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# The Relationship Between “Feeling Fat” and Weight-Gain Feedback in a Non-Eating-Disordered Female Sample: Clinical Perfectionism As a Related Variable

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Philadelphia College of Osteopathic Medicine

Department of Psychology

THE RELATIONSHIP BETWEEN “FEELING FAT” AND WEIGHT-GAIN  
FEEDBACK IN A NON-EATING-DISORDERED FEMALE SAMPLE: CLINICAL  
PERFECTIONISM AS A RELATED VARIABLE

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**Dissertation Approval**

This is to certify that the thesis presented to us by Jenna DiLossi  
on the 21<sup>st</sup> day of June, 2016, in partial fulfillment of the  
requirements for the degree of Doctor of Psychology, has been examined and is  
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## Abstract

This study investigated the relationship between feeling fat and weight-gain feedback in a sample of 111 non-eating-disordered women between the ages of 18 to 45 years.

Specifically, this study examined feeling fat with regard to feedback type (i.e., weight reading or clothing size) and social context (i.e., alone or with peers present). Additionally, perfectionism was examined as a related variable within this relationship. Hypotheses related to social context and perfectionism were supported, whereas hypotheses related to feedback type were not supported. Results indicated a significant main effect for social context on feeling fat scores and an insignificant interaction effect for feedback type.

Additionally, correlational data showed a positive correlation between perfectionism and feeling fat experiences across feedback type and social context. This correlation also showed positive correlations between actual reported body weight and feeling fat in addition to BMI and feeling fat, but only in the context of a medical setting. Despite this study's limitations, the findings offered suggestions for future research in addition to implications for clinical applications. Results are discussed in consideration of body image dissatisfaction and eating disorder prevention.

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## **Chapter One: Introduction**

### **Statement of the Problem**

The problem of “feeling fat” (FF) is a phenomenon that applies to eating-disordered (ED) and non-eating-disordered (non-ED) populations alike (Cooper, Deepak, Grocutt, & Bailey, 2007; McFarlane, Urbaszat, & Olmsted, 2011). Although this construct holds much relevance in the field of clinical psychology, it has been quite under examined in research. Nevertheless, researchers and specialists within the eating disorder field (e.g., Fairburn, 2008; Jansen, van de Looij-Jansen, de Wilde, & Brug, 2008; Tiggemann, 1996) have differentiated between the experience of FF, beliefs of being overweight, and actually being overweight. Thus, FF has been identified as a unique problem that does not necessarily imply information about self-perceptions of one’s weight and/or physique (i.e., body weight, size, and shape). Fairburn (2008) has conversely identified some component of body image dissatisfaction as the primary underlying mechanism of FF. As body image dissatisfaction is often associated with one’s weight-related beliefs and/or physique (Smith-Jackson, Reel, & Thackeray, 2011; Williamson, Gleaven, Watkins, & Schlundt, 1993), one can assume that perceptions and measurements of one’s own weight and body size would be relevant variables in the degree to which FF is experienced. Andersen (2000) also classified FF as the most easily identified descriptor for many unpleasant emotional experiences and negative mood states within ED populations.

As the prevalence of diagnosable eating disorders is higher in women than men (American Psychiatric Association [APA], 2000), the occurrence of body image dissatisfaction and experiences of FF are understandably high for non-ED female individuals (Forney, Holland, & Keel, 2012; Lam et al., 2002; Lawler & Nixon, 2011). When compared

to men and boys, women and girls have a greater propensity toward the desire for thinness, are more likely to internalize the thin ideal, and are twice as likely to experience FF (Cash & Hicks, 1990; Eldredge, Wilson, & Whaley, 1990; Furnham, Badmin, & Sneade, 2002; Harris, Waschull & Walters, 1990; Lam et al., 2002). The experience of FF occurs commonly in women, regardless of their interest in body weight, shape, and size (Cash & Hicks, 1990; Cooper et al., 2007; Eldredge et al., 1990). Furthermore, Cooper et al. (2007) found that FF is common among women with diagnosable anorexia nervosa (AN), dieting women, and non-dieting women. Findings indicated that FF was associated with the following psychological issues across those groups of women: emotional distress; somatic sensations; negative mood related to body weight, shape, and size; and negative beliefs about oneself. These psychological effects have the ability to negatively impact one's eating behaviors (Lam et al., 2002; Striegel-Moore, McAvay, & Rodin, 1986).

Although eating behaviors exist on a continuum from normal to abnormal, researchers within the eating disorder field have accepted that episodes of binge eating, patterns of emotional eating, and dieting are the first steps in developing a diagnosable eating disorder (Fairburn, 2008; Thompson & Chad, 2000). In addition to emotional distress, somatic sensations, negative mood states, and negative beliefs about oneself, FF is strongly associated with dietary restraint and dieting behaviors (Lam et al., 2002). Similarly, it is linked to strong urges to emotionally eat, lack of control over eating, eating in response to external stimuli, and eating in response to emotional distress in non-ED women (Striegel-Moore et al., 1986). A study by Striegel-Moore et al. (1986) not only found a high frequency of dieting related to FF, but also found that 50% of non-ED women who experienced FF engaged in binge eating at least once per week. As such behaviors as dieting, emotional

eating, and binge eating can manifest into a diagnosable eating disorder (Fairburn, 2008; Thompson & Chad, 2000), thorough conceptualization of the underlying variables of those behaviors can aid in the prevention of eating disorders. An examination of the variables that trigger FF in women is specifically vital, as the prevalence of eating disorders is higher in women compared to men (APA, 2000).

Additionally, Eldredge et al. (1990) and Striegel-Moore et al. (1986) showed positive correlations between degrees of perfectionism and FF in non-ED women. Achievement-focused women with perfectionistic standards for success tend to have high standards for their physical appearance as well (McGee, Hewitt, Sherry, Parkin, & Flett, 2005). With regard to weight, maladaptive perfectionism was linked to a high incidence of women perceiving themselves as overweight (Bardone-Cone, Weishuhn, & Boyd, 2009). Thus, one can plausibly conclude that high standards for beauty could contribute to one's degree of FF if/when given feedback about weight measurements that is incongruent with such standards. Since perfectionism has been identified as a primary risk factor variable for the onset of eating disorders in women (Chang, Ivezaj, Downey, Kashima, & Morady, 2008; Wliksch, Durbridge, & Wade, 2008), examination of this variable in non-ED women would offer important implications for prevention of eating disorders.

### **Purpose of the Study**

Although previous research has focused on the vital role of FF in ED populations, research about this construct in non-ED populations is scarce. Additionally, variables related to the degree to which non-ED women experience FF have remained quite under examined in the literature. Fairburn's (2008) explanation of FF identifies body image dissatisfaction as central to the experience of FF. Body dissatisfaction in non-ED populations has been linked

to both actual and perceived body weight and body size (Calzo et al., 2012; Docteur, Urdapilleta, & Duarte, 2012; Smith-Jackson et al., 2011). Thus, such variables are plausibly related to FF. The purpose of the present study is to further examine the construct of FF as it relates to weight-related feedback in non-ED female populations.

Specifically, the study aimed to investigate non-ED females' experience of FF after reading vignettes that described the participant in a hypothetical situation in which she has just received feedback about weight gain. The feedback indicated weight gain in the form of either body weight or clothing size. The weight gain feedback (i.e., weight reading feedback alone in bathroom, weight reading feedback with friends present, clothing size feedback alone in a fitting room, clothing size feedback with friends present in a fitting room) aimed to evaluate whether or not the type and/or context in which weight feedback is given impacts FF outcomes. Additionally, weight-related numerical measurements (i.e., number on a scale or clothing size) may perhaps trigger stronger degrees of FF in women who have a high propensity toward perfectionism. Thus, this study also evaluated whether or not one's degree of FF in relation to weight gain feedback is related to perfectionism. The foundation of this study rests upon both existing findings and gaps in the current literature on topics related to FF.

## **Chapter Two: Literature Review**

Women in contemporary Western culture commonly complain of “feeling fat” (FF). This experience is applicable to both eating disordered (ED) and non-ED female populations (Cooper et al., 2007; McFarlane et al., 2011), and it is experienced independent of physical appearance, body weight, body fat percentage, body shape and size, and feedback from others (Fairburn, 2008; Jansen et al., 2008; Tiggemann, 1996). Most women can recall experiencing FF at various times throughout their lives, even when they are actually not overweight (Hill, 1993; Huon & Brown, 1984). Specific definitions of FF are currently mixed, but commonly reported components of FF relate to dysphoric mood states and somatic sensations (Fairburn, 2008). Literature (e.g., Rodin et al., 1984) has indicated that body image dissatisfaction is a relative norm among women; however, literature on the construct of FF in women remains scarce.

One’s experience of FF may change within hours, which implies that fat feelings are not necessarily congruent with one’s physique (Haimovitz, Lansky, & O’Reilly, 1993). The assumption that one’s body weight and shape could actually change within such a short time frame is unrealistic; thus, the conclusion drawn is that the experience of FF is rooted in one’s perception of body image. Furthermore, body image dissatisfaction, mood states, and somatic experiences are at the core of FF (Fairburn, 2008; Tiggemann, 1996). The impact of body image perception and components related to body image dissatisfaction, especially in modern-day Western women, can be rooted in self-discrepancy theory. As body image dissatisfaction has been identified as a primary underlying component of FF (Fairburn, 2008), this theory applies to the current study.

## **Self-Discrepancy Theory**

Individuals commonly experience conflict between what they desire to be and what they believe they ought to be. This conflict is explained by the self-discrepancy theory (Higgins, 1987), which states that *the ideal self* and *the ought self* function as two self-guides that contribute to discrepancy. Ideals, such as one's aspirations, hopes, and wishes, represent one's intrinsic desires and function as the underlying components of the ideal self (Carver, Lawrence, & Scheier, 1999). According to Higgins (1987), the foundation of the ought self is related to responsibility, duty, and obligation; thus, intrinsic desires for self are lacking. Higgins (1987) also explained that the ought self enables reinforcement as a result of one's desire to conform; it is also quite punitive because the desire to conform is to avoid disapproval from oneself and others.

A primary conclusion of this theory is that discrepancies between *the actual self* and the ought self manifest from norms, expectations, and ideals. The self-discrepancy theory has also been used to explain variables related to body image discrepancies. Such variables are inclusive to the following: body dissatisfaction, negative mood, depression, self-esteem, eating behaviors, and negative affect (Anton, Perri, & Riley, 2001; Bessenoff, 2006; Halliwell & Dittmar, 2006). Specifically, greater discrepancies between body image and ideal/ought body image correlate to negative affect and depressed mood. Such discrepancies develop through experiences with various stimuli in one's environment.

### **Development of Self-Discrepancies**

Societal norms and the media both function as vehicles for individuals' development of ideals; these vehicles are especially problematic for girls and women because discrepancies between ideal, perceived, and actual body weight are often significant. As

previously stated, modernized Western culture both emphasizes appearance-related domains for female ideals and idealizes a female body that is thin (Furnham et al., 2002). Thus, one could plausibly conclude that young girls in Western culture will likely develop (and maintain as adult women) an ideal self that includes a thin body. The combination of puberty-induced bodily changes, cultural norms, the media, and discrepancies between ideal, perceived, and actual body weight has resulted in a large percentage of dieting and other unhealthy eating behaviors among female adolescents (Canpolat, Orsel, Akdemir, & Ozbay, 2005). As such behaviors can be maintained through adulthood, one can also plausibly conclude that failure to achieve the thin ideal has the potential to negatively impact women's mental health and general psychological well-being (Carver et al., 1999).

**Impact of Self-Discrepancies** Conflict between actual and ideal selves has the potential to produce unpleasant emotional states, such as guilt, anxiety, and sadness (Carver et al., 1999), and it has been linked to body image dissatisfaction, low self-esteem, and depression (Bessenoff, 2006). Interestingly, all of those emotional states have been linked to the onset and maintenance of eating disorders in addition to the experience of FF in both ED and non-ED women (Cooper et al., 2007; Fairburn, 2008; Rodin, Silberstein, & Striegel-Moore, 1984; Striegel-Moore et al., 1986). The degree of distress that results from such discrepancies can predict one's risk of engaging in harmful eating and exercise behaviors, as seen in the ED population (Canpolat et al., 2005). A person may begin to engage in ED behaviors in an attempt to adhere to others' perceived appraisals and/or standards within their ideal selves. Such behaviors commonly manifest into onset of a diagnosable eating disorder resulting from experiences of reinforcement regarding the thin ideal (Fairburn, 2008; Thompson & Chad, 2000), as those behaviors will often reduce the discrepancy (and

corresponding emotional distress) between actual body weight and low ideal body weight. One's development of self is also largely attributed to learning via experiences of appraisal and feedback from the environment.

### **Appraisals**

Appraisals from others and messages delivered through the media positively reinforce the previously mentioned behaviors, and avoidance of disapproval from others negatively reinforces the behaviors (Furnham et al., 2002). Similarly, one's perception of self develops as a result of experiences with others and messages received through society as a whole. Individuals form beliefs through those experiences and messages about how they are perceived by others, which is largely relevant in development of the self-concept. Also, people commonly form beliefs about others' perceptions of themselves based upon actual feedback they have received about themselves. The experience of receiving feedback, which involves an exchange of information given by one person regarding aspects of another person's self, also functions as a form of measurement in this actual-ideal self-discrepancy.

### **Feedback**

Swann (1990) and Steele (1988) formulated the notion that self-expectations set the foundation for the way feedback is interpreted. Specifically, the degree to which feedback is internalized is related to self-consistency and self-enhancement. Self-consistency is defined as an individual's desire to maintain a stable self-concept regardless of it being positive or negative; a preference for feedback that is consistent with one's self-concept is often the result of self-consistency (Swann, 1990). Self-enhancement is explained as a person's maintenance of a more positive self-concept; feedback that is more pleasing than expected is often preferred here (Steele, 1988). Individuals internalize feedback by evaluating the

reliability and relevance of the feedback, which involves self-consistency. Self-enhancement tends to be molded by factors related to one's mood, satisfaction, and performance. Both of these concepts impact responses to feedback.

A person's expectations moderate the impact of feedback in that someone with a positive self-concept is more likely to agree with positive feedback because it is what he or she expects, and a person with negative self-concept is more likely to agree with negative feedback (Swann, Griffin, Predmore, & Gaines, 1987). Thus, self-consistency relates to whether feedback is accepted or rejected. The experience of receiving feedback (both positive and negative) can largely impact a person's motivation, understanding, learning, and achievement (Hattie & Timperley, 2007). Additionally, both feedback type and delivery are influential regarding how it is received and internalized (Swann, 1990). With regard to body image perception, negative feedback from others has been linked to body image dissatisfaction, disordered eating patterns, and low self-esteem (Grogan, 2008; van den Berg, Wertheim, Thompson, & Paxton, 2002). Social comparison theory also supports the notion that the context in which feedback is given can impact the previously mentioned psychological variables.

### **Social Comparison Theory**

Social comparison theory (Festinger, 1954) states that people engage in social comparison as a means to understand how they fit into both their individual environment and the world. Festinger (1954) implied that all humans tend to compare themselves to others within their environment, especially with regard to self-worth and domains of success versus failure. Moreover, humans use comparative data from their environment to evaluate their own degree of success or "goodness" on particular traits and activities. This strategy is

particularly relevant in circumstances wherein an objective evaluation is given (Festinger, 1954). Social comparison can occur in two types: upward social comparison and downward social comparison. In the case of upward social comparison, one compares oneself to others who are believed to be superior in the given domain. Conversely, downward social comparison is described as one comparing oneself to others who are believed to be inferior. Research (e.g., Fardouly, Diedrichs, Vartanian, & Halliwell, 2015; Ridolfi, Myers, Crowther, & Ciesla, 2011) indicates that the process of upward social comparison is linked to humans' desire for self-improvement in addition to their motivation to actually improve. Thus, those who engage in upward social comparison may experience some degree of self-improvement (Collins, 1996).

**Social comparison in women.** According to Festinger's (1954) theory, women will collect information from other women in order to rate their own worth. This notion has been widely accepted in psychological literature, with an abundance of research (e.g., Bosch, Buunk, Siero, & Park, 2010; Fardouly et al., 2015) particularly highlighting the impact of social comparison on the domain of appearance. Women's tendency to engage in both types of social comparisons serves as a way to evaluate how their appearance is fairing in relation to the appearance of other women in their environment. A study by Leahey, Crowther, and Mickelson (2007) estimated that women are 4 times more likely to engage in upward comparisons than downward comparisons when in their natural environment. Owing to the long history of women's worth and degree of success being largely evaluated on the domain of appearance (Overstreet & Quinn, 2012), many women generalize their evaluation of appearance to their self-worth as a whole (Ridolfi et al., 2011). This perspective points to the role of social comparison to other women in their environment as serving as the basis of

worth. Thus, research not surprisingly has shown women to frequently make physical appearance social comparisons (Leahey et al., 2007). Women have been found to describe their appearance more negatively and to make more upward social comparisons about their bodies when compared to their male peers (Strahan, Wilson, Cressman, & Buote, 2006).

**Peers.** Researchers have investigated the impact of peer comparison specifically on young women's self-evaluation with regard to appearance and body image (e.g., Krones, Stice, Batres, & Orjada, 2005; Lin & Kulik, 2002; Ridolfi et al., 2011). A greater sense of body image dissatisfaction occurred when participants were asked to interact with a peer confederate who conformed to the thin-ideal versus a peer confederate of "average" body dimensions (Krones et al., 2005). Lin and Kulik's (2002) study that exposed young women to images of thin or overweight peers found a similar impact on confidence and body satisfaction. Participants who were led to believe they were competing with a thin peer in a mock "dating game" reported decreased confidence and body satisfaction. Conversely, they found no significant influence on those domains in participants who believed that they were competing with an overweight peer. As related to the current study, a gap exists in the literature regarding the role of social comparison to peers as it relates to the experience of FF.

## **Examination of FF**

### **Relationship to Body Image Dissatisfaction**

Early work on the construct of body image dissatisfaction showed that it consists of cognitive and affective components (Cash, 1994; Garner & Garfinkel, 1981; Huon & Brown, 1986; Tiggemann, 1996). Jasper and Maddocks (1992) described this construct as the dislike for one's own body and/or dislike for the ways in which one's own body is experienced. It tends to be the result of a discrepancy between actual body size estimates and ideal body

estimates (Wardle & Foley, 1989; Williamson et al., 1993). Fat feelings are known to function as underlying components of body image and body image dissatisfaction in young female adults (Wardle & Foley, 1989). Examination of the cognitive and affective components of body image dissatisfaction as distinct entities strongly contributed to identifying FF as its own construct.

In examining the separate components of body image dissatisfaction, a differentiation between experiences of *feeling fat* and *thinking fat* has been established. With regard to body image perceptions, 70% of girls estimate that their bodies *feel* fatter than they *think* their bodies actually are (Huon & Brown, 1986). The discrepancy between fat thoughts and fat feelings occurs in both ED and non-ED populations (Cash, 1994; Huon & Brown, 1986). The differentiation between thinking fat and feeling fat as distinct components of body image dissatisfaction has been further supported to occur in both adolescent girls (Jansen et al., 2008; Kostanski & Gullone, 1998; Lam et al., 2002) and young adult women (Roth & Armstrong, 1993; Tiggemann, 1996).

### **Components of FF in Adolescents**

Kostanski and Gullone (1998) supported the notion that FF is a distinct construct by examining the separate components of body image dissatisfaction in adolescents. This study yielded implications about differences in the affective and cognitive components of body image dissatisfaction as they relate to FF in non-ED adolescents. Discrepancies between participants' perceptions of ideal body figures, cognitive perceptions of their current body figures, and affective perceptions toward the appearance of their current body figures were examined. For female participants, results indicated significantly greater degrees of discrepancy and body image dissatisfaction for the relationship between perceptions of ideal

body figures and affective perceptions of body appearance than the relationship between perceptions of ideal body figures and cognitive perceptions of their current body figures. More specifically, 80% of female participants endorsed much discrepancy and body image dissatisfaction.

Such results implied that body image dissatisfaction consists of both affective and cognitive estimates of body shape and weight. Kostanski and Gullone (1998) also concluded that adolescents' feelings about their bodies are significantly more relevant to body image dissatisfaction than their thoughts about the actual appearance of their bodies. Both Lam et al. (2002) and Jansen et al. (2008) later supported the link between adolescents' "feelings of fatness" and body image dissatisfaction. In fact, "feeling overweight" was identified as most relevant to adolescents' degree of body satisfaction (Jansen et al., 2008). The construct of FF has also been examined in adult women.

### **Components of FF in Adults**

Although evidence supports the distinction between the FF components with regard to body image dissatisfaction, literature on this subject remains scarce. While Wardle and Foley (1989) did not study FF as a primary variable, their study did show a positive correlation between fat feelings and body image satisfaction levels. One of the most important studies to examine the relationship between FF and body image dissatisfaction was conducted by Tiggemann (1996). This study was the first to specifically operationalize the cognitive and affective dimensions of body image dissatisfaction by assessing discrepancies between images representative of ideal body figures, body image thoughts, and body image feelings in female college students. The discrepancy between ideal body figures and body image thoughts was labeled as the "think-ideal discrepancy," and the discrepancy between

ideal body figures and body image feelings was labeled as the “feel-ideal discrepancy.”

Findings indicated that ideal figures were significantly smaller than figures representative of their body image thoughts, and figures representative of their body image thoughts were significantly smaller than figures representative of their body image feelings. This discrepancy supported the notion that, relative to body image ideals, FF tends to be more distorted and likely more distressing than thinking fat.

The study by Tiggemann (1996) additionally yielded the following about the feel-ideal discrepancy: It was positively correlated with participants’ actual body mass index (BMI), accounting for significant variance in body weight satisfaction as well as accounting for dietary restraint, self-esteem, and depressed affect. No corresponding relationships were found for the think-ideal discrepancy. Such findings implied not only that women may view their ideal body shape as thinner than their actual body shape, but also that they may feel fatter than they believe that they are. Other research has provided evidence that body experience situations, such as negative affective states, performance evaluation, public scrutiny, self-consciousness, and components of one’s interpersonal life, were identified as primary variables related to cognitions of perceived fatness and fat feelings (Roth & Armstrong, 1993). Tiggemann’s (1996) work provided early evidence to confirm the differentiation between thinking fat and feeling fat in young adults. Despite the limited amount of attention to FF in research, various explanations of this construct have emerged.

### **Explanations of FF**

Research suggests that feeling fat may contribute a larger component of body image dissatisfaction than thinking fat and overweight perceptions. Thus, the affective component of body image dissatisfaction holds much more relevance to the current descriptions of FF

than the cognitive component of body image dissatisfaction (Jansen et al., 2008; Killian, 2013). Furthermore, experts (e.g., Fairburn, 2008) in the eating disorder field agree that the experience of FF is more appropriately described as a negative affective state rather than as a cognitive state. Use of the phrase “I feel fat” has also been identified as having more relevance to emotions than to cognitions (Andersen, 2000). In fact, this phrase often functions as an all-encompassing descriptive replacement for several different types of negative emotions. Thus, FF has been explained as an alexithymia.

**Alexithymia.** As per Andersen (2000), the phrase “I feel fat” can likely be broken down into several types of emotional distress (e.g., anger, loneliness, anxiety). The common replacement of this phrase to describe various forms of emotional distress supports the notion that FF is a type of alexithymia. Therefore, one can assume that individuals who use this phrase often likely have limitations regarding their ability to identify emotions. The primary goal in addressing FF in therapy is to aid in identification of the specific negative emotions that occur under times of distress (Andersen, 2000). Additionally, therapy should facilitate replacement of FF with the actual negative emotion that is being experienced. Both of these goals will ultimately facilitate improvement of the alexithymia and reduction of fat feelings. This description of FF has since been further elaborated to include factors related to somatic experiences in addition to one’s body weight, shape, and size (Fairburn, 2008).

**Fairburn’s description.** Fairburn’s (2008) description is congruent with Andersen’s (2008) notion that FF is the result of mislabeled dysphoric mood states. He also described it as the manifestation of individuals’ overconcern with body shape and weight. Fairburn (2008) believed that the experience of FF occurs as a result of mislabeled somatic sensations as well. Such sensations as pants fitting tight, abdominal bloating, and feeling thighs touch

would elicit FF according to this description. This description of FF encompasses body image dissatisfaction in which body weight, shape, and size are related.

In an early study that examined FF in relation to body image, body satisfaction, and eating experiences, Wardle and Foley (1989) hypothesized that overestimation of body weight would be linked to negative body self-esteem in non-ED young female adults. Although their results were statistically insignificant regarding overestimation of body size as it relates to FF, dietary restraint, and BMI, their study showed a relationship between FF and body dissatisfaction in addition to body dissatisfaction and BMI. A general trend toward a negative relationship between satisfaction and BMI was found, and participants who experienced body dissatisfaction at high intensities also experienced FF at high intensities. More importantly, FF was shown to relate to actual body size and body satisfaction. Findings yielded a significant correlation between BMI and premeal FF ratings, and the association between body dissatisfaction and FF was still statistically significant when BMI was controlled. Such results support the notion that one's body weight impacts the degree to which FF is experienced. With regard to Fairburn's (2008) description of FF, Wardle and Foley's (1989) findings demonstrated that FF is neither a physical feeling nor cognition about body size. As Fairburn's (2008) description is sufficiently comprehensive to encompass the mislabeling of both affective and somatic experiences in addition to an overconcern about body weight and shape, it will be used to operationalize FF in this current study. Despite the limited amount of research on the construct of FF, existing research has demonstrated that the construct's definition and relevance within the field of clinical psychology have certainly evolved over time (Killian, 2013).

## **Evolution of FF Examination**

FF was originally understood as a broad concept under the umbrella of body image dissatisfaction (Garner & Garfinkel, 1981), and it has since manifested into a specific affective component of body image dissatisfaction (Kostanski & Gullone, 1998; Tiggemann, 1996; Wardle & Foley, 1989). More recent descriptions of FF have further explained it as an alexithymia for various negative emotional states (Andersen, 2000) in addition to perceptual errors of somatic sensations and an overconcern with body weight and shape (Fairburn, 2008). This construct holds much relevance in the field of clinical psychology, as the experience of FF has several implications regarding the psychological health of both ED and non-ED women.

## **FF in ED Women**

A thorough understanding of the construct of FF plausibly would be facilitated through understanding the differences in how it is experienced in ED women and non-ED women. Similarly, information about FF as it relates to eating disorders can be helpful in identifying those women whose degree of FF puts them at risk for development of an eating disorder. Although the experience of FF is somewhat common for most women (Rodin et al., 1984; Striegel-Moore et al., 1986), the frequency and intensity of FF are both significantly higher in women with eating disorders compared to women without eating disorders (Cooper et al., 2007; Fairburn, 2008). In one of the earliest examinations of eating disorders, Bruch (1978) proclaimed that fat feelings are central to AN, and fat feelings were also listed as a primary construct used for diagnosis in the *Diagnostic and Statistical Manual of Mental Disorders* (3<sup>rd</sup> ed.; *DSM-III*; APA, 1980). Although there are several diagnostic differences across eating disorders, Fairburn's (2008) transdiagnostic conceptualization of

eating disorders assumes that one's degree of FF tends to increase as the intensity and frequency of the ED behaviors increase. Furthermore, the experience of FF within eating disorders can be understood as a translation of negative affective states via the preoccupation with body weight, shape, and size that exists within the disorders. The occurrence of this experience has clinically relevant implications.

### **Implications of FF**

Cooper et al. (2007) examined FF in female individuals by conducting semistructured interviews with those diagnosed with AN, dieters, and healthy controls. The experience of FF had occurred across groups, and it was linked to emotional distress and negative mood, negative cognitions and self-beliefs, and somatic sensations. This effect was significantly greater in those with AN, followed by dieters. When compared to dieters and healthy controls, those with AN reported more frequent and recent fat feelings, greater distress, and negative mood related to FF. Consistent with other literature (e.g., Andersen, 2000; Cooper & Turner, 2000; Corstorphine, 2006; Fairburn, 2008; McFarlane et al., 2011), Cooper et al. (2007) found differences in the relationships between FF and emotions and mood, cognitions, and physical sensations.

**Emotions and mood.** Patients with eating disorders tend to oversimplify their actual unpleasant emotional experiences to issues related to their body weight, shape, and size (Fairburn, 2008; McFarlane et al., 2011). Thus, clinicians often hear the complaint of "I feel fat" from ED patients, which may be triggered by experiences of loneliness or depression (Andersen, 2000; McFarlane et al., 2011). This oversimplification often occurs as a result of an inability to identify emotions within the self in addition to difficulty with differentiating between various emotional experiences and mood states (Andersen, 2000; Cooper et al.,

2007). Cooper et al.'s (2007) study showed that participants with AN were more likely to report emotions centering around depression, disgust, anger, and guilt, whereas the emotions of dieters and controls centered around frustration and annoyance. Cooper et al. (2007) also measured FF as it relates to mood and symptoms of eating disorders; severity of symptoms in addition to depression levels were both related to FF. Interestingly, a positive correlation between FF and symptoms of eating disorders remained even when depression levels were controlled. Differences regarding participants' cognitions and beliefs existed as well.

**Cognitions and self-beliefs.** Cognitions about certain emotional experiences, as well as emotional expression, often involve themes related to personal vulnerability, weakness versus strength, inadequacy, and power (Cooper & Turner, 2000; Corstorphine, 2006). Corstorphine (2006) attributed much of ED patients' over concern with body weight, shape, and size, in addition to corresponding ED behavior, to cognitions surrounding emotional experiences and emotional expression. Similarly, body displacement theory explains cognitive fixation on the body as a distracter for feelings, and performance of the ED behaviors compensate for feelings (McFarlane et al., 2011). Cooper et al. (2007) found that dieters and controls expressed negative cognitions related to their body weight and shape (e.g., being overweight), while those with AN reported more global negative self-beliefs (e.g., weakness). Additionally, Cooper et al.'s (2007) findings were consistent with Fairburn's (2008) description of FF as misidentification of both feelings and somatic sensations.

**Somatic sensations.** As per Fairburn (2008), the experience of FF largely relates to misidentification of somatic sensations. Cooper et al.'s (2007) study found a greater number of internal somatic sensations (e.g., slowed blood) in the AN and dieting groups when

compared to those in controls. Although the number of external somatic sensations (e.g., tight clothes) was comparable across groups, participants in the AN and dieting groups experienced more distress related to such sensations than did controls. Such findings support the notion that those with eating disorders will often use the phrase “I feel fat” after experiencing an unpleasant bodily sensation, such as thighs touching (Andersen, 2000; McFarlane et al., 2011). Visual imagery regarding one’s body in relation to others’ and the experience of seeing thin people were common across groups; however, auditory, olfactory, and tactile sensations were most common in the AN group (Cooper et al., 2007). An inability to effectively cope with the conjunction of emotional distress and negative mood states, negative cognitions and self-beliefs, and unpleasant somatic sensations can manifest into the onset of an eating disorder (Andersen, 2000; Cooper et al., 2007; Fairburn, 2008; McFarlane et al., 2011; Stice, South, & Shaw, 2012). Thus, the intensity, frequency, and duration of FF likely function as a risk factor for the onset of eating disorders in non-ED women.

### **FF as an Eating Disorder Risk Factor**

As those with eating disorders define their self-worth in terms of body weight, shape, and size (APA, 2000; Fairburn, 2008; McFarlane et al., 2011), performing behaviors that serve to “improve” such features of the body naturally elicit a perceived sense of personal control, power, strength, and adequacy (Cooper & Turner, 2000; Fairburn, 2008; McFarlane et al., 2011). Such perceptions then decrease the intensity of the actual distressful situation, and thus, the corresponding emotional distress, negative feelings, and dysphoric mood states are avoided. The experience of FF for an individual with an eating disorder often functions as a way of experiencing and expressing emotional distress and dysphoric mood states,

negative cognitions and self-beliefs, and somatic sensations (Cooper et al., 2007; Fairburn, Cooper, & Shafran, 2003; MaFarlane et al., 2011). Furthermore, a diagnosable eating disorder likely develops as a result of the inability to tolerate specific emotional states and functions as a primary coping mechanism (Andersen, 2000). Continued avoidance of the actual components underneath FF only facilitates the maintenance of symptoms of eating disorders (Andersen, 2000; Fairburn, 2008).

### **FF as an Eating Disorder Maintenance Factor**

Overall, FF for those with eating disorders seems to subconsciously function as a front for a variety of unpleasant feelings, cognitions, and somatic sensations. As one continues to rely on the phrase “I feel fat” as a blanket statement, as opposed to facing the underlying components of FF, the ability to decrease the presence of symptoms of eating disorders remains limited. According to this explanation, one’s experience of FF is not necessarily predicted by actual body weight, shape, and size. Individuals who are clinically obese may not experience FF despite logical acknowledgment of their high body fat percentage (Harris et al., 1990), and very thin individuals may experience FF rather frequently (Cooper et al., 2007). Additionally, the impact of having a preoccupation with body weight, shape, and size ultimately maintains the high intensity and frequency of FF in ED individuals (Fairburn, 2008). This preoccupation additionally leads to a high propensity toward maladaptive negative beliefs about one’s body appearance, in addition to body image dissatisfaction in women (Hui & Brown, 2013). Although not formally examined, both of these problems are arguably comparable to the notion of thinking fat.

Perhaps the most important finding in Cooper et al.’s (2007) study was that the presentation of FF in non-ED dieting women was quite similar to that of women with eating

disorders. Such findings support the further examination of FF in non-ED women, as the intensity of distress experienced from FF could manifest into development of an eating disorder. Additionally, high intensities of FF have been linked to subclinical levels of disordered eating (Striegel-Moore et al., 1986). Further examination of the variables involved in the experience of FF in non-ED women could inform clinicians' practices regarding the prevention and treatment of eating disorders.

### **FF in Non-ED Women**

Despite the scarce amount of research on FF as a distinct construct, it has been more widely studied in non-ED female individuals than in ED female individuals. Striegel-Moore et al. (1986) were the first to specifically examine the experience of FF in non-ED female subjects; their study aimed to identify the psychological and behavioral correlates of FF. Cognitive differences in processing of self-evaluative information among restrained and unrestrained eaters were examined in a sample of undergraduate female students (Eldredge et al., 1990). Only two previous studies had designed a specific measure to objectively quantify FF levels, both of which used female student samples. The construct of FF, as it relates to cross-situational body experiences, was examined in a sample of undergraduate female students (Roth & Armstrong, 1993). Killian (2013) later measured the construct in relation to clinical perfectionism, somatic sensations, and behavioral coping mechanism in female graduate and medical students. Such studies offered findings about the underlying variables involved in the experience of FF.

### **Psychological Variables**

The first researchers (i.e., Striegel-Moore et al., 1986) to examine the psychological correlates of FF hypothesized that the following eight variables were related to FF: parental

beliefs, self-image, weight-related remarks made by others, the degree to which one is overweight (by percentage), perfectionism, failures, social pressure to be thin, and social comparison of one's own body to others' bodies. Five of those correlates were found to account for 71% of the variance in FF among participants. Identified correlates included percent overweight, perfectionism, failures, societal pressures to be thin, and social comparison. The other three predicted variables were not statistically significant. Consistent with the later work of Wardle and Foley (1989), Jansen et al., (2008), and Harris et al. (1990), Striegel-Moore et al. (1986) found that percent overweight and FF were significantly related. Despite occurrence of this significant relationship, percent overweight did not independently predict FF. In fact, achievement-based variables were more relevant to the experience of FF.

Both societal pressures to be thin and social comparison about body weight were also highly correlated to FF (Cooper et al., 2007; Striegel-Moore et al., 1986); such domains could likely relate to a woman's overall evaluation of her "success." Also of relevance is Striegel-Moore et al.'s (1986) and Killian's (2013) identification of perfectionism as a significant predictor for fat feelings. Findings offered two important implications: (a) women who experience FF set demanding standards for themselves, especially in the appearance/beauty domain (Striegel-Moore et al., 1986), and (b) the more clinically perfectionistic women are, the more likely they may be to experience FF (Killian, 2013). As per Striegel-Moore et al. (1986), the perception of failure was similarly highly correlated to FF in women. Findings suggested that women who experience FF tend to evaluate their bodies negatively when they failed at a task. Although such results were statistically significant, literature on the relationship between FF and failure are mixed.

Research on the relationship between failure and FF has yielded inconsistent findings. Such discrepancies may be attributable, in part, to differences in samples and experimental procedures across studies. For example, Eldredge et al. (1990) did not support Striegel-Moore et al.'s (1986) initial findings on FF and failure. Experimental manipulation in the latter mentioned study involved success and failure in that 24 restrained eaters and 24 unrestrained eaters were randomly assigned to either a "success" or a "failure" condition. Results indicated that restrained eaters who experienced success had significant levels of body dissatisfaction and fat feelings, and their levels of dissatisfaction and fat feelings were equivalent to those of restrained eaters who experienced failure. Additionally, analyses showed that the success-failure manipulation did not lead unrestrained eaters to evaluate their bodies negatively.

With regard to the general relationship between body image dissatisfaction and eating style, Eldredge et al.'s (1990) results were consistent with Wardle and Foley's (1989) study on restrained and unrestrained eaters. In this study, findings showed higher body image dissatisfaction in restrained eaters than in unrestrained eaters. One should note that Eldredge et al.'s (1990) pretest scores showed that restrained eaters had both significantly higher depression levels and lower self-esteem levels when compared to unrestrained eaters; such participants also consistently endorsed greater body image dissatisfaction and fat feelings than unrestrained eaters. They concluded that results for body image dissatisfaction and fat feelings could have been attributed to baseline depression scores as opposed to the success-failure manipulation. They also recognized that Striegel-Moore et al.'s (1986) hypothesis could have implied that failure experiences triggering negative mood could then have triggered fat feelings for the future, which could then manifest into disordered eating

behaviors. With regard to the current study, perhaps the most important arguments of Eldredge et al.'s (1990) and Striegel-Moore et al.'s (1986) studies relate to body weight.

As their study was largely grounded in schema theory and the concept of self-schemata (Markus, 1977), Striegel-Moore et al. (1986) claimed that FF is triggered by self-appraisals that are unrelated to weight domains when body weight is central to schemas. Eldredge et al. (1990) conversely concluded that the FF experience of restrained eaters would likely intensify when success-failure experiences relate to weight domains. Although restrained eaters may be more critical of their bodies and experience subsequent negative emotions when an event triggers self-evaluation, specific body-weight-related schemas are not at the root of the FF experience. Eldredge et al. (1990) explained FF as an experience that is grounded in a more general deficit of cognition. Specifically, feelings of fatness in response to a negative experience relate to the depressed affect that occurs as a result of a maladaptive cognitive style for self-evaluation. The previously mentioned studies also yielded findings to support the notion that such psychological correlates can manifest into behavioral correlates.

### **Behavioral Variables**

Perhaps the most concerning aspect of FF is the impact that it can have on behaviors. Moreover, FF has been shown to elicit behaviors comparable to those found in individuals with eating disorders. In the initial examination of the behavioral correlates of FF, Striegel-Moore et al. (1986) found a relationship between FF and the following eating behaviors: uncontrolled eating, emotional eating (i.e., eating in response to stress and/or a negative experience), dieting, and binge eating. Results showed that FF was highly correlated to repetitive dieting and repetitive binge eating. Furthermore, 50% of the participants who

endorsed experiencing FF also endorsed binge eating at least once per week. Stiegel-Moore et al.'s (1986) finding about FF and dietary restraint was later supported by Wardle and Foley's (1989) study, which revealed significantly higher fat feelings in restrained eaters compared to unrestrained eaters.

Similar to Stiegel-Moore et al.'s (1986) findings on binge eating, Killian (2013) indicated a relationship between levels of FF and frequency of binge eating as a coping mechanism. Statistical significance was not found with regard to clinical perfectionism and binge eating. Exercise and dieting were both also shown to occur at significantly higher frequencies in women with higher degrees of FF. Owing to minimal data, substance use and purging were not examined as coping mechanisms for FF in this study. Consistent with the previously mentioned data about dieting, Wardle and Foley (1989) found a similarly significant correlation between perceived fatness and dietary restraint. Although the previously mentioned studies encompass experimental limitations, they hold significance with regard to this current study.

### **Limitations and Strengths of FF Literature**

#### **Limitations**

One of the primary limitations applicable to all of the previously mentioned studies is that most findings are based upon correlational research designs. As causality cannot be determined with such a design, the understanding of the interaction between the psychological, cognitive, behavioral, and emotional variables related to FF remains somewhat limited. Killian's (2013) study presented limitations with regard to validity. Statistical significance related to binge eating as a coping mechanism for FF suggests that some degree of disordered eating was present among participants in the sample. Thus,

results might not be truly representative of a non-ED population. Additionally, both studies (i.e., Killian, 2013; Roth & Armstrong, 1993) that designed measures to quantify FF were used only in those studies, and thus lack the psychometric data necessary to consider them valid and reliable measures for FF. Despite such limitations, those studies hold much relevance to the current study because of the information they provide about the relationships between FF and perfectionism in addition to FF and body weight.

### **Strengths**

While the body of research on FF as a distinct construct is not large, the existing studies provide clues that aid in the understanding of FF in women. Striegel-Moore et al. (1986) were the first to specifically examine the experience of FF in non-ED women, which led to the initial identification of the variables related to the FF experience. Variables such as binge eating and perfectionism were later supported by Killian (2013). Both Striegel-Moore et al. (1986) and Eldredge et al. (1990) proposed information related to the underlying cognitive roots of fat feelings. The experience of FF was also shown to have some relationship to body weight (Eldredge et al., 1990; Roth & Armstrong, 1993). This current study also aimed to examine perfectionism as it relates to FF, as Killian (2013) supported a relationship between FF and perfectionism.

### **Perfectionism**

Perfectionism, understood as the pursuit of extremely high standards (Chang et al., 2008), has remained a highly complex construct within psychological research. Perfectionism was originally broken down into two different types: *normal perfectionism* and *neurotic perfectionism* (Hamachek, 1978). Normal perfectionism was described as the desire to meet favorable, yet realistic standards in order to result in gratification. Conversely,

Hamachek (1978) described neurotic perfectionism as the desire to meet rigid, unrealistic standards with corresponding unattainable goals. Such efforts often result in psychological distress caused by the perception of inadequacy.

More recent literature on perfectionism differentiates between adaptive and maladaptive perfectionism. Adaptive perfectionism typically manifests as a strong set of values and standards for living, adherence to rules, and pursuit of attainable goals, and it is often associated with satisfaction (Chang et al., 2008). Maladaptive perfectionism is typically rooted in inadequacy and extreme fears of failure, and it presents as an over concern with errors, rigidity, and pursuits for unrealistic expectations (Hewitt & Flett, 1991). Because maladaptive perfectionism produces strong feelings of inadequacy, self-criticism, and negative affect, it is commonly associated with several psychological disturbances. There has since been much debate among researchers with regard to the conceptualization of perfectionism as unidimensional and multidimensional (Killian, 2013); however, this current study most relates to the unidimensional conceptualization of *clinical perfectionism* developed by Shafran, Cooper, and Fairburn (2002).

### **Clinical Perfectionism**

The unidimensional concept of perfectionism is essentially self-referent. Perfectionism is captured in only three of the subscales (i.e., self-oriented perfectionism, personal standards, and two items from concern over mistakes) of the Multidimensional Perfectionism Scale (MPS; Frost, Marten, Lahart, & Rosenblate 1990). As a result, Shafran et al. (2002) developed the unidimensional construct of perfectionism, *clinical perfectionism*. Clinical perfectionism is defined as “the overdependence of self-evaluation on the determined pursuit of personally demanding, self-imposed standards in at least one highly

salient domain, despite adverse consequences” (Shafran et al., 2002, p. 778). Shafran et al. (2002) argued that the defining feature of perfectionism is not simply the act of setting high standards, but instead the act of setting unreasonably high standards with little to no flexibility.

Perfectionism’s hallmark is comprised of one’s adoption of high standards in conjunction with the effect that failure to achieve such standards has on one’s self-evaluation (Shafran et al., 2002). Put simply, if one does not achieve such standards, one engages in self-criticism. When successful accomplishment of such standards does occur, one is likely to then reevaluate those standards as inadequate. According to this conceptualization, self-examination is dependent upon the domain in which perfectionism is expressed. Thus, if/when self-examination relates to internalization of the thin ideal, perfectionism often manifests into various forms of psychological distress. Much literature (e.g., Fairburn et al., 2003) has suggested that perfectionism is a primary maintenance factor in eating disorders.

### **Perfectionism and Eating Disorders**

One of the most commonly identified variables associated with diagnosable eating disorders in women is perfectionism (Chang et al., 2008; Dalley, Toffanin, & Pollet, 2012; Davis, 1997; Downey & Chang, 2007; Hewitt, Flett, & Ediger, 1995; McGee et al., 2005; Sherry et al., 2009; Striegel-Moore et al., 1986). Perfectionism has been identified as a primary risk factor for onset of eating disorders (Stice, Butryn, Rohde, Shaw, & Marti, 2013). It has also been identified as a moderating variable for the progression of eating pathology and body image dissatisfaction (Fairburn et al., 2003). In fact, Goldner, Cockell, and Srikameswaran (2002) argued that the cognitive hallmark of eating disorders (i.e., the pursuit to obtain the “perfect body”) is in essence perfectionistic. With regard to clinical

perfectionism, Shafran et al. (2002) hypothesized that diagnosable eating disorders occur as a result of the manifestation of perfectionism in the domain of eating and body image.

Findings of several studies (e.g., Dalley et al., 2012; McGee et al., 2005) suggest that high levels of perfectionism tend to have negative implications on body image satisfaction, eating attitudes, self-evaluation, and eating behaviors in ED and non-ED women alike.

### **Perfectionism, Body Weight, and FF**

The desire to achieve a flawless appearance was similarly correlated to concerns about body image and linked to higher levels of body image dissatisfaction in college students (Downey & Chang, 2007; Hewitt et al., 1995). Additionally, Chang et al. (2008) identified perfectionism as the primary predictor of body image dissatisfaction in addition to the only significant predictor of a thinner ideal figure. Perfectionistic standards and self-presentation (i.e., concealing imperfections from others) were both highly correlated with body image dissatisfaction in both men and women. Striegel-Moore et al.'s (1986) study was the first to show a strong relationship between perfectionism and feelings of fatness among women with demanding internal standards. Specifically, FF was linked to significant negative affect and cognitions in the occurrence of perceived failures. Such women also engaged in social comparison on the domains of body weight and shape. Such findings were later supported by Killian (2013), whose study yielded a strong correlation between clinical perfectionism and FF. With regard to weight, maladaptive perfectionism was linked to weight perception (Bardone-Cone et al., 2009). Results indicated that women with maladaptive perfectionism were more likely to perceive themselves as overweight compared to nonperfectionistic women. The previously mentioned studies support the notion that perfectionists are more likely to adopt stricter standards with regard to evaluation of their

own appearance in addition to body weight, shape, and size.

## **Weight Measurements**

### **Weight Measurements in Women**

Modernized Western culture emphasizes ideals and standards to which individuals are expected to adhere. With regard to the ideals and standards of women in Western culture, a disproportionate degree of emphasis is placed on domains related to appearance, beauty, and physical attractiveness (Furnham et al., 2002). One of the primary sources of evaluation for a woman's adherence to such ideals and standards is her body. Furthermore, one's body weight and body fat percentage serve as concrete forms of measurement to assess a woman's adherence to given body image ideals and standards. A major shift regarding the ideals and standards of the female body has occurred over time, in that thinness is not only valued but also equated with success, fame, desirability, and happiness (Hawkins, Richard, Granley, & Stein, 2004).

Failure to obtain thinness is often stigmatized, leaving many girls and women feeling ashamed, anxious, guilty, and depressed about their body image (Puhl & Brownwell, 2001; ter Bogt et al., 2006; Tiggemann & McGill, 2004). Such emotional states also have the potential to impact the ways in which girls and women experience their bodies, specifically their body image perceptions (Docteur et al., 2012). Body image perception has been widely linked to the onset and maintenance of eating disorders in both men and women, with a higher percentage of occurrences in women (Furnham et al., 2002). Body image perception has also predicted exercise regimens, eating behaviors, and internal components of health, such as self-evaluation and self-worth (Fox & Farrow, 2009; Furnham et al., 2002; Hill, Masuda, & Latzman, 2013). The implications of body image perception on mental-health

issues are undeniable (Desai & Patoliya, 2011; ter Bogt et al., 2006), which highlights the need for further evaluation of factors related to body image perception. In modernized Western culture, the experience of receiving weight-related feedback is commonly linked to body image perception.

### **Weight Feedback**

Although the behavior of weighing oneself can be reinforcing and motivating, it can also produce several negative consequences (Klos, Esser, & Kessler, 2012; Quick, Larson, Eisenberg, Hannan, & Neumark-Sztainer, 2012). Negative consequences related to self-weighing is more commonly associated with women, which is likely a result of the heavy emphasis that Western culture places on body weight with regard to a woman's worth. For some women, the behavior of weighing themselves or of being weighed determines their mood for the day in addition to their general evaluation of self (Garner, Rockert, Olmsted, Johnson, & Coscina, 1985). On the continuum of eating behaviors, the impact that weight has on mood seems to be the most intense for women with a diagnosable eating disorder, with restrained eaters following as a close second (McFarlane, Polivy, & Herman, 1998; Mills & Miller, 2007; Tiggemann, 1994). Researchers have examined the effects of weighing and weight measurements; however, research focusing on the impact of weight deception and manipulation of feedback remains scarce.

With particular relevance to this current study is the link between receiving negative weight-related feedback and high levels of anxiety and feelings of fatness (Mills & Miller, 2007). Additionally, greater body image dissatisfaction, depression, and fat feelings were found when feedback was received by a peer as opposed to a nonpeer. An interesting conclusion of the Mills and Miller (2007) study is that peers' perception of weight is

particularly relevant to components of psychological health. While current literature has provided information about variables of weight-related feedback and psychological health, a gap exists with regard to the relationship between weight-related feedback and FF.

### **Gap in the Literature**

Although previous research has focused on the vital role of FF in ED populations, research about this construct in non-ED populations is scarce. Additionally, variables related to the degree to which non-ED women experience FF has remained quite underexamined in the literature. Fairburn's (2008) explanation of FF identifies both body image dissatisfaction and somatic sensations (e.g., how clothing feels on the body) as central to the experience of FF. Body dissatisfaction in non-ED women has been linked to both actual and perceived body weight and body size (Calzo et al., 2012; Docteur et al., 2012; Smith-Jackson et al., 2011), and both weight measurements and clothing on the body have been loosely mentioned in FF literature. However, FF as it relates to weight readings and clothing size have yet to be directly examined in the current literature. Additionally, this research will consider the relationship between clinical perfectionism and FF in the context of weight-related feedback. This gap in the current literature in conjunction with both self-discrepancy theory and social comparison theory guided the research questions and hypotheses in the current study.

## **Chapter Three: Research Questions and Hypotheses**

### **Research Questions**

Answering the following questions provided a better understanding about the experience of FF in non-ED female individuals. This understanding may help inform clinicians' practice regarding prevention and treatment of eating disorders. The following research questions were answered through a simulated experience of receiving feedback in vignettes that are indicative of weight gain (i.e., weight reading feedback alone in bathroom, weight reading feedback with friends present, clothing size feedback alone in a fitting room, clothing size feedback with friends present in a fitting room).

1. Does the type of feedback (i.e., weight reading or clothing size) impact the experience of FF?
2. Does the context in which feedback is given (i.e., alone versus with peers) impact the experience of FF?
3. Is perfectionism related to fat feelings as a result of weight-gain feedback?

### **Hypotheses**

Although the construct of FF does not necessarily provide information about a person's physiological features, body weight, or body fat percentage (Jansen et al., 2008; Tiggemann, 1996), Fairburn (2008) has conversely identified some components of body image dissatisfaction as a primary underlying mechanism of FF. Body image dissatisfaction is often associated with one's weight-related beliefs and/or physique (Smith-Jackson et al., 2011), and literature (e.g., McFarlane et al., 1998) has shown a mood effect surrounding feedback about one's own weight-related measurements. Given Fairburn's (2008) emphasis on body image dissatisfaction with regard to the experience of FF, such literature supports

the examination of weight feedback. Prior research on FF (e.g., Fairburn, 2008), in addition to the underpinnings of self-discrepancy theory and social comparison theory, informed the following hypotheses:

### **Hypothesis 1**

FF will be higher when feedback is received with peers present compared to when feedback is received alone.

### **Hypothesis 2**

FF will be higher when feedback is received by clothing size compared to when feedback is received by a weight reading.

### **Hypothesis 3**

FF will be highest when feedback is received by clothing size with peers present.

### **Justification for Hypotheses 1, 2, and 3**

Research that has focused on the impact of peer comparison on young women's self-evaluation with regard to appearance and body image (e.g., Krones et al., 2005; Lin & Kulik, 2002; Ridolfi et al., 2011) provides support for Hypotheses 1 and 3. Fairburn's (2008) emphasis on somatic sensations in the experience of FF was used as justification to support Hypotheses 2 and 3, as individuals are likely to experience the somatic sensations identified when trying on clothing that is too small.

### **Hypothesis 4**

Total perfectionism scores will be positively correlated with FF scores across groups.

### **Justification for Hypothesis 4**

Secondary analysis rested upon a foundation of findings from previous studies (e.g., Bardone-Cone et al., 2009; Chang et al., 2008; Hewitt et al., 1995; Killian, 2013; Striegel-

Moore et al., 1986) that examined perfectionism as it relates to FF, success, and beauty ideals in female students. A strong correlation between perfectionism and FF was identified among female college students, thus implying that high-achieving women with high standards for success might also set high standards for physical beauty (Striegel-Moore et al., 1986). Chang et al. (2008) found perfectionism to be the only significant predictor of the thin ideal in female college students. Additionally, efforts made to escape the impression of imperfection were identified as related to concerns about having a thin physique in female college students (Hewitt et al., 1995). Bardone-Cone et al.'s (2009) study supported this notion, indicating that highly perfectionistic women are likely to perceive themselves as overweight. Of most relevance to the current study, Killian's (2013) findings showed a significant positive correlation between clinical perfectionism and FF scores in female subjects.

## **Chapter Four: Methodology**

### **Design**

This study was an online survey that used random assignment of subjects into two separate conditions, resulting in a one-way independent repeated-measures design. The sample of participants was split into two groups of weight gain feedback type: weight-reading (WR) group and clothing size (CS) group. Each group received two conditions in the form of vignettes, each of which indicated a social context (i.e., feedback received while alone and feedback received with peers present). Furthermore, a vignette about weight gain feedback from a doctor was used as a baseline condition across groups. Scores on two items captured frequency and intensity of feeling fat (FF) in the prior 28 days and were reported before participants read any vignettes. FF intensity was also assessed with one item after reading each of the vignettes. Feedback type functioned as the study's manipulated independent variable. Other measures that gathered demographic information and items related to clinical perfectionism were included in the survey as well.

### **Sample Demographics of Participants**

A total of 200 individuals accessed the link to participate in this study; however, 89 prospective participants were disqualified as a result of screening questions that determined ineligibility. The study participant sample consisted of only women ( $N = 111$ ) ranging from 18 to 45 years of age. The mean age was 27.16 years ( $M = 27.16$ ,  $SD = 6.59$ ). The racial/ethnic composition of the sample was largely White/Caucasian, totaling 92.8% ( $n = 103$ ). The mean weight in pounds was 147.32 ( $M = 147.32$ ,  $SD = 6.59$ ), and the mean body mass index (BMI) was 24.72 ( $M = 24.72$ ,  $SD = 5.05$ ). The sample demographic statistics, with a breakdown per group, are displayed in Table 1.

Table 1

*Descriptive Statistics: Sample Demographics (N = 111)*

Variable	<i>M</i>	<i>SD</i>
<b>Total sample</b>		
Age (in years)	27.16	6.59
Body weight (in pounds)	147.32	35.50
BMI	24.72	5.05
<b>WR group</b>		
Age (in years)	27.29	7.04
Body weight (in pounds)	150.09	40.79
BMI	24.92	5.55
<b>CS group</b>		
Age (in years)	27.04	6.19
Body weight (in pounds)	144.61	29.54
BMI	24.53	4.55
<b>Ethnicity</b>		
	<b>Frequency</b>	<b>Percent</b>
Multiple	4	3.6
Asian/Pacific Islander	2	1.8
Hispanic	2	1.8
Black/African American	0	0.0
White/Caucasian	103	92.8

*Note.* WR group  $n = 55$ ; CS group  $n = 56$ . BMI = body mass index; WR = weight reading; CS = clothing size.

**Recruitment**

Participants were recruited via e-mail, posts/messages on social-media websites, and word of mouth using the snowballing method. The recruitment materials briefly explained the purpose of the study and the process for determining study eligibility and participation. E-mails and social media posts were sent out by friends, colleagues, and cohort members of the researcher. Facebook was used as the primary social-media website for posts. The researcher also sent the survey link to a colleague at Saint Joseph's University who sent out

the survey to students in the psychology department. Incentive to participate in the study was offered by advertising the potential of winning a \$100 electronic gift card for one randomly chosen participant. Participants were screened based upon specific inclusion and exclusion criteria.

Those eligible to participate in the study were women who had Internet access to the survey link, were between the ages of 18 to 45 years, not pregnant, and without a reported eating disorder diagnosis and treatment history (current and past). Lastly, any students or staff members from the Philadelphia College of Osteopathic Medicine (PCOM) who endorsed participation in a weight or body image study within the previous 2 years were deemed ineligible and excluded from study participation. Screening questions can be found in Appendix A.

## **Measures**

### **Demographic Information**

A demographics questionnaire was specifically developed for use in this study. Questions included on the questionnaire aimed to obtain the following basic demographic information for each participant: age, gender, race, and pregnancy status. This questionnaire also gathered relevant information about participants' height and weight measurements so that the responsible investigator had the information needed to calculate participants' BMI. Lastly, this questionnaire also required all participants to indicate whether or not they have ever been diagnosed or treated for an eating disorder. The demographic questionnaire can be found in Appendix B.

### **Weight-Gain Feedback**

This study initiated a simulated experience of receiving weight-gain feedback through

use of brief vignettes written by the responsible investigator. The vignettes provided feedback in the form of either a weight reading that was 5 pounds higher than expected or a clothing size that was one full size larger than expected. Vignettes assessed the experience of FF in the social context of being with a medical provider, alone, and with peers. All participants, regardless of group assignment, were provided with the scenario of stepping on a scale at a medical provider's office and receiving a reading that was 5 pounds higher than expected. The WR vignettes presented scenarios of stepping on a scale alone in the bathroom and also with a group of peers doing a weight loss challenge. These scenarios indicated that the reader (imagining that she was the person in the vignette) had gained 5 pounds from her last weight reading. Similarly, the CS vignettes presented scenarios to participants that involved selecting a pair of pants in their usual size and trying them on in a fitting room alone and with peers. Both of these scenarios indicated that the pants did not fit and that they needed one full size larger. Vignettes can be found in Appendix C.

### **Perfectionism**

Perfectionism was measured through use of the Clinical Perfectionism Questionnaire (CPQ; Fairburn et al., 2003), which assesses intrapersonal and interpersonal mechanisms of perfectionism. The CPQ is a 12-item, 4-point Likert-type, self-report scale with responses ranging from "not at all" to "all of the time." Prior to completing these 12 items, participants were asked an initial, dichotomous question regarding whether or not they had been attempting to achieve high standards during the previous month. Participants were also asked to report the areas of their lives in which they had been attempting to achieve high standards during the previous month. The 12 aforementioned items measured the following components of perfectionism: goal-setting, achievement striving, and self-evaluation of

performance. Reliability and validity of the measure are still under investigation; however, preliminary data indicate that the CPQ holds good reliability and convergent validity with other perfectionism measures ( $r = .57$ ; Riley, Lee, Cooper, Fairburn, & Shafran, 2007). Similarly, it has been shown to have good internal consistency ( $\alpha = .83$ ) in community samples (Chang & Sanna, 2012) and ED samples (Steele, O'Shea, Murdock, & Wade, 2011). The Cronbach's alpha for this current sample was  $\alpha = .78$ ,  $n = 108$ . The CPQ can be found in Appendix D.

## **FF**

The construct of FF was measured through use of three Likert-type items. The measure had a brief explanation of FF, followed by the first two items of the Feeling Fat Inventory (FFI; Killian, 2013), which had been recently developed for a doctoral dissertation. The FFI is a 45-item, 5-point Likert-type, self-report instrument with responses ranging from "never" to "always." It was designed specifically to examine the construct of FF, and it is the first of its kind. Construction of this instrument was primarily influenced by the work of Fairburn (2008) and Cooper et al. (2007). As the construct is not exclusive to objective body weight, individual items aim to evaluate the cognitive, affective, behavioral, and somatic components of FF. As use of this measure is currently limited to an unpublished doctoral dissertation, studies to indicate its validity and reliability have yet to be conducted. However, it holds strong face validity according to the current literature on the construct of FF (e.g., Cooper et al., 2007; Fairburn, 2008; Striegel-Moore et al., 1986). Killian (2013) originally designed the FFI to measure the construct over the previous month; thus, the responsible investigator used the first two items to assess participants' levels of FF frequency and intensity over the preceding 28 days. All other items on the FFI were deemed irrelevant

to the current study and were not used. The other portion of FF assessment was a single Likert-type question that asked participants to rate the degree to which they would feel fat (FF intensity) if they were the person in the vignette. As stated previously, FF was captured for each vignette. The FF measure can be found in Appendix E.

## **Procedures**

### **Preliminary Procedures**

The researcher first determined a sample size that provided adequate statistical power to account for non completers. Prior to obtaining Institutional Review Board (IRB) approval, the researcher composed the recruitment e-mail/social-media post. In the recruitment e-mails and social-media posts, the researcher was introduced along with a description of the research study. Approval to begin data collection as per the PCOM IRB was then obtained. The following measures were consolidated and uploaded online onto Survey Monkey: a general demographic questionnaire, the CPQ, a modified version of the FFI, five vignettes (i.e., four experimental and one baseline/control) with corresponding questions, and a page asking participants if they would like to be placed in a raffle to win a \$100 Amazon gift card for their participation. A separate link was provided for participants to select if they were interested in participating in the raffle. The link took them to Survey Monkey to answer the screening questions and then complete the study if eligible.

### **Screening Procedures**

Once the link to SurveyMonkey was opened, participants were led to a series of screening questions where they confirmed that they met inclusion criteria. Screening questions included the following: "Are you female?"; "Are you pregnant?"; "Are you currently diagnosed and/or in treatment for an eating disorder?" ; "Have you ever been

diagnosed and/or treated for an eating disorder in the past?" ; "Are you between the ages of 18-45?" ; "Are you a PCOM student/staff who has participated in a weight/body image study within the past two years?" If someone did not meet the criteria, Survey Monkey then ended the survey and thanked the individual for her interest. Participants were notified that they were not eligible to participate in the raffle if they did not qualify for the study.

### **Informed-Consent Procedures**

If they did meet criteria to participate, they were sent to an introduction page that thanked them for their interest and described the study and the purpose of the study. The introduction page made clear that participation was voluntary, anonymity would be maintained, and participants could exit the study at any time if they changed their mind. Participants were told that the purpose of the study was to "better understand the experience of FF," and any potential risks/benefits were explained to participants. They were notified that their participation would take between 20 to 30 minutes and that they may choose to enter into a raffle to win the gift card. In order to indicate understanding and willingness to participate in the study, participants provided consent by clicking "submit" (or its equivalent) to proceed with the study.

### **Participation Procedures**

The participants were directed to complete the demographics questionnaire, CPQ, and selected items from the FFI. Survey Monkey randomly assigned participants by birth month into either the WR group or the CS group. Participants also received the medical-provider vignette prior to completing any of the other study condition vignettes. Each group had two vignettes, both of which represented receiving weight-gain feedback (i.e., [1] while alone and [2] in a group of peers) either from stepping on a scale or trying on pants while alone or in a

group of peers. Vignettes can be found in Appendix C. Participants were exposed to each of the vignettes with the following direction: "Please read the following scenario, IMAGINING THAT THIS WAS YOU, and then answer the following question." Participants then read the vignettes and were asked to rate how fat they would feel if they were in this scenario with the following direction: "Please answer the question below by selecting a number that best captures your intensity of feeling fat if the person in the story that you read were you." Upon completion of the last question, participants were also invited to click a link to a separate page, where they had the opportunity to enter an e-mail address in order to be entered into the Amazon e-card raffle.

### **Postdata Collection Procedures**

The survey automatically closed after 200 prospective participants accessed the link. After data collection was completed, the researcher used a random number generator to determine the raffle winner. The winner received the e-card claim number in an e-mail from the responsible investigator. All other raffle participants were sent an e-mail notifying them that they did not win the raffle and thanking them for their study participation. Following this step, the responsible investigator created a data set in the Statistical Package for the Social Sciences (SPSS) and conducted the selected statistical analyses.

## **Chapter Five: Statistical Analyses and Results**

### **Statistical Plan**

The hypotheses in this study were tested using a series of statistical analyses that examined differences in scores between the study's two independent conditions. The researcher used the Statistical Package for the Social Sciences (SPSS) software as the means for data analysis. Descriptive statistics were computed within and between groups for feeling fat (FF) and perfectionism. Several independent-samples *t*-tests were conducted to determine effective random assignment. Descriptive statistics for variables relevant to group randomization were conducted as well. A one-way independent repeated-measures analysis of variance (ANOVA) was conducted to determine differences between and within groups regarding FF and feedback type in addition to social context (Hypotheses 1, 2, and 3). Both multivariate tests and tests of within-subject contrast effects were included in the analyses. A Pearson correlation analysis was used to determine whether perfectionism significantly correlated with FF in each of the weight-gain feedback groups (Hypothesis 4). There were no exploratory hypotheses, but Pearson correlations were also conducted to test the impact of body weight and body mass index (BMI). Statistical analyses yielded mixed results for the study's hypotheses.

### **Preliminary Analyses**

Analyses were run to ensure that the groups were evenly split with regard to size in addition to variables that could have influenced the results. Included variables were FF Intensity (over prior 28 days), body weight, BMI, and age. Independent-samples *t*-tests were conducted for each of those variables to determine that groups were not statistically significantly different from each other.

## Descriptive Statistics for Group Variables

Participants were evenly randomly split into groups, weight reading (WR;  $n = 55$ ) and clothing size (CS;  $n = 55$ ), after one participant was not included in analyses for incomplete responses on FF questions. The WR group had a mean FF Intensity of 2.82. There was a mean body weight of 150.09 pounds, a mean BMI of 24.92, and a mean age of 27.29 years. The CS group had a mean FF Intensity of 2.77. There was a mean body weight of 144.61 pounds, a mean BMI of 24.71, and a mean age of 27.04 years. Descriptive statistics for group variables are displayed in Table 2.

Table 2

*Descriptive Statistics: Group Variables (N = 111)*

Variable	<i>M</i>	<i>SD</i>
FF Intensity		
WR	2.82	1.11
CS	2.77	1.04
Body weight (in pounds)		
WR	150.09	40.79
CS	144.61	29.54
BMI		
WR	24.92	5.55
CS	24.53	4.55
Age (in years)		
WR	27.29	7.04
CS	27.04	6.19

Note: There was an  $n = 110$  used in this analysis, with WR group of  $n = 55$  and CS group of  $n = 55$ . FF = feeling fat; WR = weight reading; CS = clothing size; BMI = body mass index.

## Independent Samples *t*-Test

Assuming equal variances, the *t*-tests revealed no significant differences between the

means of the two groups on the Clinical Perfectionism Questionnaire (CPQ) Total,  $t(106) = -.99, p = .92$ ; FF Intensity,  $t(109) = .25, p = .67$ ; body weight,  $t(109) = .81, p = .30$ ; and age,  $t(109) = .20, p = .36$ .

### **Analysis by Hypothesis**

#### **Hypotheses 1, 2, and 3**

Hypotheses 1, 2, and 3 focused on the effect of social context in addition to an interaction effect with feedback type. Hypothesis 1 proposed that FF intensity would be higher when feedback was received with peers present compared to when feedback was received alone. Hypothesis 2 proposed that FF intensity would be higher when feedback was received by clothing size compared to when feedback was received by weight readings. Hypothesis 3 proposed that FF intensity would be highest when feedback was received by clothing size with peers present. Hypotheses were examined by conducting a one-way independent repeated-measures ANOVA. Multivariate tests, Mauchly's Test of Sphericity, and Huynh-Feldt's correction, in addition to tests of within-subjects contrasts with descriptive statistics, were used to further support findings.

**Descriptive statistics within and between groups.** The number of participants who completed the CPQ was lower than the full sample size ( $n = 108$ ), with a mean score of 28.24 ( $M = 28.24, SD = 5.27$ ). The sample was comparable to what has been shown in a non-eating-disordered (non-ED) community ( $M = 25.00, SD = 5.00$ ), which indicates that the participants in this study were within an average range for clinical perfectionism (Fairburn et al., 2003). With an adjusted sample ( $n = 110$ ) based on completion of the FF items, there was an even split between the WR group ( $n = 55$ ) and the CS group ( $n = 55$ ). Data showed a mean FF Frequency ( $M = 2.61, SD = 1.06$ ) and FF Intensity ( $M = 2.41, SD = 1.07$ ) that

indicated the qualitative frequency and intensity of participants' fat feelings over the prior 28 days as somewhere between "occasionally" and "sometimes," and "slightly" and "somewhat," respectively. Mean scores for the WR/CS feedback type groups FF Doctor Total ( $M = 2.97$ ;  $SD = 1.08$ ), FF Alone Total ( $M = 3.00$ ,  $SD = 1.00$ ), FF Alone-WR ( $M = 3.00$ ,  $SD = 0.96$ ), FF Alone-CS ( $M = 3.00$ ,  $SD = 1.05$ ), FF Peers Total ( $M = 3.20$ ,  $SD = 1.04$ ), FF Peers-WR ( $M = 3.16$ ,  $SD = 1.01$ ), and FF Peers-CS ( $M = 3.24$ ,  $SD = 1.07$ ) indicated the qualitative experience of participants' FF scores in response to the vignettes as "very much." Descriptive statistics for within and between groups are displayed in Table 3, with FF scores also shown in the Figure.

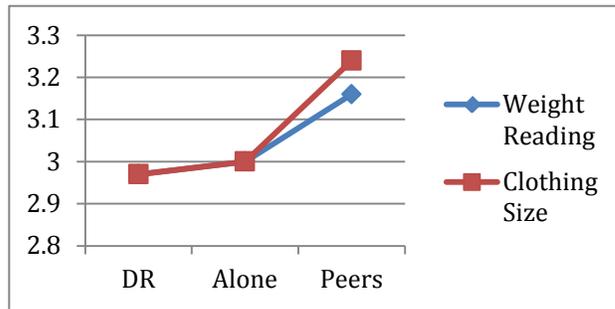
Table 3

*Descriptive Statistics: CPQ Total and FF Scores, Within and Between Groups (N = 111)*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>
CPQ Total	108	28.24	5.28
FF Frequency (over prior 28 days)	110	2.61	1.06
FF Intensity (over prior 28 days)	111	2.41	1.07
FF Doctor Total	110	2.97	1.08
FF Alone Total	110	3.00	1.00
FF Alone-WR	55	3.00	0.96
FF Alone-CS	55	3.00	1.05
FF Peers Total	110	3.20	1.04
FF Peers-WR	55	3.16	1.01
FF Peers-CS	55	3.24	1.07

*Note.* CPQ = Clinical Perfectionism Questionnaire; FF = feeling fat; WR = weight reading; CS = clothing size.

Figure



---

*FF Scores Between Feedback Type and Within Social Contexts (N = 111)*

**Repeated-measures analyses.** Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated,  $\chi^2(2) = 14.82, p < .01$ . The degrees of freedom were corrected using the Huynh-Feldt estimates of sphericity ( $\epsilon = .91$ ). The correction shows that FF scores were significantly affected by social context,  $F(1.82, 196.02) = 20.47, p < .01, \omega^2 = .87$ . Conversely, the correction did not show a statistically significant effect for the interaction between social context and feedback type for FF scores,  $F(1.82, 196.02) = .50, p > .05, \omega^2 = .87$ . Thus, there was no significant difference between scores based on a weight reading or clothing size. Using Pillai's trace, there was a statistically significant main effect for social context on FF scores,  $V = 0.25, F(2, 107) = 17.58, p < .01$ . There was no statistically significant effect for the interaction of social context and feedback type for FF scores,  $V = .01, F(2, 107) = .46, p > .05$ . These results are displayed in Table 4.

Table 4

*One-Way Independent Repeated-Measures ANOVA: Multivariate Tests (N = 111)*

Effect	<i>df</i>	<i>F</i>	<i>p</i>
<b>Social context</b>			
Pillai's trace	2.00	17.58	.00
Huynh-Feldt	1.81	20.47	.00
<b>Social context - feedback type</b>			
Pillai's trace	2.00	.46	.63
Huynh-Feldt	1.81	.50	.59

*Note: There was an  $n = 110$  used in this analysis, with WR group of  $n = 55$ , and CS group of  $n = 55$ .*

**Within-subjects contrasts.** Findings were further supported by tests of within-subjects contrasts that compared FF scores for the doctor, alone, and peers social contexts. There was a significant main effect for social context in doctor-alone,  $F(1, 108) = 9.59, p < .05$ ; alone-peers,  $F(1, 108) = 15.12, p < .01$ ; and doctor-peers,  $F(1, 108) = 33.07, p < .05$ . No statistically significant effects were found for the interaction of feedback in doctor-alone,  $F(1, 108) = .16, p = .69$ ; alone-peers,  $F(1, 108) = .50, p = .48$ ; and doctor-peers,  $F(1, 108) = .80, p = .37$ . These results are displayed in Table 5.

Table 5

*One-Way Independent Repeated-Measures ANOVA: Within-Subjects Contrasts (N = 111)*

Effect	<i>df</i>	<i>F</i>	<i>p</i>
<b>Social context</b>			
Doctor-Alone	1	9.59	.002
Alone-Peers	1	15.11	.000
Doctor-Peers	1	33.06	.002
<b>Social context - feedback type</b>			
Doctor-Alone	1	.16	.69
Alone-Peers	1	.50	.48
Doctor-Peers	1	.80	.37

*Note: There was an n = 110 used in this analysis, with WR group of n = 55, and CS group of n = 55.*

#### **Hypothesis 4**

Hypothesis 4 focused on the relationship between FF scores across feedback groups and within social contexts with perfectionism. Hypothesis 4 proposed that total perfectionism scores would be positively correlated with FF scores across groups and within social contexts. Correlations between total perfectionism scores and FF scores were calculated using a Pearson product-moment coefficient correlation.

There were significant positive correlations between CPQ Total and FF scores across groups. There were strong correlations for the FF Alone-WR condition ( $r = .61, p < .01$ ) and FF Peers-WR condition ( $r = .61, p < .01$ ). There were weak correlations on the FF Alone-CS condition ( $r = .28, p < .05$ ) and FF Peers-CS condition ( $r = .29, p < .05$ ). The correlation for the FF Dr-WR condition was moderate ( $r = .35, p < .01$ ). In other words, there were positive relationships between endorsed perfectionism as measured by the CPQ and the intensity of FF experienced when receiving weight-gain feedback both in the form of a weight reading or

clothing size. However, results indicate a stronger link between body weight and perfectionism than clothing size and perfectionism. The coefficients of determination for such relationships were calculated as well. Results are as follows: FF Alone-WR ( $R^2 = .37$ ), FF Peers-WR ( $R^2 = .37$ ), FF Alone-CS ( $R^2 = .08$ ), FF Peers-CS ( $R^2 = .08$ ), FF Dr-WR ( $R^2 = .12$ ), FF Alone Total ( $R^2 = .21$ ), FF Peers Total ( $R^2 = .20$ ). Findings suggest that approximately 37.21% of the variance in both the FF Alone-WR condition and FF Peers-WR condition, 7.84% of the variance in the FF Alone-CS condition, 8.47% of the variance in the Peers-CS condition, 12.25 % of the variance in the Dr-WR condition, 21.16% of the variance in FF Alone Total, and 20.25% of the variance in FF Peers Total were shared by CPQ total scores. These results are displayed in Table 6.

### **Additional Variables**

Although there were no exploratory hypotheses, there was an examination of the possible impact of body weight (in pounds) and BMI. This examination was conducted either to further support or contradict the notion that one's actual body size does not necessarily impact the experience of FF. Research on this notion has been mixed. Pearson product-moment coefficient correlations were conducted to examine the following relationships: body weight (in pounds) and perfectionism, body weight and FF intensity, BMI and perfectionism, and BMI and FF scores.

Results indicated minimal statistical significance. The only condition wherein BMI was significantly positively correlated to FF scores was the FF Dr-WR control condition ( $r = .30, p < .01$ ). Similarly, a significant positive correlation was found between body weight and FF scores in the Dr-WR condition ( $r = .27, p < .01$ ). This finding suggests that there is a weak-to-moderate relationship between one's degree of FF experienced while being weighed

by a medical provider and both BMI and actual reported body weight. Lastly, there was a weak positive correlation between actual reported body weight and CPQ Total ( $r = .19, p < .05$ ). These results are displayed in Table 6.

Table 6

*Pearson Correlations: CPQ Total, FF Scores, Body Weight, and BMI (N = 111)*

Scores	1	2	3	4	5	6	7	8
1. CPQ Total <sup>a</sup>	--	--	--	--	--	--	--	--
2. FF Alone-WR <sup>b</sup>	.61**	--	c	c	--	--	--	--
3. FF Peers-WR <sup>b</sup>	.61**	.89**	c	c	--	--	--	--
4. FF Alone-CS <sup>b</sup>	.28*	c	c	--	--	--	--	--
5. FF Peers-CS <sup>b</sup>	.29*	c	c	.84**	--	--	--	--
6. FF Dr-WR <sup>a</sup>	.35**	.73**	.75**	.81**	.76**	--	--	--
7. Body weight (in pounds) <sup>a</sup>	.19*	.25	.25	.07	.19	.27**	--	--
8. BMI <sup>a</sup>	.15	.23	.23	.09	.22	.30**	.93**	--

*Note.* C = cannot be computed because at least one of the variables is a constant

<sup>a</sup> n = 108. <sup>b</sup> n = 55.

\*\* p < .01, two tailed.

\* p < .05, two tailed.

## **Chapter Six: Discussion**

This study examined the relationship between feeling fat (FF), weight-gain feedback, and perfectionism in a non-eating-disordered (non-ED) female sample. It was unique in that it was the first to examine FF in the context of weight readings versus clothing size in addition to alone versus peer social contexts. Selected statistical analyses yielded mixed results regarding the study's hypotheses, which can inform future research and offer implications for clinical applications. Despite some significance in findings, this study had limitations that are addressed here. A brief discussion about ideas for future research is provided here as well.

### **Interpretation of Findings**

#### **FF and Social Context**

The study's first hypothesis that predicted FF scores would be higher when feedback was received with peers present compared to when feedback was received alone was supported. FF scores were significantly higher in the peers' condition in both the weight-reading (WR) group and the clothing size (CS) group. The significance found in Hypothesis 1 regarding FF being impacted by social context was perhaps the result of an intensified degree of self-consciousness. Prior research supports the notion that social comparison played a role in this finding, in that it emerged (simulated) in the context of peers being present (Bosch et al., 2010; Fardouly et al., 2015). Social comparison as a construct involved in FF was similarly identified in Striegel-Moore et al.'s (1986) study on FF. This notion is further supported by previous research that investigated the impact of peer comparison specifically on young women's self-evaluation with regard to appearance and body image (e.g., Krones et al., 2005; Lin & Kulik, 2002; Ridolfi et al., 2011). Comparable to the current

study's findings showing greater FF when peers are present versus being alone, Mills and Miller's (2007) study about negative weight feedback found greater fat feelings when negative feedback was received from a peer as opposed to a nonpeer. Furthermore, both societal pressures to be thin and social comparison about body weight have been highly correlated to FF (Cooper et al., 2007; Striegel-Moore et al., 1986).

With regard to the current study, social comparison about body weight could have related to an overall evaluation of "success" (Overstreet & Quinn, 2012). This perspective points to the role of social comparison to other women in their environment as serving as the basis of worth. Thus, one should not be surprised that prior research (e.g., Leahey et al., 2007), in addition to the current findings, shows that women make physical appearance social comparisons. Women's tendency to engage in social comparisons serves as a way for them to evaluate how their appearance is fairing in relation to that of the other women in their environment.

This type of social context might make a woman more likely to wonder if she is "measuring up" to peers (Bosch et al., 2010; Fardouly et al., 2015), if her peers are judging her for weight gain, if her peers are then looking at her body to notice the gain, or if her peers have gained any weight. Essentially, this experience could trigger upward social comparisons between oneself and one's surrounding peers, which is consistent with previous literature pointing to the frequency of upward social comparisons in women (Leahey et al., 2007). Upward social comparisons could further produce negative cognitions about oneself and unpleasant affective states, both of which are variables identified in the FF experience (Fairburn, 2008). Based on this study's findings, that phenomenon apparently did not apply when considering the notion of FF being impacted by the type of weight-gain feedback one

received.

### **FF and Feedback Type**

Conversely, the second hypothesis, which predicted FF would be higher when feedback was received by clothing size compared to when feedback was received by weight readings, was not supported. The study's third hypothesis, which predicted FF would be highest when feedback was received by clothing size with peers present, was also not supported. Results showed no statistically significant difference in FF scores with the interaction of feedback type. The lack of significance in Hypothesis 2 and Hypothesis 3 might have occurred because of no actual difference in the experience of FF based on weight readings and clothing size. Perhaps these two types of feedback are so different that they are not comparable or are so alike that they yield no difference in the experience. This study was the first to examine FF in the context of two different types of weight-gain feedback; therefore, no previous research is available with which to compare. However, this study does relate to previous research that showed negative consequences related to self-weighing in women (Garner et al., 1985; Klos et al., 2012; Quick et al., 2012).

Garner et al. (1985) found the behavior of weighing oneself or being weighed was a variable that could determine participants' mood for the day in addition to their general evaluation of self. As a component of FF is unpleasant affective states (Fairburn, 2008), one could consider that the vignettes in the current study first triggered an imagined negative mood state, which then triggered an imagined FF experience. Although Fairburn (2008) and Cooper et al. (2007) have identified somatic sensations as a variable involved in FF, no previous research has examined the somatic sensations of trying on clothes that are too small. The vignettes that described clothing size might not have been detailed enough to account for

the somatic sensations that one would experience when trying on pants that are too small (e.g., squeezing around the waist, stomach over the waistband). In that case, a central part of the FF experience was not captured in the vignettes (Andersen, 2000; Fairburn, 2008; McFarlane et al., 2011).

The source of measurement for FF, a Likert-type scale with qualitative descriptors, is also a possible variable to account for insignificant results. Although this form of measurement was used by Killian (2013), perhaps it did not account for specificity in the experience for the current study. Moreover, participants may have unintentionally selected a rating that was not genuine to what they would actually experience as a result of being required to select a single word to capture the experience.

### **FF and Perfectionism**

The fourth hypothesis, which predicted total perfectionism scores would be positively correlated with FF scores across groups, was supported. Results indicated that higher scores on the CPQ were related to higher FF scores. Statistical analyses also showed that actual reported body weight (in pounds) and body mass index (BMI) did not significantly correlate to FF scores for all conditions except the doctor-weight reading (Dr-WR) condition. The significance found for Hypothesis 4 was likely the result of a genuine relationship between the intensity of FF and perfectionism, which is consistent with previous research (e.g., Eldredge et al., 1990; Killian, 2013; Striegel-Moore et al., 1986). Eldredge et al. (1990) and Striegel-Moore et al. (1986) showed positive correlations between degrees of perfectionism and FF in non-ED women. A study by Chang et al. (2008) about body image dissatisfaction was congruent with this study's findings on both perfectionism and the impact of peers. Their study showed that perfectionistic standards and self-presentation (i.e.,

concealing imperfections from others) were both highly correlated with body image dissatisfaction. The findings here are also consistent with Killian's (2013) findings regarding this relationship, both of which used the CPQ as the measure of perfectionism. The current findings' congruence with previous research further supports the notion that women with perfectionistic standards for success might have high standards for their physical appearance as well (McGee et al., 2005). Because the current study had an emphasis on body weight, Bardone-Cone et al.'s (2009) study on weight perception is noteworthy. Results indicated that women with maladaptive perfectionism were more likely to perceive themselves as overweight compared to nonperfectionistic women. The previously mentioned studies support the notion that perfectionists are more likely to adopt stricter standards with regard to evaluation of their own appearance in addition to body weight, shape, and size.

The participants who have more perfectionistic standards for their lives would be more likely to experience FF when they receive weight-gain feedback in their real lives. In the current study, perfectionism likely related to the fact that the vignettes described some type of objective feedback (i.e., number on scale or on a tag in pants). Furthermore, objective feedback of this type is likely to be evaluated more harshly in perfectionists than in nonperfectionists because it is a measurable form of success versus failure (Bardone-Cone et al., 2009). One must note, however, that the significant findings found in this study merely show a relationship because of the correlational analysis. Although causality between FF and perfectionism cannot be concluded, the current findings offer implications and clinical applications.

### **Implications and Clinical Applications**

The findings of this study imply that the degree to which women experience FF when

receiving weight-gain feedback is impacted by the social context in which the feedback is received. Additionally, findings implied that there are no differences in terms of FF experiences when feedback is received in the form of a weight reading or clothing size. The findings also supported a relationship between perfectionism and FF. Perhaps of most relevance to the current findings is the qualitative experience that corresponded with mean FF scores. Mean scores corresponded with the qualitative experience of “very much” in all conditions. This finding implies that the women in this study are likely to feel quite intense feelings of fatness if/when they receive weight-gain feedback in their real lives. This implication certainly has clinical applications.

Previous studies (e.g., Lam et al., 2002; Striegel-Moore et al., 1986) have indicated that FF was associated with the following psychological issues in women: emotional distress; negative mood related to body weight, shape, and size; and negative beliefs about oneself. These psychological effects have the ability to negatively impact one’s eating behaviors. Moreover, Striegel-Moore et al.’s (1986) study directly linked FF to disordered eating (i.e., repeated dieting, binge eating, and a lack of control of eating). A better understanding of this construct can be used in clinical practice, in that clinicians will be able to identify those at risk for development of a diagnosable eating disorder. Clinicians would additionally be able to target individuals’ specific beliefs, attitudes, and emotions toward weight-gain feedback, specifically as they relate to experiences of FF and body image dissatisfaction. Perfectionistic standards could be targeted in therapy via cognitive-behavioral therapy (CBT) techniques. Clinicians could pay specific attention to the ways in which such standards impact individuals’ adherence to weight ideals as related to their self-perceptions. Despite implications and applications, the study had many limitations.

## **Study Limitations**

Although the study was the first of its kind to examine the specific relationship between FF, weight-gain feedback, and perfectionism, several limitations within this study must be mentioned. These limitations ought to be considered, as they offer implications about the study's internal and external validity. Limitations are especially applicable to interpreting the study's primary findings about the impact of social context and feedback type on FF. Noteworthy limitations concern two of the primary measures used in the study, in addition to the participant sample.

### **Weight-Gain Feedback**

The primary limitation in this study was the measure of providing weight-gain feedback. The experience was simulated through the use of brief vignettes that were created by the responsible investigator. The vignettes were also brief and limited in detail, which could have created a scenario wherein participants felt less connected. The study format was selected and designed in a brief fashion intentionally for feasibility of data collection in a timely manner. Therefore, one cannot assume that the experience of FF reported by participants was exactly reflective of what their experience would have been had they received this feedback in their real lives. The study provided only two forms of weight-gain feedback, neither of which considered BMI, body fat percentage, or details about the bodily changes that may have contributed to the weight gain (e.g., menstrual cycle, constipation).

There has also been no research to support the comparability of unexpectedly gaining 5 pounds and unexpectedly going up one full pants size. One could argue that the two are qualitatively different and thus incomparable forms of feedback. Conversely, they could be qualitatively not different enough, which might explain the lack of statistical significance for

Hypotheses 2 and 3. The amount of weight gain in both forms of feedback also could not have been high enough to produce an effect on FF scores. Furthermore, the selected measures of weight-gain feedback and FF experience may not have been the most appropriately matched in terms of being the most reflective of real-world experiences.

### **FF Measure**

The measure of FF used was also a limitation, as selected items were from a measure that was created by a former doctoral student (Killian, 2013). Although this measure holds strong face validity according to the current literature on the construct of FF (e.g., Cooper et al., 2007; Fairburn, 2008; Striegel-Moore et al., 1986), no formal psychometric data support its validity and reliability. Additionally, only two items were selected and used here because of the irrelevance of the other items to the current study. The 5-point Likert-type scale also may not have been the most effective way to capture one's experience of FF because specificity was likely lost by participants being required to select a number that matched a word (e.g., "somewhat," "extremely"). Perhaps a visual analogue scale with a larger range would have more effectively captured participants' FF experiences. A qualitative measure that allows participants to describe their experience in their own words could have also allowed for more specificity in responses, thus capturing the experience more accurately. Lastly, a more diverse sample size may have created more variability in FF scores.

### **Sample Demographics**

Although the study's sample was comparable to that of other studies that examined FF (Rodin et al., 1984; Striegel-Moore et al., 1986), it served as a limitation to generalizability of findings to other groups. The sample size was relatively small ( $N = 111$ ), and the inclusion criteria allowed for female participants only between the ages of 18 to 45

years. Moreover, 92.8% of the participants were White/Caucasian, and approximately half of the total sample was between the ages of 20 to 30 years. Such limitations lower the external validity of the study, as the findings are not generalizable across age, gender, and ethnicity. This study's focus was on FF in female individuals; however, that it does not capture FF in adolescent girls or older women is specifically noteworthy. Perhaps the mean FF scores across groups would have been different if age had not been considered a criterion for participation. A larger sample size could have allowed expansion of experiment groups, as well as inclusion of a control group for comparison. Specifically, participants would have been exposed to only one vignette (i.e., Alone-WR, Alone-CS, Peers-WR, and Peers-CS) instead of being exposed to both social contexts within the same group. Participants in both feedback groups were exposed to peer vignettes after already reading and responding to alone vignettes. The ANOVA conducted yielded a significant main effect for social context; however, that effect could be simply attributed to an increased exposure to FF stimuli as opposed to social context. All of the previously mentioned limitations ought to be considered and addressed in future research.

### **Future Research**

The construct of FF in general ought to be further examined in research, as it is very relevant to Western culture as a whole. The specific relationship between FF and weight-gain feedback would likely be better captured in a study that uses deception for in-vivo weight-gain feedback as opposed to a simulated experience. Findings from an in vivo study would likely be more reflective and applicable to real-world experiences as well. If researchers were to replicate this study in the future, a large sample size to allow for four experimental groups, more detailed vignettes, and a visual analogue scale to measure FF

could assist in improving statistical significance in addition to internal validity. Clinicians could gain a better understanding of FF from researchers doing more qualitative examinations on FF, as only one study (i.e., Cooper et al., 2007) has yet to explore the construct qualitatively in ED and non-ED women. As few studies have examined FF in both ED and non-ED female individuals, a study that compares ED and non-ED women on the same variables as the current study could be useful in understanding similarities and differences in the experience across populations. A replication study to include individuals with eating disorders may not be possible, however, because of the ethical considerations that arise in terms of initiating a particularly emotionally laden experience for that vulnerable population. The possible risks and benefits would need to be thoroughly considered prior to conducting a study that involves any type of weight-gain experience in individuals with eating disorders.

Comparable to the current study, most of the research done on FF has used a Caucasian, young-adult, female sample. Thus, further examination of this construct should be performed among various cultures, age groups, and genders. Body image and the idea of “being fat” do not hold the same meaning across cultures; thus, research that focuses on the variables impacting FF across cultures would be useful in understanding the experience as a whole. Such research could also aid in clinicians’ ability to understand their clients’ individual experiences of FF. Studies that compare differences across ages would be particularly relevant to clinicians who treat adolescents, as most body image concerns begin to emerge during adolescence (Stice et al., 2013). Although recent advances have been made in the body image literature, these constructs are generally understudied in male individuals in comparison to female individuals. A replication of this study with adaptations made

applicable to men could be useful in understanding the impact of body image on men's psychological health; this type of study could have implications for clinicians doing therapy with men.

Lastly, one of the primary areas for future study related to the topic of FF is its applicability in CBT. The cycle between thoughts, physiological reactions, emotions, and behaviors that is at the core of CBT matches the variables that are involved in FF. The cognitions, interpretations of somatic sensations, affective states, and behavioral coping strategies for FF as they relate to the CBT cycle ought to be specifically examined in future research. Additionally, researchers ought to study the ways in which one can either adaptively or maladaptively respond to and cope with the experience of FF. One's coping style could, in itself, be the mediator between FF and disordered eating. Such research could inform clinicians' approach to intervening on the variables that trigger and maintain FF experiences for the individuals they treat. Continued examination of this topic will further contribute to psychological literature, which will ultimately enhance the field of clinical psychology as a whole.

### **Contribution to Clinical Psychology**

This study informs future research that could increase the understanding of this very relevant, yet understudied, construct. Although researchers have not directly examined the experience of FF in relation to the onset of eating disorders, FF has been associated with both body image dissatisfaction and disordered eating patterns (Fairburn, 2008; Lam et al., 2002; Striegel-Moore et al., 1986). Preliminary research suggests that by improving body image in young women, eating disorders may be somewhat preventable (e.g., Stice et al., 2012). The primary prevention literature has focused extensively on the roles of body image

dissatisfaction (Stice et al., 2013) and perfectionism (Wliksch et al., 2008) as risk factors for the onset of eating disorders. Because the current findings identified perfectionism and social context as significantly related to FF, constructs associated with body image dissatisfaction, this study provides a small contribution to the eating disorder prevention literature.

As eating disorders have been characterized as serious mental illnesses with several psychological and physical comorbid issues, high mortality rates, and growing prevalence rates (APA, 2000), any and all efforts toward prevention are vital. A contribution to eating disorder prevention literature can inform future research, which will continue to enhance clinicians' ability to identify those at risk for development of a diagnosable eating disorder. The results of this study could be relevant in prevention for clinicians working with women who often report feelings of fatness, as a frequent occurrence of this experience could put one at risk for disordered eating. Specifically, clinicians could intervene with coping style, for that in itself could be the moderator between FF and disordered eating. Furthermore, collective prevention of eating disorders at the individual level essentially improves prevention at the global level.

### **Conclusion**

The present study examined the relationships between FF and weight-gain feedback between two types of feedback and within two social contexts in a non-ED female sample. It also examined the relationship between perfectionism and FF with regard to weight-gain feedback. FF was conceptualized as a construct rooted in body image dissatisfaction, which encompasses a variety of negative cognitions, unpleasant affective states, and somatic sensations (Fairburn, 2008). This study was the first to examine FF with regard to weight

readings versus clothing size and alone versus with peers present. Gaps in the literature, in addition to self-discrepancy and social comparison theories, informed the hypotheses of this study. The findings here showed the social context wherein weight-gain feedback is given as important with regard to FF experiences, whereas feedback type was not shown to be statistically significant. Perfectionism was also identified as positively related to FF experiences. These findings offer many implications and applications for clinical settings. Although this study had limitations, it offers ideas for future research and contributes to the clinical psychology field by adding to the eating disorder prevention literature.

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## Appendix A

### *Screening Questions*

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- 1) Are you a female?
    - a. Yes
    - b. No
  
  - 2) Are you pregnant?
    - a. Yes
    - b. No
  
  - 3) Are you between the ages of 18 and 45?
    - a. Yes
    - b. No
  
  - 4) Are you currently diagnosed and/or in treatment for an eating disorder?
    - a. Yes
    - b. No
  
  - 5) Have you ever been diagnosed and/or in treatment for an eating disorder?
    - a. Yes
    - b. No
  
  - 6) Are you currently a PCOM student who has participated in a weight/ body image study with the past two years?
    - a. Yes
    - b. No
-

## Appendix B

### *Demographic Questionnaire*

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- 1) What is your age? \_\_\_\_\_
  - 2) What is your sex?
    - a. Male
    - b. Female
  - 3) Which race/ethnicity best describes you?
    - a. American Indian/ Alaskan Native
    - b. Asian/Pacific Islander
    - c. Black or African American
    - d. Hispanic
    - e. White/Caucasian
    - f. Multiple ethnicity/ other \_\_\_\_\_
  - 4) Are you currently pregnant?
    - a. Yes
    - b. No
  - 5) What is your current weight in pounds? \_\_\_\_\_
  - 6) What is your height in feet and inches? \_\_\_\_\_ \_\_\_\_\_
  - 7) Have you ever been diagnosed with an eating disorder (current and past)?
    - a. Yes
    - b. No
  - 8) Have you ever received treatment for an eating disorder (current and past)?
    - a. Yes
    - b. No
-

## Appendix C

*Vignettes: WR-DR, WR-Alone, WR-Peers, CS-Alone, CS-Peers*

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### Control Vignette, WR-DR:

**Directions:** Please read the following scenario, IMAGINING THAT THIS WAS YOU, and then answer the following question.

You arrive for your annual check at your primary care physician's office. The medical assistant takes you back for vitals and weight readings. Upon stepping on the scale, the medical assistant says a number aloud that you were not expecting to hear. You discover that you have gained weight. This number is seven pounds higher than the last time you weighed yourself on your bathroom scale.

### Vignette 1, WR-Alone:

**Directions:** Please read the following scenario, IMAGINING THAT THIS WAS YOU, and then answer the following question.

You are in the bathroom in the morning after waking up. Prior to getting in the shower, you step on the scale to weigh yourself. Upon stepping on the scale, you see a number that you were not expecting to see. You discover that you have gained weight. The number is five pounds higher than the last time you weighed yourself on your bathroom scale.

### Vignette 2, WR-Peers:

**Directions:** Please read the following scenario, IMAGINING THAT THIS WAS YOU, and then answer the following question.

You and four female friends are in your dorm discussing the idea of participating in a weight loss challenge and state your current weights aloud. You all decide to step on the scale together and state weights aloud to get baseline readings prior to beginning the challenge. Upon stepping on the scale, your friend says a number aloud that you were not expecting to hear. You discover that you have gained weight. The number is five pounds higher than the last time you weighed yourself on your bathroom scale.

### Vignette 3, CS-Alone:

**Directions:** Please read the following scenario, IMAGINING THAT THIS WAS YOU, and then answer the following question.

You are shopping for new jeans at one of the stores you often go to for clothing. You grab a few pairs of jeans in the size that you have been for the past few years and enter the fitting room alone. Upon trying on the jeans, you look in the mirror and see that they are too

tight to button. You discover that you have gained weight. You realize that your current pant size has increased by one full size.

Vignette 4, CS-Peers:

**Directions:** Please read the following scenario, IMAGINING THAT THIS WAS YOU, and then answer the following question.

You and four female friends are shopping for new jeans at one of the stores you often go to for clothing. You grab a few pairs of jeans in the size that you have been for the past few years and enter the fitting room with two of your friends. Upon trying on the jeans, you look at your two friends and see that the jeans are too tight to button. You discover that you have gained weight. You realize that your current pant size has increased by one full size.



## Appendix D

### *Feeling Fat Scale*

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What is *Feeling Fat*?

*Feeling fat* is not the same thing as being overweight. In fact, it may have nothing to do with one's body weight at all. *Feeling fat* is a subjective experience often associated with uncomfortable emotions or uncomfortable physical sensations.

**Part A) Instructions: These questions refer to the past month (28 days). Please circle the response that best describes your experience. Please answer every question.**

1) In the past 28 days (1 month), how **OFTEN** have you felt fat regardless of your actual weight?

<i>Never</i>	<i>Occasionally</i>	<i>Sometimes</i>	<i>Frequently</i>	<i>Always</i>
0	1	2	3	4

2) Overall, in the past 28 days (1 month), how INTENSE were your feelings of fatness?

<i>Not at all</i>	<i>Slightly</i>	<i>Somewhat</i>	<i>Very much</i>	<i>Extremely</i>
0	1	2	3	4

**Part B) Instructions: This question refers to right now. Please answer the question below by selecting a number that best captures your intensity of feeling fat if the person in the story that you read were you.**

<i>Not at all</i>	<i>Slightly</i>	<i>Somewhat</i>	<i>Very much</i>	<i>Extremely</i>
0	1	2	3	4

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