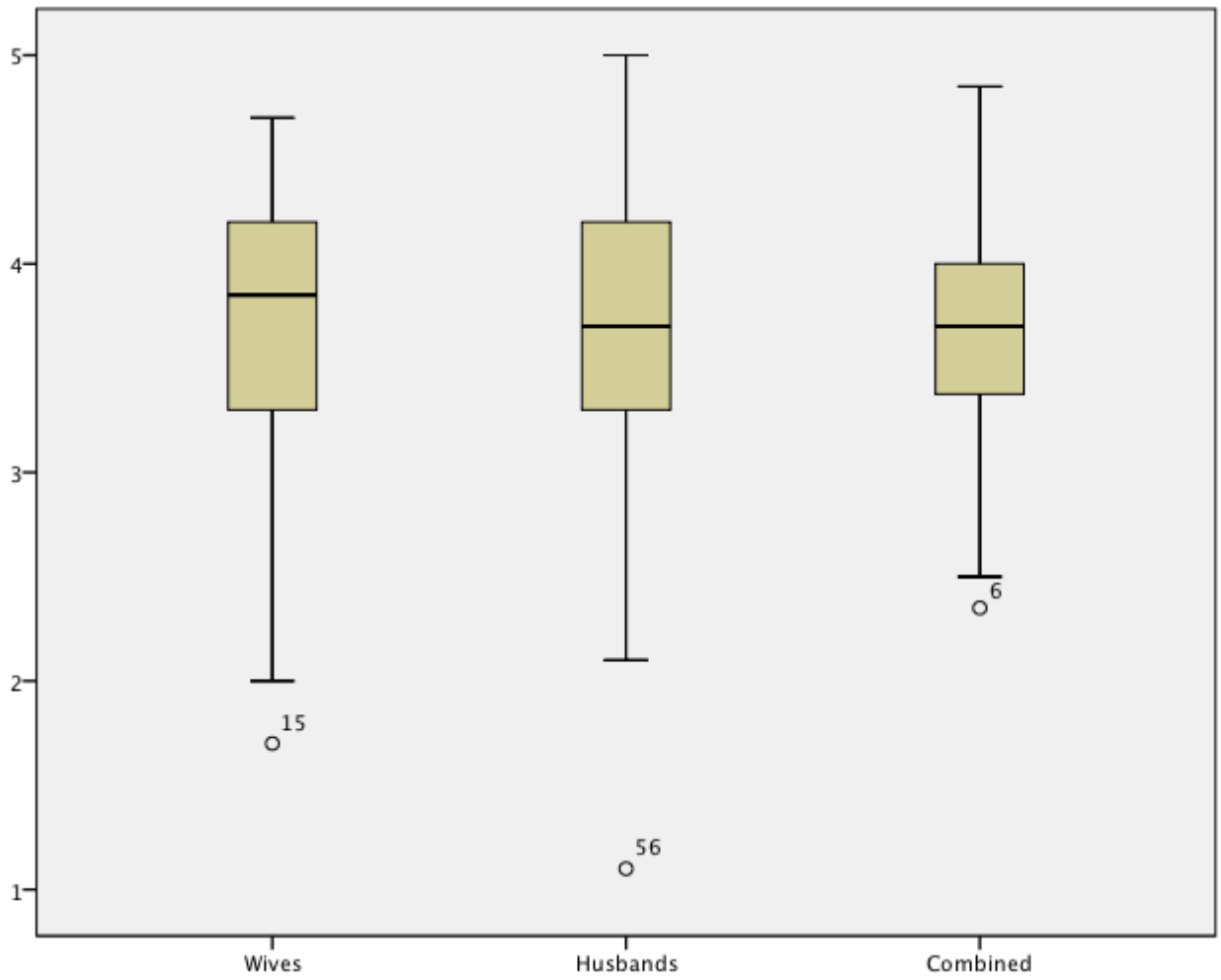


Figure 9 Wives' BMI and BAS

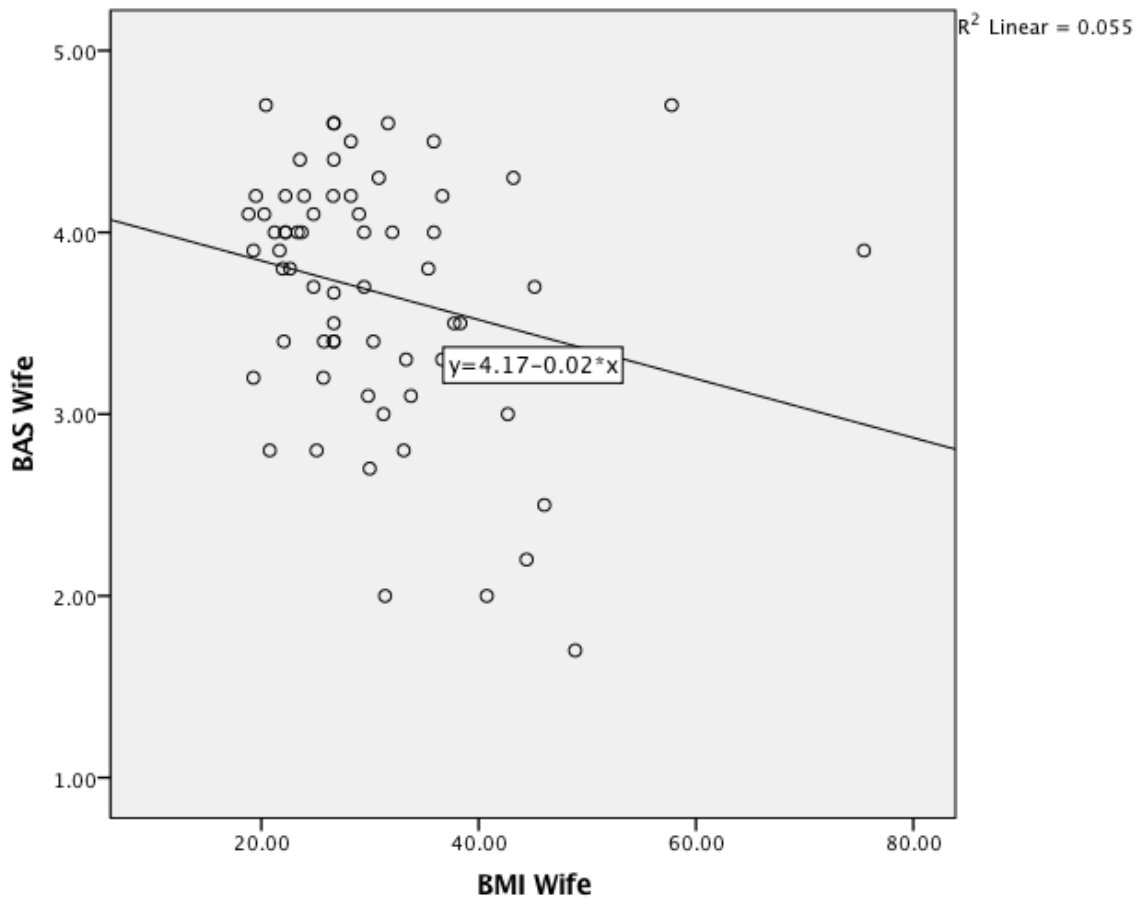


Figure 10 Husbands' BMI and BAS

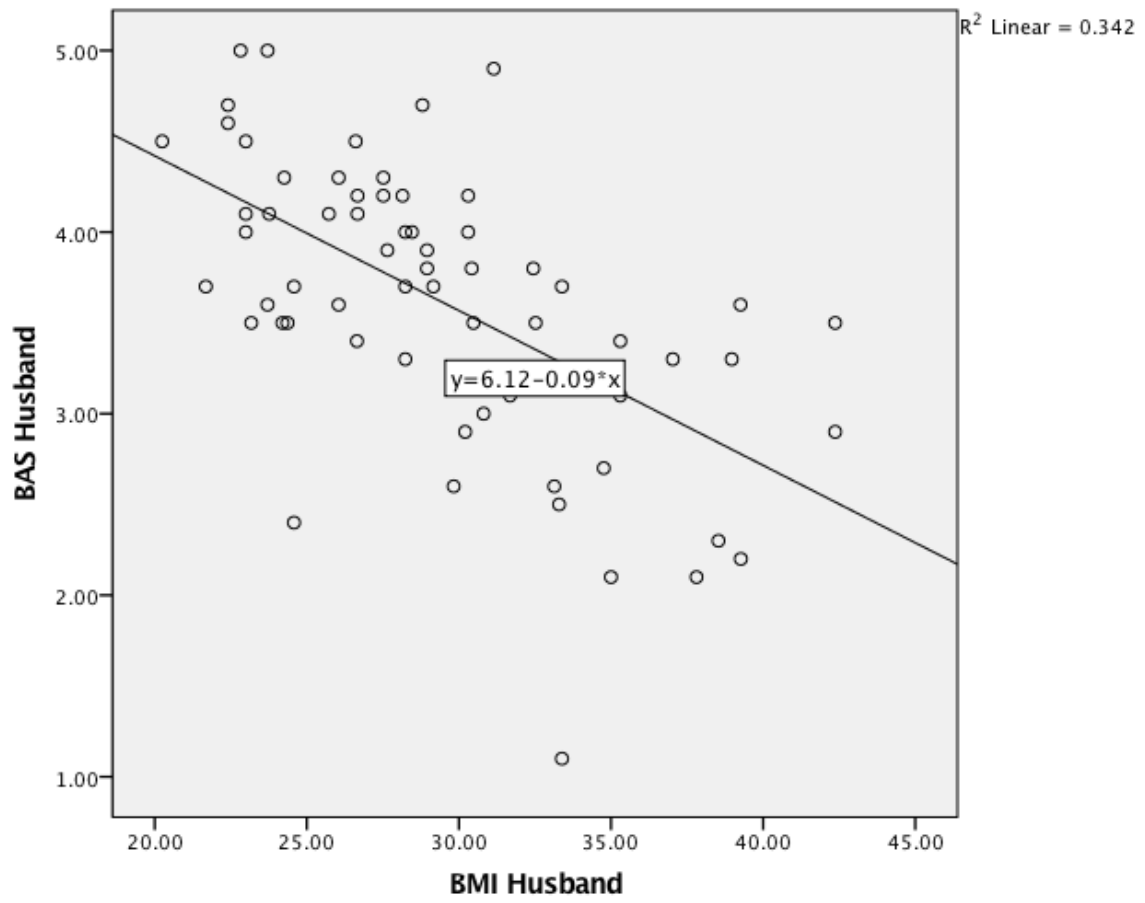


Figure 11 Wives' BMI and BSQ

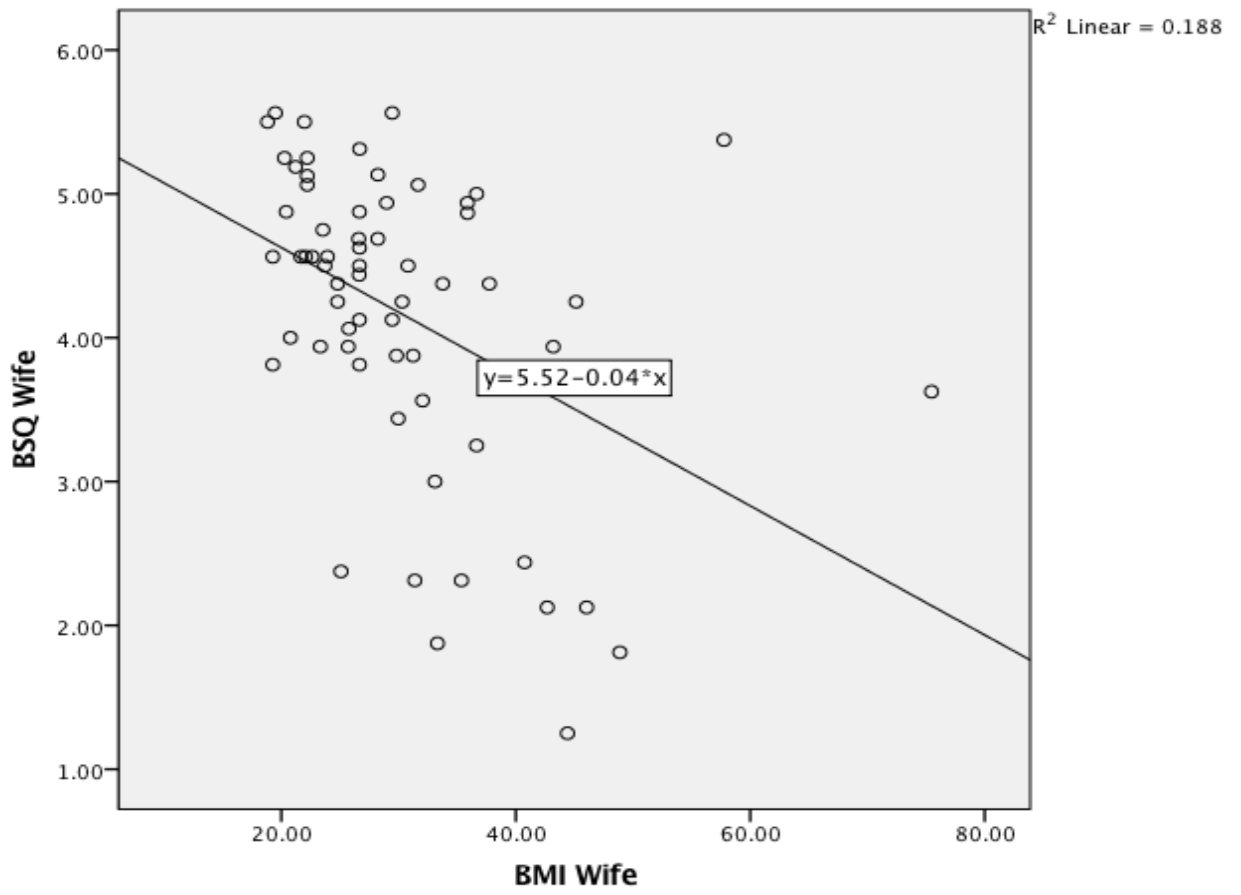


Figure 12 Husbands' BMI and BSQ

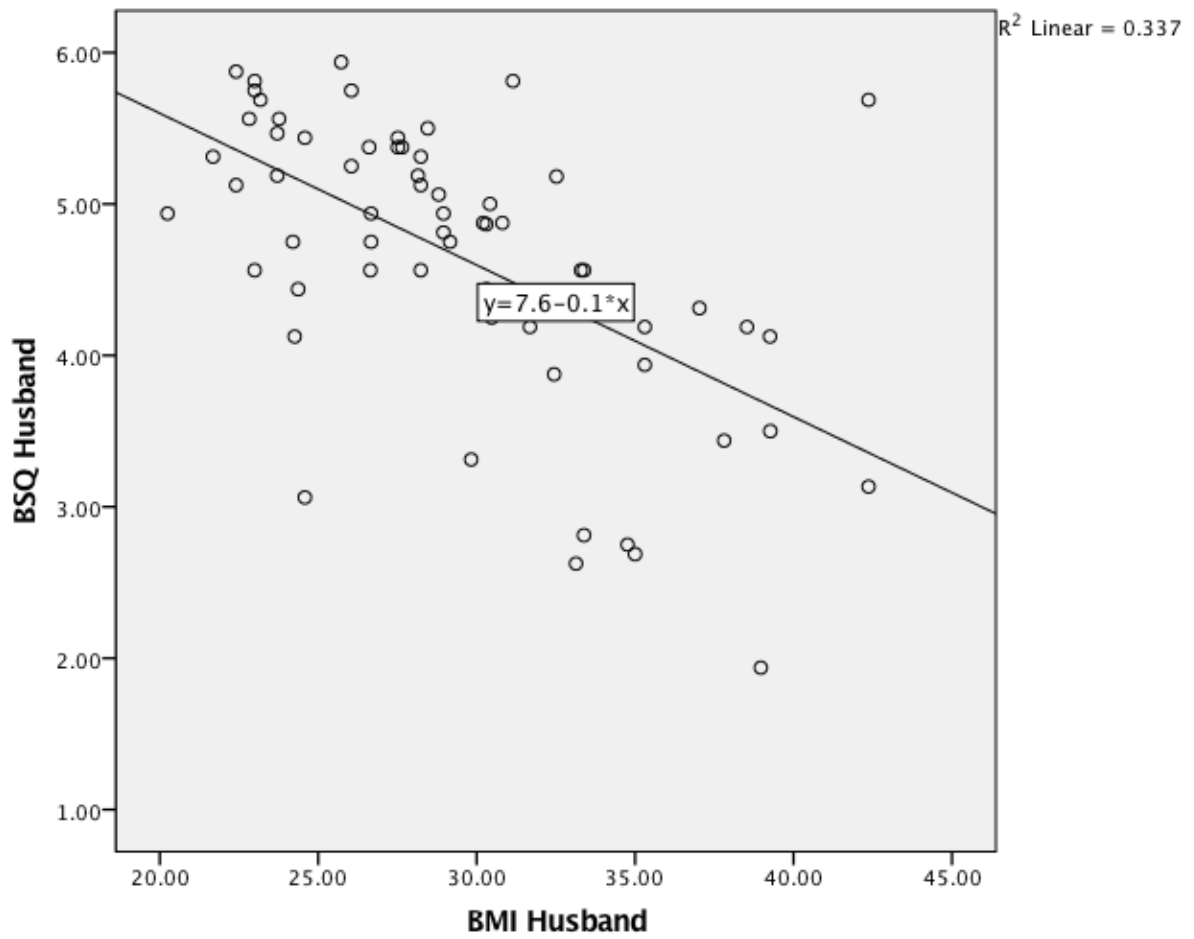


Figure 13 Husbands' BSQ and Combined CSI

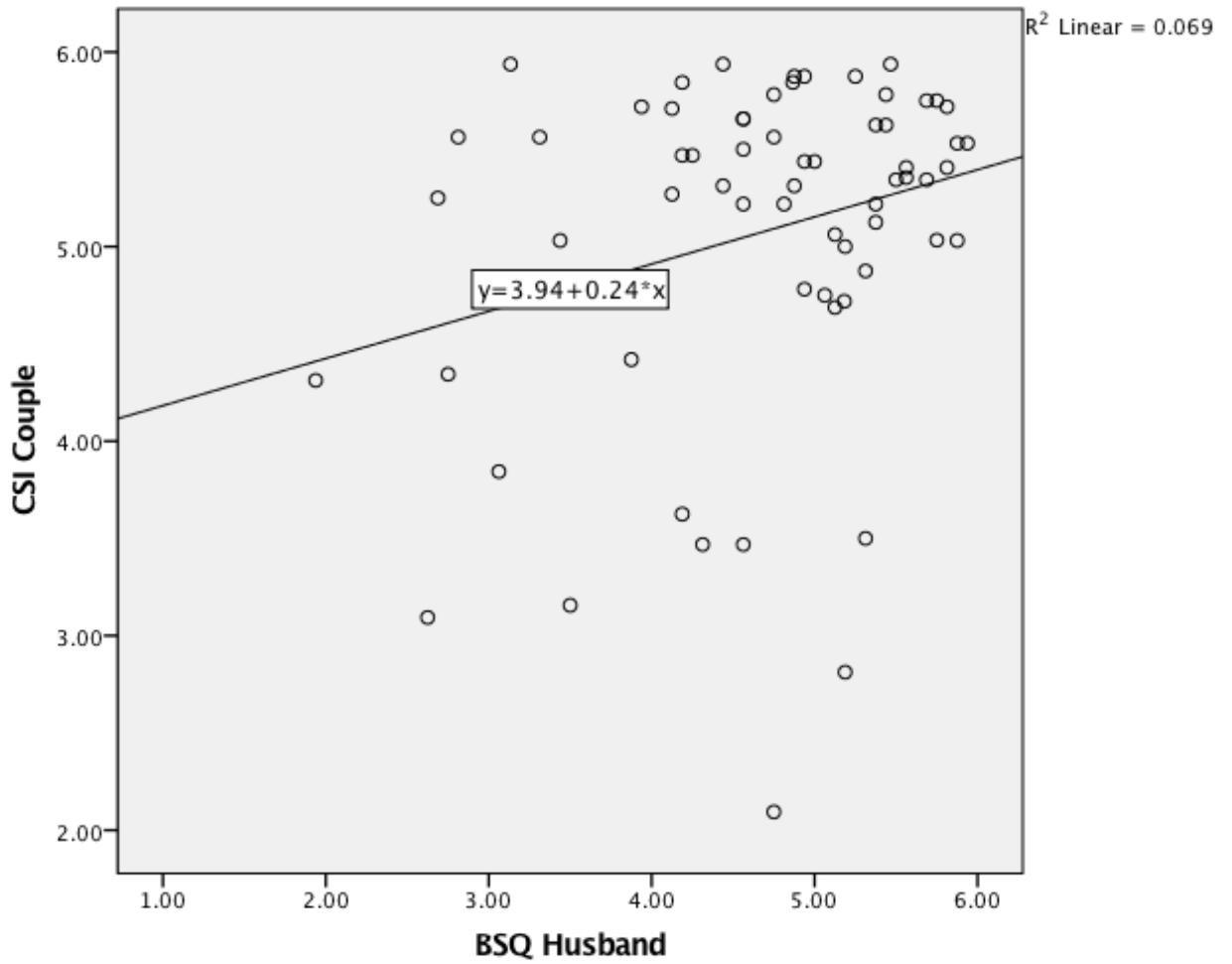


Figure 14 Husbands' BSQ and Wives CSI

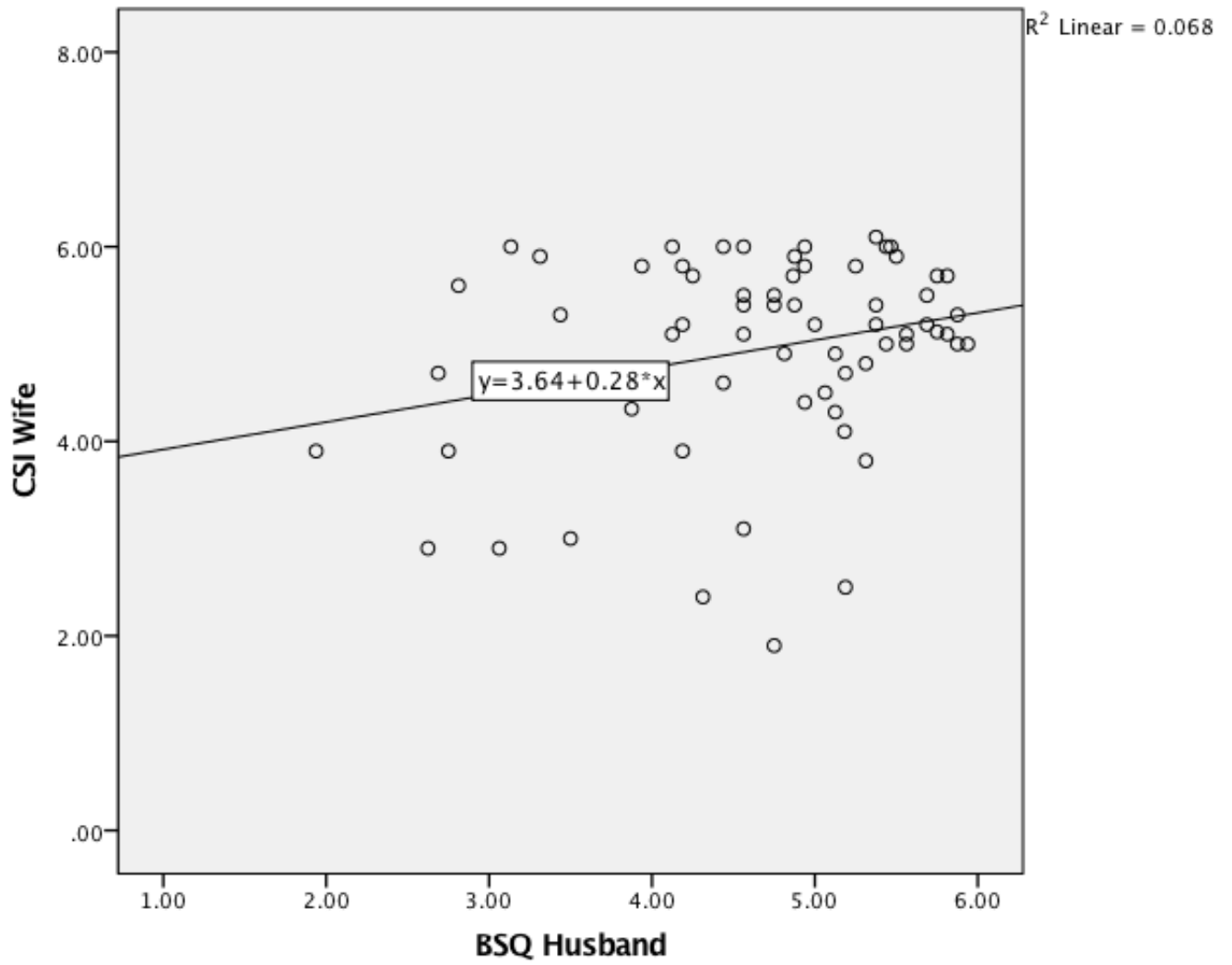
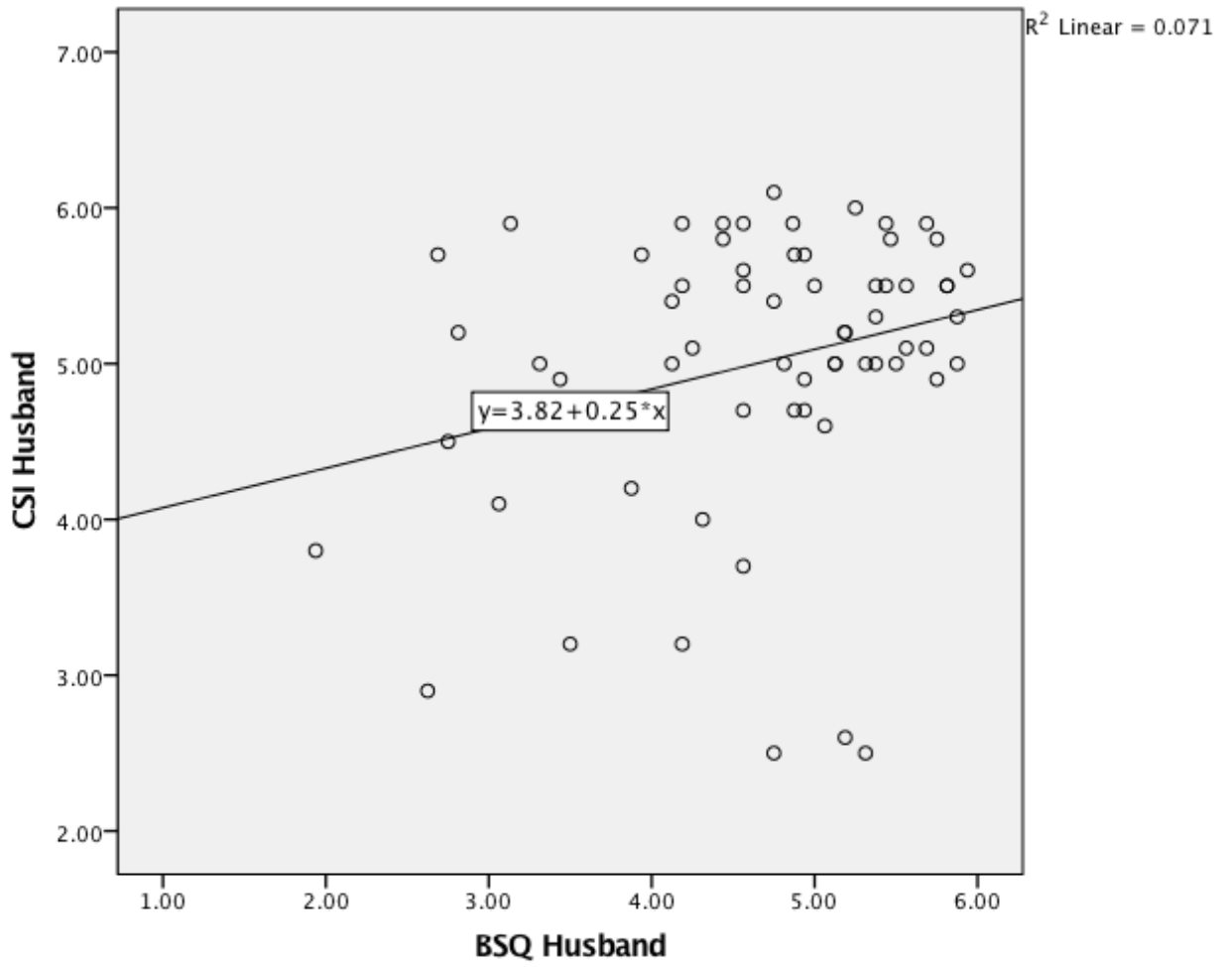


Figure 15 Husbands' BSQ and Husbands' CSI



Vita

Nancy Ellis-Ordway received her Bachelor of Science degree in 1974 from Eastern Illinois University and her Master of Social Work degree from Washington University in 1979. She completed the Advanced Psychodynamic Psychotherapy program at the St. Louis Psychoanalytic Institute in 1989. She has worked in the field of mental health counseling since 1979. She has written chapters for four books and has presented numerous times at regional and national conferences.

She lives in Jefferson City, MO, where she maintains a private practice in counseling. She is married and has two children, two children-in-law and one grandchild.