THE ROLES OF DISPOSITIONAL FLOW, DISPOSITIONAL MINDFULNESS, AND SELF-COMPASSION IN THE OBJECTIFICATION THEORY FRAMEWORK

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ABSTRACT

Women are at greater risk than men for experiencing eating disorders, depression, and sexual dysfunction (American Psychological Association, 2007; Fredrickson & Roberts, 1997). Objectification theory (Fredrickson & Roberts, 1997) was proposed to explain one process through which sexist social experiences affect women's mental health outcomes. Objectification theory posits that women are frequently treated as objects in Western society, and that they internalize this treatment such that they view themselves as objects. This self-objectification affects their experience of themselves in the world, heightening body-related shame and appearance- and safety-related anxiety. It also makes it more difficult for women to feel connected with their bodies and to experience flow, a pleasant sensation of feeling absorbed in the present moment. Flow has a rich body of research dating back to at least

1975, when Csikszentmihalyi wrote about flow as experienced by chess players, dancers, rock climbers, and surgeons. Historically, however, objectification theory researchers have used measures of flow not grounded in Csikszentmihalyi's multi-dimensional conceptualization. One purpose of the present study was to investigate the aspects of flow most relevant to objectification theory (i.e., concentration, control, and loss of self-consciousness) using an appropriate, validated measure.

A second purpose of the present study was to explore mindfulness and self-compassion as potential moderators within the objectification theory framework. These strength-based practices have received recent attention for treatment of anxiety, depression, and other mental health concerns. We studied mindfulness and self-compassion at the trait level as a first step in exploring how these cultivatable strengths may buffer against the deleterious effects of objectification.

The present study used a correlational design to explore relationships among objectification theory variables and hypothesized strength-based moderators. We sampled data obtained from 500 women recruited through three different methods who completed an online survey consisting of 11 different measures. Data were analyzed using structural equation modeling. Hypothesized moderated relationships were generally not supported, although most correlations were in the expected directions. Overall, results underscored the need to a) study flow within the objectification theory framework using a multi-dimensional conceptualization and b) develop strength-based interventions for treating women's mental health concerns.

APPROVAL PAGE

The faculty listed below, appointed by the Dean of the School of Education, have examined a dissertation titled "The Roles of Dispositional Flow, Dispositional Mindfulness, and Self-Compassion in the Objectification Theory Framework," presented by Morgan M. Grotewiel, candidate for the Doctor of Philosophy degree, and certify that in their opinion it is worthy of acceptance.

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CHAPTER 1

INTRODUCTION

In *Guidelines for Psychological Practice with Girls and Women*, the American Psychological Association (APA; 2007) highlighted the importance of establishing treatment interventions specifically tailored to the unique mental health challenges faced by girls and women in the 21st century. The United States Department of Health and Human Services (USDHHS), Office on Women's Health (2009) echoed this concern in *Action Steps for Improving Women's Mental Health*. Both publications emphasized the striking gender disparities in a variety of mental health concerns:

- Women are approximately two times more likely than men to be depressed, and girls are seven times more likely than boys to experience depression (APA, 2007).
- Girls and women are about nine times more likely than boys and men to experience eating disorders (APA, 2007).
- Women are three times more likely than men to engage in nonlethal self-harming behavior (USDHHS, 2009).
- Women are two to three times more likely than men to experience anxiety disorders, including post-traumatic stress disorder, panic disorders, phobias, and obsessive compulsive disorders (USDHHS, 2009).

The causes of these disparities are complex and wide-ranging, encompassing diverse economic, biological, developmental, psychological, and sociocultural influences, including a pervasive culture of rape, abuse, and sexism within the United States (APA, 2007; USDHHS, 2009). In addition, many women experience the interaction of gendered discrimination with other types of discrimination based on their race, ethnicity, culture,

sexual orientation, gender identity, ability status, or other marginalized identities (APA, 2007).

Feminist scholars have proposed a variety of models to explain how women's experiences of gendered discrimination affect their mental health. Some models focus on specific diagnoses, including models of somatoform and pain disorders, premenstrual syndrome, postpartum depression, addiction, personality disorders, schizophrenia, and depression (Ballou & Brown, 2002). Other models attempt to contextualize the effects of specific types of gendered discrimination on a variety of outcomes. One such model of women's experiences that has received considerable attention within the past decade and a half is objectification theory.

Objectification Theory

Objectification theory was proposed by Fredrickson and Roberts in 1997 to explain how pervasive sexual objectification in mainstream United States culture affects women's psychological functioning. Sexual objectification occurs when a woman's body is viewed as separate from her person—as an object to be used or consumed by others (Kaschak, 1992). Sexual objectification takes a myriad of forms, including being "checked out" (or "ogled," or "leered at") by men and other women; seeing other women "checked out" by men in-person or in media; and visual media that highlights female bodies and body parts (Fredrickson & Roberts, 1997). Other socialization experiences interact with sexual objectification to compound its effects, including gender or cultural identity conflict and experiences of heterosexism, racism, and other types of discrimination (Moradi, 2010). According to objectification theory, women internalize these objectifying experiences through the process

of *self-objectification*: in other words, they adopt the idea that their bodies are objects for use by others rather than a part of themselves (Fredrickson & Roberts, 1997).

Moradi (2010) offered a three step explanation of the self-objectification process. First, as a result of externally objectifying experiences, women start to believe that the young, slim, White female ideal propagated by Western media is the standard against which they should measure themselves. This *internalization of dominant cultural standards of attractiveness* causes women to devote considerable portions of their conscious attention to concerns about their appearance (*body surveillance*), interrupting their thoughts and actions and resulting in a variety of negative psychological consequences. Body surveillance increases body shame and appearance anxiety, because women's self-assessments of their bodies inevitably come up short compared to the idealized female bodies promoted in Western media. Body surveillance also decreases women's ability to experience flow, the feeling of being "in the zone" (Csikszentmihalyi, 1990), by forcing women to divide their attention between attending to the task at hand and monitoring their appearance. Similarly, when women view their bodies from an observer's perspective, their *internal bodily awareness*, or their ability to accurately detect internal physiological sensations, such as stomach contractions and physiological sexual arousal (Moradi & Huang, 2008), is diminished. Finally, at a broader level, the idea that women's bodies are objects for others' consumption contributes to a culture of sexual harassment and violence, increasing women's anxiety about their physical safety. These five *consequences for women's subjective experiences*—greater body shame, greater appearance anxiety, reduced flow experiences, diminished internal awareness, and greater physical safety anxiety—result in greater rates of

eating disorders, depression, and sexual dysfunction (Fredrickson & Roberts, 1997; Moradi & Huang, 2008; Szymanski, Moffitt, & Carr, 2011; see Figure 1).

The canon of research into Fredrickson and Roberts's (1997) model of objectification shows strong support for the links from sexual objectification experiences to internalization of dominant cultural standards of attractiveness and body surveillance, and from these constructs to disordered eating through body shame and appearance anxiety (Szymanski, Moffitt, & Carr, 2011). However, there has been relatively less attention paid to the other pathways, including the mediating roles of physical safety anxiety, reduced flow experiences, and lower internal bodily awareness (Moradi & Huang, 2008; Szymanski, Moffitt, & Carr2011). The extant studies examining these pathways have produced mixed support for mediation and are limited by methodological concerns, including primarily White samples, no tests for significance of mediation, and inconsistency or inaccuracy of measurement (Moradi & Huang, 2008). In their review of a decade of objectification theory studies, Moradi and Huang (2008) called for more studies focusing on the intermediary roles of physical safety anxiety, flow, and internal body awareness in order to begin developing prevention and intervention strategies for the full spectrum of objectification theory concerns.

Flow

The role of flow in objectification theory is especially intriguing, because on the surface, it seems to be less related to body concerns than the other mediators proposed by Fredrickson and Roberts (1997). Csikszentmihalyi (1990) coined the term flow to refer to a highly enjoyable state of peak performance that occurs when one is completely immersed in an activity to the point that the activity itself becomes its own reward; it is similar to feeling "in the zone" or "on fire." Increased experiences of flow have been shown to produce a

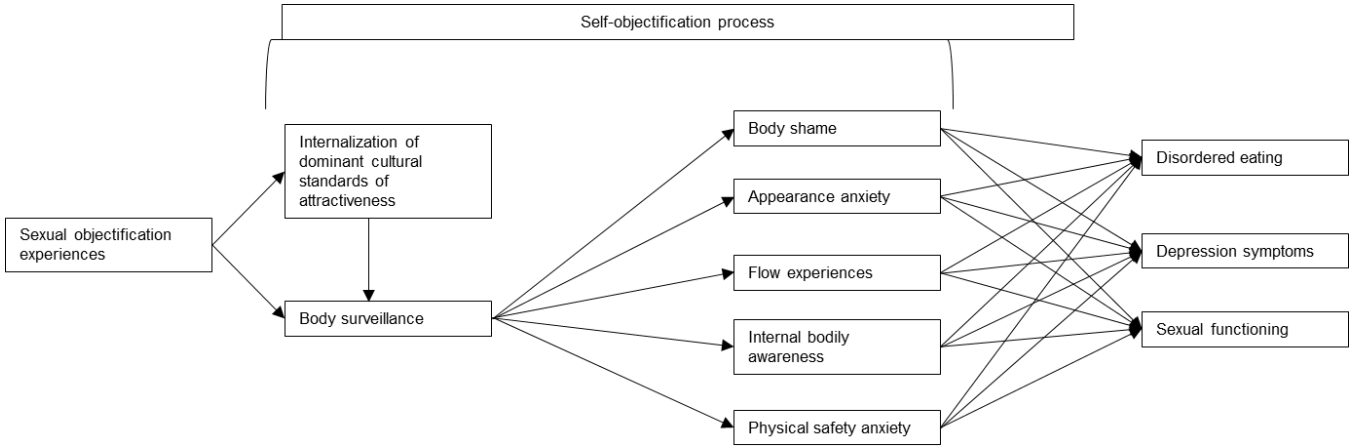


Figure 1. Objectification theory framework (Moradi & Huang, 2008; Moradi, 2010).

variety of positive outcomes, including greater positive emotions, intrinsic motivation, and satisfaction (Csikszentmihalyi & Csikszentmihalyi, 1992).

Csikszentmihalyi (1990) proposed that flow consists of nine distinct but related dimensions: merging of action and awareness, clear goals, unambiguous feedback, high concentration, sense of control, loss of self-consciousness, transformation of time, an autotelic experience (i.e., a feeling of intrinsic reward), and a balance of challenge and skill. Within the objectification theory literature, however, flow has most commonly been treated as a unidimensional construct, rather than as nine distinct but related factors (e.g., Szymanski & Henning, 2007; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001; Tiggemann & Williams, 2012), or sometimes measured by proxy using task performance (e.g., Hebl, King, & Lin, 2004; Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; Fredrickson & Harrison, 2005; Quinn, Kallen, Twenge, & Fredrickson, 2006). In reviews of objectification theory research, Moradi and Huang (2008) and Szymanski, Moffitt, and Carr (2011) suggested that future research on the mediating role of flow use a multidimensional approach and focus on the distinct roles of the various dimensions of flow.

Conceptualizing flow as nine distinct dimensions (Csikszentmihalyi, 1990), rather than as a one-dimensional construct, could help elucidate the role of flow in the objectification theory model. In particular, it seems that three dimensions of flow—concentration, loss of self-consciousness, and sense of control—may be most relevant to the study of self-objectification. A woman's immersion in an activity may be interrupted when someone calls attention to her body or appearance, or when she feels threatened that someone might; it takes her out of the moment, out of "the zone." This interruption may impede her ability to experience the concentration dimension of flow. In addition, once a woman has

ingrained the habit of viewing her body as an object to be used or evaluated by others (i.e., self-objectification), she must divide her attention between the task at hand and monitoring her appearance (i.e., body surveillance), thereby becoming more self-conscious. She may become overly concerned with how she appears to others while performing a task, and experiencing the loss of self-consciousness dimension of flow will be difficult. Finally, external experiences of objectification usurp a woman's feeling of control over her own body; internalization of this lack of control may affect her ability to experience the sense of control dimension of flow.

Strengths-Based Moderators

In addition to clarifying the mediating role of flow, Szymanski, Moffitt, and Carr(2011) also called for research to identify constructs that might moderate the relationships among self-objectification, consequences for subjective experience, and psychological outcomes. Understanding the traits, attitudes, and behaviors that can buffer against the deleterious effects of objectification will be vital for developing preventative and remedial interventions. Some research has emerged on potential moderators of the objectification-mental health link. Watson, Ancis, White, and Nazari (2013) found that an internalized multiculturally inclusive identity moderated the relationship between sexually objectifying experiences and internalization of dominant cultural standards of beauty for African American women, such that the link between sexual objectification experiences and internalization of dominant cultural standards of beauty was not significant for women with high levels of internalized multiculturally inclusive identity. Szymanski and Feltman (2014) found that resilience moderated the relationships between sexually objectifying experiences and both internalization of sexual oppression and psychological distress, such that both of

these links were not significant for women with high levels of resilience. These two studies offer hope that women can develop traits or behaviors to buffer against the effects of objectification; however, there is room for additional research on additional buffers that may be more applicable for all women or more easily developed.

Mindfulness. The structure of objectification theory, and specifically the relationship between self-objectification and negative psychological consequences as proposed by Fredrickson and Roberts (1997), offers a fertile starting point for thinking about potential buffers. Self-objectification often manifests as body surveillance. Body surveillance steals cognitive resources away from focusing on the task at hand (resulting in a diminished ability to experience flow) and internal bodily states (resulting in decreased internal awareness; Fredrickson & Roberts, 1997). It is possible that the deleterious effect of self-objectification on flow and internal bodily awareness could be ameliorated by an increased focus on the present moment.

Dispositional mindfulness refers to an individual's tendency to be mindful, or to focus on the present moment in a non-judgmental way (Dijkstra & Barelds, 2011). Two recent studies offer a promising first look at the relationship between mindfulness and body concerns. Dijkstra and Barelds (2011) explored a model of dispositional mindfulness, body comparison, and body satisfaction. Using data from a sample of women in the Netherlands, they found that dispositional mindfulness partially mediated the inverse relationship between body comparison and body satisfaction, such that greater mindfulness was associated with less body comparison and greater body satisfaction. Similarly, Dekeyser, Raes, Leijseen, Leysen, and Dewulf (2008) found that body satisfaction was positively correlated with four mindfulness skills (i.e., mindful observation, action, acceptance, and description) among a

sample of male and female adults in Belgium and the Netherlands. Mindfulness has also been shown to correlate positively with flow (e.g., Aherne, Moran, & Lonsdale, 2011; Kee & Wang, 2008) and internal bodily awareness (e.g., Brotto, Seal, & Rellini, 2012), and negatively with anxiety (e.g., Bergen-Cico & Cheon, 2013; Desrosiers, Klemanski, & Nolen-Hoeksema, 2013) and depression (e.g., Desrosiers et al., 2013).

These studies offer a promising glimpse into possible intervention strategies for self-objectification. Increasing mindfulness may help women decrease the proportion of cognitive resources devoted to body surveillance. Yoga, a meditative practice that involves body movement, breath control, and intentional thought, has been shown to increase mindfulness (e.g., Brisbon & Lowery, 2009) and has been tested as an intervention for body image concerns in several studies. Daubenmier (2005) found that women who practiced yoga reported greater awareness and responsiveness to bodily sensations, lower self-objectification, greater body satisfaction, and fewer disordered eating attitudes than women involved in aerobic exercise or no exercise. Similarly, Impett, Daubenmier, and Hirschman (2006) showed that participating in a two-month yoga immersion program decreased self-objectification for women and increased body awareness, positive affect, and life satisfaction for women and men. Despite these initial promising findings, little is known about how mindfulness works within the objectification theory framework proposed by Fredrickson and Roberts (1997), or how mindfulness-enhancing interventions other than yoga may help alleviate the consequences of sexual objectification.

Self-compassion. The potential ameliorating power of additional cultivatable strengths is also worth investigating. *Self-compassion* is one such strength that has received considerable attention in the positive psychology literature (e.g., Neff, 2009). Self-

compassion has been defined as “being touched by and open to one’s own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one’s suffering and to heal oneself with kindness” (Neff, 2003b, p. 87). Self-compassion has been touted as an alternative to self-esteem for conceptualizing individuals’ healthy attitudes towards themselves. Unlike self-esteem, self-compassion does not involve evaluation of self or others (Neff, 2003b). Instead, like mindfulness, self-compassion involves intentional non-judgment.

Whereas increasing mindfulness may moderate the relationships between body surveillance and flow and internal bodily awareness, self-compassion might moderate the relationships between body surveillance and body shame and appearance anxiety. When women critique their bodies, they almost inevitably fail to measure up to the young, slim, White female ideal propagated in Western culture. Self-compassion could help ameliorate this self-criticism. Similarly, self-compassion could curb the influence of body surveillance on appearance anxiety by decreasing self-judgment.

Early investigations into the relationships between self-compassion and several objectification-related constructs have yielded promising results. Wasylkiw, MacKinnon, and MacLellan (2012) found that high self-compassion predicted fewer body concerns and less eating guilt in a sample of undergraduate women in the Netherlands. Furthermore, self-compassion was found to partially mediate the positive relationship between body preoccupation and depression in their sample, such that lower body preoccupation was associated with greater self-compassion, which in turn was associated with fewer depressive symptoms. Albertson, Neff, and Dill-Shackleford (2014) found that women who participated in a three-week self-compassion meditation program experienced greater reductions in body dissatisfaction, body shame, and contingent self-worth based on appearance, as well as

greater increases in self-compassion and body appreciation, compared to control group participants. As with mindfulness, however, researchers have yet to incorporate self-compassion into the full framework of objectification theory. Also, following the trend in the larger body of objectification theory research, there has been much less attention paid to the role of self-compassion in anxiety, flow experiences, internal bodily awareness, and sexual dysfunction.

Study Importance

Historically, in the United States, women are much more likely than men to experience depression, anxiety, and eating disorders (APA, 2007; United States Department of Health and Human Services, 2009). Objectification theory (Fredrickson & Roberts, 1997) posits that many women experience these psychological disturbances as a result of a pervasive culture of sexual objectification. Some pathways in the objectification theory model have received strong support, but other pathways have received relatively little attention from researchers, and what findings do exist have been mixed (Moradi & Huang, 2008). In particular, the mediating role of flow deserves further investigation with more rigorous methodology. Furthermore, a better understanding of women's cultivatable strengths that moderate the relationship between self-objectification and mental health risks is overdue, in order to create strengths-based interventions that focus on women's whole selves. The present study is an early step in this process.

CHAPTER 2

BACKGROUND AND REVIEW OF LITERATURE

The purpose of this study was to explore the mediating role of flow and the potential moderating roles of mindfulness and self-compassion in the objectification theory framework. The scientific context of this study encompasses three broad areas of theory and research. The first area is an overview of the model of objectification theory, including the original theory proposed by Fredrickson and Roberts (1997), seminal research using Fredrickson and Roberts's (1997) model, and contemporary trends in objectification theory research and conceptualization. The second area is an in-depth exploration of the concept of flow through the lenses of flow theory and objectification theory, as well as an examination of incongruences between these conceptualizations. The final area is comprised of theoretical and empirical underpinnings of mindfulness and self-compassion.

Objectification Theory

Fredrickson and Roberts (1997) proposed objectification theory to explain the sociocultural context in which girls and women experience their own bodies, as well as the mental health risks and psychological outcomes of constructing their bodies in a sexually objectifying context. Objectification theory operates from a feminist constructivist epistemology, highlighting the place of the female body within a social and cultural context. Fredrickson and Roberts posited that the sociocultural context throughout much of the world, and specifically the United States and Europe, is rife with sexual objectification, and that this pervasive objectification puts women at increased risks for certain psychological problems that disproportionately affect women compared to men.

Fredrickson and Roberts (1997) proposed four elements of objectification theory: external sexual objectification experiences, self-objectification, consequences for subjective experience, and mental health risks. Although these elements are usually discussed and depicted sequentially (see Figure 1), it is important to note that they occur simultaneously; women experience sexual and self-objectification constantly, because it is ingrained in the cultural context.

External sexual objectification. Fredrickson and Roberts (1997) defined *sexual objectification* as "the experience of being treated *as a body* (or collection of body parts) valued for its use to (or consumption by) others" (p. 174, italics in original). Although sexual objectification can occur between any two or more people, regardless of gender, the sexual objectification of women by men is especially problematic due to (a) its cultural pervasiveness, especially in the media, and (b) the power differential between men and women in Western society, which includes a history of legislating the oppression of women (Benokraitis & Feagin, 1995).

Sexual objectification takes many forms, ranging from subtle sexual evaluation to sexual violence (Fredrickson & Roberts, 1997). Kaschak (1992) proposed that the most ubiquitous form of sexual objectification is the *male gaze*, or visual inspection of the female body by men. Women encounter the objectifying male gaze in three ways (Fredrickson & Roberts, 1997). First, women experience it personally in social encounters when they're "ogled" or "leered at" by men. Second, women see it in media, such as television, movies, magazines, and music, in which men objectify women. Third, women experience the objectifying gaze through media that spotlights bodies and body parts, forcing the viewer into the position of the gazer. Kaschak (1992) acknowledged that not all men objectify women,

but explained that the potential for sexual objectification is inherent in all instances of male sexualized gazing because it is not under women's control. In other words, when the male gaze occurs in a sexually objectifying context, it is experienced as sexually objectifying regardless of the man's conscious intentions.

Recent research into objectification theory (e.g., Moradi, 2010; Moradi & Huang, 2008; Szymanski, Moffitt, & Carr, 2011) has expanded the conceptualization of external sexual objectification beyond the male gaze to include related behaviors by men, appearance pressures propagated by the media, sexual violence and harassment, and gender or cultural identity conflict and marginalization. The implicated behaviors by men look most similar to Fredrickson and Roberts's (1997) original conceptualization of external sexual objectification; they include sexist comments, sexual remarks, and sexist actions that prioritize women's bodies or bodily functions over other aspects of their whole selves (Szymanski, Moffitt, & Carr, 2011). These behaviors may take the form of appearance evaluations, cat calls, or inappropriate sexual comments (Moradi & Huang, 2008).

Another type of external objectification proposed by Szymanski, Moffitt, and Carr(2011) includes the narrow and unattainable standards of beauty propagated by Western media that covertly or overtly tell women that they need to fit certain physical molds (i.e., White, thin, and young) in order to be happy and successful. Moradi and Huang (2008) specifically identified thinness-related pressures and harassment as a component of external sexual objectification that has a powerful influence on women's relationships with their bodies. These messages are more pronounced in certain situations, environments, and subcultures in which the objectification of women is encouraged, such as beauty pageants,

modeling, cheerleading, pornography, and certain work and sporting environments (Moradi & Huang, 2008; Szymanski, Moffitt, & Carr, 2011).

Sexual victimization is an extreme type of sexual objectification that nevertheless directly or indirectly affects many women. Nearly 1 in 5 (18.3%) women in the United States have been victims of rape, and more than half of all college women have experienced some sort of sexual victimization (e.g., rape, sexual assault, sexual harassment; Fisher, Cullen, & Turner, 2000; National Center for Injury Prevention and Control & Division of Violence Prevention, 2012). These incredibly violating experiences are compounded by a culture steeped in rape myth endorsement. Rape myths place responsibility for sexual violence partially or entirely upon victims, such as suggesting that women "ask for it" by wearing "provocative" clothing (Lonsway & Fitzgerald, 1994). Sexual objectification and rape myths reciprocally reinforce each other, resulting in a culture that both mandates and punishes women for conforming to conventional standards of beauty.

Szymanski, Moffitt, and Carr (2011) also drew attention to the special types of sexual objectification experienced by certain groups of women. In the media, sexually objectifying depictions of women of color, lesbian and bisexual women, and low income women are often infused with stereotypes (e.g., African American women as objects or sexual aggressors; lesbian and bisexual women as components of male sexual fantasies; low income women as sexually promiscuous and deserving of sexual violence; Szymanski, Moffitt, & Carr, 2011). The intersection of gender and other stigmatized identities compounds the experiences of objectification for ethnic and sexual minority women, and related experiences of oppression (e.g., racism, heterosexism) also contribute to sexual objectification in unique ways (Moradi & Huang, 2008; Szymanski, Moffitt, & Carr, 2011).

Moradi (2008) proposed an amended objectification theory model to encompass additions to Fredrickson and Roberts's (1997) original objectification theory, including modifications to the contextual piece. She proposed including sexually objectifying experiences under the heading "socialization experiences," alongside gender or cultural identity conflict or marginalization; experiences of heterosexism, racism, etc.; and masculine appearance norm pressure (in reference to recent work on the adaptation of objectification theory for men; see Moradi, 2008). There is a growing body of research on the unique sexual objectification experiences of marginalized groups, including African American women (Buchanan, Fischer, Tokar, & Yoder, 2008; Watson et al., 2013; Watson, Robinson, Dispenza, & Nazari, 2012) lesbian women (Haines et al., 2008), bisexual women (Brewster et al., 2014), and sexual minority men (Wiseman & Moradi, 2010), These amended models serve as reminders that sexual objectification does not occur in a vacuum and is not easily isolated from other socialization experiences. Together, these experiences interact to influence the complex process of self-objectification.

Self-objectification. Self-objectification occurs when a person adopts an observer's perspective of her or his physical self (Fredrickson & Roberts, 1997). Objectification theory posits that women self-objectify because they internalize the notion that physical attractiveness translates to power (Fredrickson & Roberts, 1997). Indeed, numerous studies have found that women judged to be physically unattractive or overweight face more barriers to success at work and in social relationships than women deemed attractive or thin (see Fredrickson & Roberts, 1997, for an overview of these studies). Because women are rewarded socially and even economically for adhering to conventional standards of

attractiveness, they learn to "be their own first surveyors" (Fredrickson & Roberts, 1997, p. 178), monitoring their own physical appearance in anticipation of others' judgments.

Moradi (2010) proposed that self-objectification should not be viewed as a single construct, but rather as a process promoted by sexual objectification experiences and manifested as internalization of cultural standards of attractiveness and body surveillance. In this conceptualization of self-objectification, which has been used by other researchers (e.g., Tolaymat & Moradi, 2011; Watson et al., 2013), the mental health risks proposed by Fredrickson and Roberts (1997; i.e., greater body shame, greater anxiety, reduced flow, and reduced internal bodily awareness) are thought to result from the self-objectification process.

Internalization of cultural standards of attractiveness. Internalization of dominant cultural standards of attractiveness includes personal preference for a thin physique (i.e., internalization of the thin ideal) and comparison of one's own physical self to women who embody conventional standards of beauty (e.g., models, actresses, celebrities; Heinberg, Thompson, & Stormer, 1995). Theoretically, this construct is consistent with Fredrickson and Roberts's (1997) proposition that women adopt conventional standards of beauty as their own personal standards, due to the privileges associated with women who meet these standards (Moradi & Huang, 2008). Empirically, internalization of sociocultural standards of beauty has been shown to mediate the relationship between externally objectifying experiences (e.g., interpersonal sexual objectification experiences and exposure to beauty magazines) and self-objectification, body surveillance, body shame, and eating disorder symptomatology (Moradi, Dirks, & Matteson, 2005; Morry & Staska, 2001).

Body surveillance. Body surveillance has been conceptualized as one manifestation of self-objectification (Moradi & Huang, 2008); it includes a preoccupation with how one

looks to others and an emphasis on physical appearance over physical comfort or function (McKinley & Hyde, 1996). Although fastidious attention to appearance may be construed as narcissism or vanity, it is better understood as a woman's attempt to have some power over how other people see her and the associated consequences of her appearance (Fredrickson & Roberts, 1997).

Fredrickson and Roberts (1997) proposed that body surveillance disrupts a woman's flow of consciousness. Women must devote significant portions of conscious attention to monitoring their appearance in anticipation of others' judgments (Fredrickson & Roberts, 1997). This divided consciousness leads to the experience of "doubling" proposed by de Beauvoir (1952), in which a woman exists not only as herself, but also as an observer of herself. This doubling has deleterious consequences for a woman's subjective experience of herself and her world (Fredrickson & Roberts, 1997).

Contemporary conceptualizations of the objectification theory framework posit that body surveillance partially mediates the positive links between internalization of cultural standards of beauty and body shame, and fully mediates the positive links from internalization of cultural standards of beauty to anxiety, flow, and internal bodily awareness (Moradi, 2010; Moradi & Huang, 2008). In correlational and experimental studies, higher levels of body surveillance have been associated with greater body shame (Calogero, 2004; Fredrickson et al., 1998; McKinley, 2006; Quinn et al., 2006; Roberts & Gettman, 2004), greater appearance anxiety (Calogero, 2004; Choma et al., 2010; Fitzsimmons-Craft & Bardone-Cone, 2012; Roberts & Gettman, 2004; Szymanski & Henning, 2007), lower levels of dispositional flow (Fredrickson et al., 2008; Hebl et al., 2004; Quinn et al., 2006;

Szymanski & Henning, 2007; Tiggemann & Kuring, 2001), and lower awareness of internal bodily states (Tylka & Hill, 2004).

Consequences for women's subjective experience. Fredrickson and Roberts (1997) proposed that objectification theory serves as a viable explanation for known gender differences in subjective experiences, including experiences of shame, anxiety, flow, and internal bodily awareness. Objectification theory posits that these factors mediate the relationship between body surveillance and the psychological outcomes proposed by objectification theory (i.e., eating disorders, depression, and sexual dysfunction; Fredrickson & Roberts, 1997; Moradi & Huang, 2008). Conceptualization of these mediators has largely remained unchanged since Fredrickson and Roberts's (1997) initial articulation of objectification theory, although anxiety is often split into two distinct types, appearance anxiety and physical safety anxiety (Moradi & Huang, 2008).

Body shame. People experience shame when they evaluate themselves relative to an internalized or cultural ideal and perceive that they do not live up to this expectation (Fredrickson & Roberts, 1997). Body shame is a particular type of shame that occurs when people feel that their physical appearance does not measure up to internalized cultural standards of beauty (Moradi & Huang, 2008). Cultural standards of beauty for women in the United States include youth, slimness, and Whiteness; these standards are extremely difficult for most women and impossible for many women to achieve (Fredrickson & Roberts, 1997). For example, Wolfe (1991) suggested that as few as 1 in 40,000 women meet the requirements of a model's size and shape. In addition to concerns about size, Women of Color, older women, women with disabilities, lesbian and bisexual women, and gender non-conforming women may face additional discrepancies between their own bodies and

dominant cultural standards of beauty (McKinley & Hyde, 1996). Body shame is not confined to negative feelings about the body; it also includes more global negative feelings toward the self. For example, the Body Shame Scale of the Objectified Body Consciousness Scale contains items such as "I feel like I must be a bad person when I don't look as good as I could" and "When I'm not exercising enough, I question whether I am a good person" (McKinley & Hyde, 1996, pp. 191-192).

The mediating role of body shame in the relationship between self-objectification and eating disorder symptoms has been well-supported by research with diverse samples of women. In samples of predominantly White and racially diverse college women, Noll and Fredrickson (1998) found that body shame partially mediated the positive relationship between self-objectification and eating disorder symptoms, such that greater self-objectification was associated with greater body shame, and greater body shame was associated with greater eating disorder symptoms. Partial mediation of the positive links from self-objectification and body surveillance to eating disorder symptoms through body shame has also been found in an ethnically diverse sample of physically active and inactive young adult and middle age women (Greenleaf, 2005); adolescent girls in Australia (Slater & Tiggemann, 2002); college women in Australia (Tiggemann & Kuring, 2004); ballet dancers and nondancers in Australia (Tiggemann & Slater, 2001); deaf women who were predominantly White (Moradi & Rottenstein, 2007); and predominantly White women diagnosed with eating disorders (Calogero, Davis, & Thompson, 2005). Generally, using Cohen's (1988) criteria for effect size estimation, these indirect effects have been small to medium in size.

The mediating role of body shame in the link between self-objectification and depression has also received generally consistent empirical support, although most of the samples have been predominantly White or lack demographic data. Specifically, body shame has been found to partially mediate the positive relationship between body surveillance and depression for adolescent girls and women, such that greater self-objectification is associated with greater body shame, and greater body shame is associated with higher levels of depression (Grabe, Hyde, & Lindberg, 2007; Muehlenkamp, Swanson, & Brausch, 2005; Szymanski & Henning, 2007; Tiggemann & Kuring, 2004). These results suggest that the affective component of body evaluation (i.e., body shame) exacerbates the positive effect of the behavioral/vigilance component (i.e., body surveillance) on depression symptoms. Intervening in the link between body surveillance and body shame is likely to decrease the effect of body surveillance on depression symptoms.

Body shame has also been shown to mediate the positive relationship between body surveillance and sexual dysfunction. In a sample of undergraduate women in Australia, Steer and Tiggemann (2008) found that body shame partially mediated the positive link between body surveillance and self-consciousness during sex, which was related to reduced sexual functioning. Similarly, in a sample of undergraduate women from the United Kingdom, Calogero and Thompson (2009) found that body surveillance was related to body shame, which was related to reduced sexual satisfaction. In a study of predominantly White college students, Aubrey (2007) found a medium-sized positive correlation between body shame and body image self-consciousness during physical intimacy, and a small negative correlation between body shame and sexual esteem; however, an analysis of the mediating role of body shame was not conducted. Although the research on the link between body shame and sexual

dysfunction is fairly limited, it strongly suggests that body shame is a robust predictor of reduced sexual satisfaction.

***Appearance anxiety*.** Appearance anxiety results from not knowing when or how one's body will be evaluated by others (Fredrickson & Roberts, 1997). Frequent and unpredictable experiences of external sexual objectification remind women that they may be evaluated by men without warning at any time, so they must remain hypervigilant about their appearance (Fredrickson & Roberts, 1997). Women's fashions may compound this problem; many garments require regular body monitoring to ensure that neither undergarments nor "too much skin" are exposed (Fredrickson & Roberts, 1997). Like other forms of anxiety, appearance anxiety may be experienced as motor tension, vigilance, and scanning (Fredrickson & Roberts, 1997). The Social Appearance Anxiety Scale (Hart et al., 2008) includes appearance-related concerns ranging from "I am concerned that I have missed out on opportunities because of my appearance" to "I am uncomfortable when I think others are noticing flaws in my appearance" (Hart et al., 2008, p. 53).

The mediating role of appearance anxiety in the link between self-objectification and mental health risks has received limited, mixed support. Studies using samples of racially diverse college women (Greenleaf & McGreer, 2006) and Australian samples of young, middle age, and older age women whose race/ethnicity was not reported (Tiggemann & Kuring, 2004; Tiggemann & Lynch, 2001) have shown appearance anxiety to be uniquely and positively related to eating disorder symptoms. However, the unique contribution of appearance anxiety to eating disorder symptoms was not upheld in other studies using samples of college women who were White, predominantly White, African American, or of unreported racial/ethnic background (Slater & Tiggemann, 2002; Tiggemann & Slater, 2001;

Watson et al., 2013). The mediating role of appearance anxiety in the relationship between self-objectification and depression was supported in two studies, one using a sample of predominantly White women across the lifespan (Szymanski & Henning, 2007) and one using a sample of Australian undergraduates whose race/ethnicity was not reported (Tiggemann & Kuring, 2004). Finally, among a predominantly White sample of undergraduate students, Aubrey (2007) found a strong positive correlation between appearance anxiety and body image self-consciousness during physical intimacy, and a moderate negative correlation between appearance anxiety and sexual esteem. Taken together, these studies suggest that the mediating role of appearance anxiety in the link between self-objectification and mental health risks (i.e., disordered eating, depression, decreased psychosexual functioning) is viable but not well understood at this point. There is a need for further research exploring the links from appearance anxiety to depression symptoms and sexual functioning, particularly among racially and ethnically diverse women.

Reduced flow experiences. Flow is a highly enjoyable state of peak performance that people experience when they are completely immersed in an activity to the point that the activity itself becomes its own reward (Csikszentmihalyi, 1990). In everyday vernacular, flow is often referred to as being "in the zone" or "on fire" (Csikszentmihalyi & Csikszentmihalyi, 1992). Hallmark features of flow include total concentration on the tasks at hand, feelings of complete control, and loss of self-consciousness (Csikszentmihalyi, 1990). Flow has state and trait forms; *state flow* refers to an individual's feelings of being "in the zone" at a given moment or in a given activity, whereas *dispositional* (or *trait*) *flow* refers to an individual's general proclivity to experiencing flow (Csikszentmihalyi & Csikszentmihalyi, 1992).

Fredrickson and Roberts (1997) proposed that women may be less likely to experience flow than men due to sexual objectification. High levels of body surveillance interrupt concentration, decrease women's feelings of control over their own bodies, and prevent women from achieving the loss of self-consciousness necessary for achieving a flow state. Whether a woman is playing a sport or a musical instrument, the need to be aware of her body's appearance at all times saps cognitive resources that would otherwise be devoted to mastering and enjoying the task at hand.

The proposed mediating role of flow in the relationship between body surveillance and mental health risks has received little empirical support. The mediating role of flow in the link between self-objectification or body surveillance and eating disorder symptoms was not supported in samples of racially diverse young and middle age women (Greenleaf, 2005; Greeleaf & McGreer, 2006), college women in Australia whose race/ethnicity was not reported (Tiggemann & Kuring, 2004), and former ballet dancers and nondancers in Australia (Tiggemann & Slater, 2001). In one study of predominantly White women across the lifespan, the mediating role of flow in the link between self-objectification and depression was upheld, such that greater self-objectification was linked to decreased flow, which was then related to higher levels of depression (Szymanski & Henning, 2007); however, in another study of college women in Australia whose race/ethnicity was not reported, the same mediating role of flow was not supported (Tiggemann & Kuring, 2004).

Notably, in all of these studies, flow was operationalized as a one-dimensional construct, rather than as nine related but distinct factors. This is problematic because flow was originally proposed as a multidimensional trait (Csikszentmihalyi, 1990), and the most commonly used measures of state and trait flow use a multidimensional model (Jackson &

Eklund, 2002). However, most existing studies that integrate flow and objectification theory use only a global flow score (e.g., Szymanski & Henning, 2007; Tiggemann & Slater, 2001; Tiggemann & Williams, 2012). Furthermore, upon a closer examination of the nine dimensions of flow, it appears that three dimensions (i.e., concentration, sense of control, and loss of self-consciousness) might be more strongly influenced by self-objectification than the other six dimensions (Szymanski & Henning, 2007). Indeed, in an exploratory study using a sample of predominantly White undergraduate students, Grotewiel and Marszalek (2013) found that higher levels of body surveillance were related to lower levels of loss of self-consciousness, and that higher levels of appearance anxiety were related to lower levels of loss of self-consciousness, concentration, and sense of control. Grotewiel and Marszalek (2013) found no relationship between self-objectification and overall level of dispositional flow, and only a small negative correlation between body surveillance and overall level of dispositional flow. There is a clear need for a more nuanced exploration of the role of flow as originally conceptualized by Csikszentmihalyi (1990) in the objectification theory framework.

In addition to concern with the operationalization of flow, measurement of flow is an issue in most extant studies on objectification theory. Despite the availability of well-validated instruments such as the Dispositional Flow Scale-2 (DFS-2) and the Flow State Scale-2 (FSS-2; Jackson & Eklend, 2002), some authors (e.g., Szymanski & Henning, 2007; Tiggemann & Slater, 2001) have developed new or study-specific measures that do not reflect Csikszentmihalyi's (1990) original conceptualization of state or trait flow. A more thorough analysis of the construct of flow and associated measurement issues is offered in the next section.

***Internal bodily awareness*.** Internal bodily awareness, sometimes called *interoceptive awareness*, refers to the ability to accurately detect internal physiological sensations, such as stomach contractions and physiological sexual arousal (Moradi & Huang, 2008). In general, women seem to be less skilled than men at detecting internal physiological symptoms in the absence of relevant contextual clues (Fredrickson & Roberts, 1997). For example, Katkin, Blascovich, and Goldband (1981) found that in a small sample of undergraduates, men were able to learn to discriminate their own heartbeats, but women were not. Fredrickson and Roberts (1997) offered two reasons why women may have poorer internal bodily awareness than men. First, it may be that women learn to suppress their hunger cues from a young age in order to diet to attain a socially desirable thin physique. This habit may generalize to tuning out other internal bodily cues. The second theory is that body surveillance requires so much energy that women have fewer perceptual resources left to monitor their inner body experience. So, according to Fredrickson and Roberts, "by internalizing an observer's perspective as a primary view of the physical self, women may lose access to their own inner physical experiences" (1997, p. 185).

Studies that have examined the full range of proposed objectification theory mediators have produced mixed support for the role of internal bodily awareness. In a sample of African American undergraduate women, Watson et al. (2013) found that sexually objectifying experiences were associated with poorer interoceptive awareness, which was in turn related to greater disordered eating symptoms. However, in samples of undergraduate women and former ballet dancers and nondancers in Australia, links from self-objectification and body surveillance to awareness of internal states were not supported (Tiggemann and Kuring, 2004; Tiggemann & Slater, 2001). Using a sample of predominantly White

undergraduate students, Tylka and Hill (2004) found that body shame (but not body surveillance) predicted unique variance in poor awareness of hunger, satiety, and emotions, which predicted unique variance in disordered eating. Similarly, in a sample of predominantly White heterosexual undergraduate women, Kozee and Tylka (2006) found that interoceptive awareness partially mediated the positive relationship between body shame and eating disorder symptomology; however, this finding was not replicated with a sample of predominantly White lesbian women (Kozee & Tylka). The proposed inverse relationship between internal bodily awareness and depression has not been supported in samples of undergraduate women in Australia whose race/ethnicity was not reported (Tiggemann & Kuring, 2004) and predominantly White women of all ages (Szymanski & Henning, 2007). There is a need for more research on the role of internal bodily awareness in objectification theory to determine if it should be maintained, dropped from the framework, or reconceptualized.

Daubenmier (2005) suggested that the conceptualization of internal bodily awareness should be expanded to include responsiveness to bodily sensations. The concept of body responsiveness emphasizes how bodily sensations are valued and treated and not just whether or not they are perceived. Using a sample of racially diverse undergraduate women, Daubenmier found that body responsiveness, but not internal bodily awareness, mediated the positive relationship between self-objectification and eating disorder symptoms. Furthermore, in a sample of women exercisers, Martin, Prichard, Hutchinson, and Wilson (2013) found that internal bodily awareness, as measured by Daubenmier's (2005) scale of body responsiveness, mediated the relationship between yoga participation and both mindful eating and disordered eating in the expected directions. Together, these studies suggest that

body responsiveness, a broader construct than internal bodily awareness, may be a more useful variable to assess within the context of objectification theory.

Physical safety anxiety. Fredrickson and Roberts (1997) posited that women experience more concern about their physical safety than men due to ever-present threats of sexual violence. Rape myths, ideas that women whose appearance or behavior is considered "striking" or "provocative" provoke their own rape (Fredrickson & Roberts, 1997; Lonsway & Fitzgerald, 1994), underscore the role of sexual objectification in sexual violence. Because all women face the possibility of sexual victimization, they learn to closely monitor their appearance and behavior (ranging from interpersonal behavior, such as flirting and selecting clothing, to safety-promoting behavior, such as double-checking locks, staying inside after dark, jogging with a dog, etc.) in an attempt to avoid physical and sexual violence. This constant vigilance is a chronic source of anxiety for many women, and Fredrickson and Roberts (1997) proposed that it contributes to eating disorder symptomology, depression, and sexual dysfunction.

Although research on the role of physical safety anxiety in the objectification theory framework is sparse, two extant studies suggest that sexual objectification experiences do predict women's physical safety anxiety. Using a sample of Black/African American and White undergraduate women, Watson, Marszalek, Dispenza, and Davids (2015) found that sexual objectification experiences predicted increased perceived risk of crime, which was related to greater fear of rape and other crimes. In one recent qualitative study of African American women's sexual objectification experiences, Watson et al. (2012) found that 9 out of 20 participants reported experiencing physical safety anxiety when they were faced with external sexual objectification, such as fear of physical retaliation when rejecting a man's

sexual advances. Taken together, the results of these two studies suggest that objectification experiences are associated with increased levels of physical safety anxiety, but further research is needed to understand the effect of physical safety anxiety on eating disorders, depression, and sexual dysfunction.

Summary of proposed mediators. The mediators proposed by Fredrickson and Roberts (1997) in the link between self-objectification and negative psychological outcomes include body shame, appearance anxiety, flow, internal bodily awareness, and physical safety anxiety. In general, studies support the role of body shame in mediating the relationships between self-objectification and eating disorder symptoms, depression, and sexual dysfunction. The roles of appearance anxiety, flow, and internal bodily awareness have received mixed support; research into the role of flow in particular is limited due to concerns with operationalization and measurement of the construct in many extant studies. In one study in which dispositional flow was conceptualized using Csikszentmihalyi's nine dimensional definition, loss of self-consciousness, concentration, and sense of control emerged as the only three dimensions predicted by body surveillance and/or appearance anxiety (Grotewiel & Marszalek, 2013). The mediating role of physical safety anxiety has largely been ignored in empirical studies, and the mental health risk of sexual dysfunction has frequently been overlooked as well.

Mental health risks. The entire objectification theory framework is anchored in Fredrickson and Roberts's (1997) hypothesis that the implicated experiences may contribute to women's increased susceptibility to certain mental health risks, including eating disorders, depression, and sexual dysfunction. More extreme and direct sexual objectification experiences, such as physical and sexual abuse and harassment, often contribute to these

psychological conditions as well; however, Fredrickson and Roberts were specifically interested in creating objectification theory to elucidate the ways in which simply being a woman in a culture that objectifies the female body may affect women's mental health.

Eating disorders and eating disorder symptoms. Eating disorders and eating disorder symptoms are perhaps the most obvious consequences of living in a society that objectifies the female body. Indeed, girls and women experience anorexia and bulimia nervosa at 10 times the rate of men (American Psychiatric Association, 2013). At any given time, 0.4% of young women in the United States meet the diagnostic criteria for anorexia nervosa, and 1-1.5% of young women in the United States meet the diagnostic criteria for bulimia nervosa (American Psychiatric Association, 2013). The relative frequency of these disorders among women suggest that society's differential treatment of women may be at least partially to blame.

Within the framework of objectification theory, Fredrickson and Roberts (1997) explained that eating disorders are strategies that girls and women use to attempt to gain power over the objectification of their bodies. Eating disorders can function as a way of attempting to meet cultural standards of beauty, such as through dieting, purging, and excessive exercising; when taken to an extreme, these behaviors can result in bulimia nervosa. Less frequently, eating disorders can also function as an attempt to subvert cultural standards of beauty, such as through the extreme restricted eating characteristic of anorexia nervosa, which may prevent a young girl from developing a mature, womanly body and may inhibit menstruation (Fredrickson & Roberts). Either way, girls' and women's often unhealthy attitudes toward eating and exercise can easily be linked to direct and indirect experiences of sexual objectification.

The role of eating disorder symptomology in objectification theory has received ample research attention compared to the other two mental health risks (i.e., depression and sexual dysfunction) proposed by Fredrickson and Roberts (1997). The link between body shame and eating disorder symptoms is especially well-researched, and has been consistently supported in diverse samples of girls and women (Calogero et al., 2005; Greenleaf, 2005; Moradi & Rottenstein, 2007; Noll & Fredrickson, 1998; Slater & Tiggemann, 2002; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001). The relationship between appearance anxiety and eating disorder symptoms is less well-researched and has received mixed support (Greenleaf & McGreer, 2006; Slater & Tiggemann, 2002; Tiggemann & Kuring, 2004; Tiggemann & Lynch, 2001; Tiggemann & Slater, 2001). The link between flow and eating disorder symptoms has generally not been supported (Greenleaf, 2005; Greenleaf & McGreer, 2006; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001); however, much of the extant research on this relationship has used unconventional conceptualizations or measurements of flow (Moradi & Huang, 2008). The relationship between physical safety anxiety and eating disorder symptoms has received little empirical attention and was not addressed directly by Fredrickson and Roberts (1997). Finally, the relationship between internal bodily awareness and eating disorder symptoms has received mixed support in diverse samples of women (Daubenmier, 2005; Kozee & Tylka, 2006; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001; Tylka & Hill, 2004). Taken together, these results show a clear connection between the process of self-objectification and eating disorder symptoms through body shame; less well-understood are the roles of appearance anxiety, flow, internal bodily awareness, and physical safety anxiety.

Depression. A depressive episode is a period of at least two weeks characterized by depressed mood or the loss of interest or pleasure in most activities (American Psychiatric Association, 2013). Other possible symptoms include change in weight or appetite; changes in sleeping patterns; psychomotor agitation or retardation; fatigue; feelings of worthlessness or guilt; trouble concentrating or indecisiveness; and recurrent thoughts of death (American Psychiatric Association, 2013). Experiences of depression are common among women and men, affecting about 7% of the United States population per year (American Psychiatric Association, 2013); however, women are about two times more likely than men, and girls are seven times more likely than boys, to experience depression (American Psychiatric Association, 2007).

Fredrickson and Roberts (1997) proposed that objectification theory may help explain women's greater susceptibility to depression through the consequences for subjective experience in three different ways. First, recurrent and uncontrollable experiences of body shame, appearance anxiety, and physical safety anxiety may cause some women to feel that they lack control in their lives. They may feel helpless to change their bodies to match the cultural ideal or to control other people's evaluations of their appearance. Because women are constantly reminded of the importance of solving these problems but feel that they have no means of doing so, they ruminate on them. Rumination, or excessive preoccupation with a stressor, is more common in women than men and has been shown to prolong depressive episodes (Nolen-Hoeksema, 1991). So, Fredrickson and Roberts (1997) explained, "to the extent that a woman's body generates feeling of helplessness, it can also induce depression" (p. 188).

The effects of body shame and anxiety on depression within the framework of objectification theory have received consistent empirical support. The link between body shame and depression has consistently been supported for samples of predominantly White women and in samples of women that lack demographic data (e.g., Grabe, et al., 2007; Muehlenkamp et al., 2005; Szymanski & Henning, 2007; Tiggemann & Kuring, 2004). The relationship between appearance anxiety and depression has also been supported for samples of predominantly White women across the lifespan (Szymanski & Henning, 2007) and Australian undergraduates whose race/ethnicity was not reported (Tiggemann & Kuring, 2004). Although physical safety anxiety has largely been ignored in empirical studies of objectification theory (Moradi & Huang, 2008), in one large-scale longitudinal study of middle aged adults in London, participants who reported greater fear of crime were 1.93 times as likely to experience depression as participants who reported less fear of crime (Stafford, Chandola, & Marmot, 2007), suggesting that the proposed link between physical safety anxiety and depression is tenable.

The second way that objectification theory may help explain women's greater susceptibility to depression is through reduced flow experiences (Fredrickson & Roberts, 1997). Csikszentmihalyi (1990) explained that because experiencing flow is highly enjoyable, having fewer flow experiences reduces quality of life. Lewinsohn (1974, as cited in Fredrickson & Roberts, 1997), posited a link between "self-initiated positive experience" (p. 188) and depression from a biological perspective, such that having fewer of these positive experiences diminishes active behavior, resulting in the motivational deficits that are characteristic of depression. Fredrickson and Roberts (1997) elaborated on Lewinsohn's (1974) model, explaining that women have less direct control over their positive experiences

because their opportunities in relationships and work are often contingent on others' evaluations of their appearance. Although the link between flow and depression within the framework of objectification theory has received mixed support (Szymanski & Henning, 2007; Tiggemann & Kuring, 2004), flow demonstrated positive correlates with subjective wellbeing for a sample of male and female office workers (Bryce & Haworth, 2002) and with happiness for a sample of male and female Indian adults (Sahoo & Sahu, 2009), suggesting that this proposed relationship may be supported when flow is operationalized and measured according to Csikszentmihalyi's (1990) original conceptualization.

Finally, objectification theory may help explain women's greater susceptibility to depression because experiences of sexual victimization and harassment may contribute to symptoms of depression (Fredrickson & Roberts, 1997). Indeed, several theorists have proposed that women's experiences of victimization may help explain up to one third of the gender disparity in depression (Cutler & Nolen-Hoeksema, 1991; Hamilton & Jensvole, 1992; Nolen-Hoeksema & Girgus, 1994). Taken together, theory and research on the effect of sexual objectification on women's experiences of depression are provocative and deserving of additional empirical attention.

Sexual dysfunction. The term *sexual dysfunction* encompasses a variety of problems that individuals may experience related to engaging in sexual activities, including difficulties with sexual interest or desire, problems with sexual arousal, trouble achieving orgasm, and pain during sexual activity (Lewis et al., 2010). Although prevalence rates for sexual dysfunction vary widely depending on multiple factors (e.g., age, culture, duration, severity, distress), it is estimated that about 40-45% of adult women, compared to 20-30% of adult men, frequently experience at least one type of sexual dysfunction (Lewis et al., 2010).

Women are physiologically as capable as men of achieving arousal and orgasm (Heiman & Verhulst, 1982), so physiological differences alone cannot explain women's greater susceptibility to sexual dysfunction; instead, sociocultural experiences may be to blame (Fredrickson & Roberts, 1997). Increased body shame, increased appearance anxiety, reduced flow experiences, decreased awareness of internal bodily states, and increased physical safety anxiety may negatively affect the way that women experience their bodies during sexual encounters in three ways (Fredrickson & Roberts, 1997). First, as explained by the role of flow in objectification theory, engaging in body surveillance can prevent women from being fully immersed in their present-moment experiences. Taking the role of an outside observer can prevent women from being fully present during sexual encounters. Second, the emotions associated with body shame, appearance anxiety, and physical safety anxiety likely carry over into women's sexual experiences, possibly reducing their enjoyment. Indeed, a recent meta-analysis of studies from the United States and abroad indicated that women experience more fear, anxiety, and guilt about sex than men (Petersen & Hyde, 2010). Third, decreased internal bodily awareness may cause women to feel disconnected from physical pleasure during sex (Fredrickson & Roberts, 2007). Combined with the effects of sexual abuse, assault, and harassment on sexual functioning and enjoyment experienced by many women (see Feldman-Summers, Gordon, & Maegher, 1979; Gordon & Riger, 1989; Martin, Warfield, & Braen, 1983), objectification theory may help explain why sexual dysfunction is more prevalent for women than men.

Research on sexual dysfunction as an outcome variable of sexual objectification is limited but supportive. Steer and Tiggemann (2008) sampled undergraduate women in Australia to study relationships among body-related thoughts and feelings and sexual

functioning. They found that body shame and appearance anxiety partially mediated the positive relationship between body surveillance and self-consciousness during sex in the expected direction. Self-consciousness during sex, in turn, predicted sexual functioning. Calogero and Thompson (2009) found support for a similar model using undergraduate women from the United Kingdom. In their model, internalization of the media's standards of beauty predicted body surveillance, which predicted greater body shame and reduced sexual self-esteem, which in turn predicted less sexual satisfaction. In addition, body surveillance and body shame directly predicted sexual satisfaction. Likewise, in a sample of predominantly White college students, Aubrey (2007) found that body image self-consciousness during physical intimacy was positively correlated with body shame and appearance anxiety. Likewise, sexual esteem was negatively correlated with body shame and appearance anxiety. Together, the results of these three studies support sexual dysfunction as an outcome of objectification theory as proposed by Fredrickson and Roberts (1997).

Summary of mental health risks. Fredrickson and Roberts (1997) proposed that sexual objectification is implicated in the high prevalence of eating disorders, depression, and sexual dysfunction experienced by women relative to men. The majority of studies looking at these outcome variables have focused on eating disorders and eating disorder symptoms, although links with depression and sexual dysfunction have also been supported. The influence of body shame and appearance anxiety on these mental health risks has received more empirical attention than the influence of flow, internal bodily awareness, and physical safety anxiety; in studies in which flow and internal bodily awareness have been examined, the results have been inconsistent. Notably, the treatment of flow in these studies is troubling

due to conceptualization and measurement approaches that are inconsistent with Csikszentmihalyi's (1975) original conceptualization of the construct.

Flow

In its simplest sense, the construct of *flow* can be defined as complete absorption in the task at hand. Csikszentmihalyi began studying flow in the 1960s while writing his dissertation on the creative process of artists (Nakamura & Csikszentmihalyi, 2002). He noticed that the artists he studied could remain focused on their work for hours, working single-mindedly and ignoring fatigue, discomfort, and even hunger, despite lack of external incentive (Nakamura & Csikszentmihalyi, 2002). Csikszentmihalyi (1975) identified this process as *autotelic*, or intrinsically rewarding (*auto* = self, *telic* = goal) for the artists. He went on to interview chess players, rock climbers, and dancers who emphasized enjoyment as their primary reason for engaging in these chosen activities, as well as surgeons, who also seemed to function with single-minded, all-consuming concentration (Csikszentmihalyi, 1975; Nakamura & Csikszentmihalyi, 2002). Based on these interviews, Csikszentmihalyi (1975) introduced the construct of flow, defined as "the holistic sensation that people feel when they act with total involvement" (p. 36). He went on to explain:

> In the flow state, action follows upon action according to an internal logic that seems to need no conscious intervention by the actor. He experiences it as a unified flowing from one moment to the next, in which he is in control of his actions, and in which there is little distinction between self and environment, between stimulus and response, or between past, present, and future. (Csikszentmihalyi, 1975, p. 36)

Csikszentmihalyi (1975) noted that some activities seem to enable flow more readily than others. Games, such as chess, and sports, such as rock climbing or dancing, in particular

seem to be consistent *flow activities* (Csikszentmihalyi). However, the surgeons Csikszentmihalyi interviewed reported subjective experiences similar to those of the other interviewees while in a state of deep concentration and enjoyment. Csikszentmihalyi posited that although recreational flow activities may enable flow most easily for many people, flow can be experienced in a vast array of pursuits and settings. Creativity in general seems to enable flow, whether in art or science, for work or pure enjoyment; transcendental, religious, and ritual experiences can also engender flow (Csikszentmihalyi). Csikszentmihalyi noted that people can even experience flow in unlikely settings, such as in war, an assembly line, or a concentration camp, if they are engaged in an absorbing task.

Elements of the flow experience. Csikszentmihalyi (1975) found that across contexts, people's reports of flow experiences are remarkably similar. He identified nine common themes of the flow experience, referred to as the nine *elements* or *dimensions of flow*. These include balance of challenge and skill, merging of action and awareness, high level of concentration, sense of control, loss of self-consciousness, clear goals, unambiguous feedback, transformation of time, and the autotelic experience.

Balance of challenge and skill. Csikszentmihalyi (1975) noted that across activities, interviewees viewed their pursuits as challenging, but also believed that their skills were appropriate for the challenge at hand. An individual's *perception* of an experience, rather than any objective measure of challenge or skill, is important, because flow is a subjective state (Csikszentmihalyi). Flow requires that an individual perceives the challenges presented by a task as balanced with her or his level of skill (Csikszentmihalyi). If an activity is viewed as too challenging for an individual's skill, anxiety ensues; if an activity is viewed as not challenging enough, boredom is experienced (Csikszentmihalyi). Subsequent researchers

have conceptualized additional affective states engendered by different ratios of challenge to skill (see Csikszentmihalyi, 1997); most notably, Csikszentmihalyi (1997) identified a fourth state, apathy, which is associated with low challenge paired with low skill. Based on this reconceptualization, Nakamura and Csikszentmihalyi (2010) posited that flow occurs "when both [challenge and skill] are above average levels for the individual" (p. 95).

The balance of challenge and skill is arguably the hallmark feature of flow. Indeed, it is referenced in some basic definitions of flow, including Marszalek's (2006), who explained that flow is "an optimal mental state that occurs when there is a balance between an individual's perceived challenges and the individual's skill level during some activity" (p. 26). The balance of challenge and skill has been conceptualized by other researchers (e.g., Hoffman & Novak, 2009) as an antecedent of flow rather than a dimension of it; alternatively, in his first book about flow, Csikszentmihalyi (1975) described the balance of challenge and skill as the basic structure of flow activities rather than as an element of flow. Clearly, this *subjective* balance is integral to the experience of flow.

Merging of action and awareness. A second dimension of flow, suggested to be the clearest indicator by Csikszentmihalyi (1975), is the merging of action and awareness. According to Csikszentmihalyi, "A person in flow has no dualistic perspective: he is aware of his actions but not of the awareness itself. . . . When awareness becomes split, so that one person perceives the activity from 'outside,' flow is interrupted" (p. 38). Csikszentmihalyi (1975) illustrated this phenomena with a quote from an expert rock climber: "You are so involved in what you are doing [that] you aren't thinking of yourself as separate from the immediate activity . . . . You don't see yourself as separate from what you're doing" (p. 39). The merging of action and awareness requires a lack of metacognition, or a lack of thinking

about one's own mental state. (From this perspective, it would be impossible to think about being in flow *and* remain in flow, which poses an interesting problem for researchers measuring flow, as will be discussed in a later section.) The merging of action and awareness is enabled by a third element of flow, concentration (Csikszentmihalyi, 1975).

Concentration. In order to achieve flow, an individual must be able to completely center her or his attention on a limited stimulus field (i.e., the task at hand; Csikszentmihalyi, 1975). "I am really quite oblivious to my surroundings after I really get going," a music composer interviewed by Csikszentmihalyi (1975) noted. "I think that the phone could ring, and the doorbell could ring, or the house burn down, or something like that. . . . When I start working, I really shut out the world" (p. 41). Some flow activities provide inducements that make concentrating on the task at hand easier, including competition (e.g., sports and games), the possibility of material gains (e.g., gambling), and even physical danger (e.g., rock climbing; Csikszentmihalyi). To an extent, raising the stakes of a situation can cause people to attend to it with undivided attention. Full concentration requires ignoring everything else in one's environment.

Sense of control. Complete control of one's actions and environment is the fourth dimension of flow (Csikszentmihalyi, 1975). There is no conscious awareness of this control in the moment, but no worry of losing it either (Csikszentmihalyi). As one chess player whom Csikszentmihalyi interviewed put it, "I get a tyrannical sense of power. I feel immensely strong, as though I have the fate of another human in my grasp. I want to kill" (p. 44)! A gentler explanation was offered by a dancer: "If I have enough space, I am in control. I feel I can radiate energy into the atmosphere. . . . I become one with the atmosphere" (p. 44). Like the balance of challenge and skill, an individual's *perception* of control is more

important than any "objective" measure of control. A rock climber can feel in complete control of her experience, despite having no sway over the weather or the potential of falling rock; a driver can feel completely in control of his journey, despite having no control over his fellow drivers.

Loss of self-consciousness. The fifth element of flow, loss of self-consciousness, also described as "loss of ego" and "self-forgetfulness," requires an individual to temporarily forget about her or his social, or constructed, self (Csikszentmihalyi, 1975). The social self exists to manage the needs and expectations of others; however, Csikszentmihalyi (1975) explained, because many flow activities, such as games, rituals, and art, are based on freely accepted rules, they do not require the use of a social self. "What is usually lost in flow," Csikszentmihalyi noted, "is not the awareness of one's body or of one's functions, but only the self *construct*, the intermediary which one learns to interpose between stimulus and response" (p. 43; italics in original). One of the composers interviewed by Csikszentmihalyi (1975) described this experience of self-forgetfulness vividly: "You yourself are in an ecstatic state to such a point that you feel as though you almost don't exist," he said. "I've experienced this time and time again. My hand seems devoid of myself, and I have nothing to do with what is happening. I just sit there watching it in a state of awe and wonderment. And it just flows out by itself" (p. 44).

***Clear goals*.** Being in flow requires having clear goals for the task at hand. This includes large goals, such as driving safely to one's destination or reaching the top of the rock, but small goals are just as important. "When the rock climber senses the way, or when the author anticipates the next passage, the experience is likely to be associated with flow," Rich (2013) wrote in an overview of flow theory. Csikszentmihalyi (1975) explained that the

clear rules of many sports and games enable participants to see and set goals easily. When contradictory options are made possible, such as cheating in a game, the participant must reevaluate her or his goals, and the flow state is temporarily broken (Csikszentmihalyi).

Unambiguous feedback. Csikszentmihalyi (1975) initially lumped together clear goals with the seventh element of flow, unambiguous feedback, explaining that flow "usually contains coherent, noncontradictory demands for action and provides clear, unambiguous feedback to a person's actions" (p. 46). Csikszentmihalyi had separated unambiguous feedback from clear goals by 1990, perhaps because some situations allow for clear goals but provide confusing or minimal feedback. For example, Marszalek (2006) proposed that test-takers may be able to enter flow easier while taking computerized tests that provide immediate feedback about their performance than while taking traditional paper-and-pencil tests. Csikszentmihalyi (1975) explained unambiguous feedback this way: "In the artificially reduced reality of a flow episode, one clearly knows what is 'good' and what is 'bad'" (p. 46).

Transformation of time. The eighth dimension of flow is the alteration of time; seconds, minutes, and hours seem to move dramatically faster or slower than usual. Rich (2013) provided the example of a reader who becomes engrossed in a book late at night and is surprised to learn that she has been reading for many hours when the sun rises. In sports, time may seem to slow down, allowing an athlete to perform a complex move before her or his opponents realize what is happening (Csikszentmihalyi, 1975). Alternatively, time may seem to both speed up and slow down, as described by one of the surgeons interviewed by Csikszentmihalyi, Holcome, and Csikszentmihalyi (1975): "Time goes very fast; but

afterwards, if it was a difficult operation, it may feel as if I had been working one hundred hours" (p. 132).

The autotelic experience. Inherent in flow activities are their autotelic nature; flow activities need no extrinsic rewards because they are intrinsically rewarding. Csikszentmihalyi (1975) borrowed the word "flow" from the description of the autotelic experience given by one interviewee, who was both a poet and a rock climber:

> The mystique of rock climbing is climbing; you get to the top of a rock glad it's over but really wish it would go forever. The justification of climbing is climbing, like the justification of poetry is writing; you don't conquer anything except things in yourself. . . . The act of writing justifies poetry. Climbing is the same: recognizing that you are a flow. The purpose of the flow is to keep on flowing, not looking for a peak or utopia but staying in the flow. It is not a moving up but a continuous flowing; you move up only to keep the flow going. There is no possible reason for climbing except the climbing itself; it is a self-communication. (pp. 47-48)

In Csikszentmihalyi's (1975) interviews, even highly accomplished individuals who had received monetary rewards or recognition for their achievements downplayed the nature of these extrinsic incentives. "The most rewarding thing is the competition, the satisfaction of pitting your mental prowess against someone else," one top chess player said. "I've won . . . trophies and money . . . but considering the expenses of entry fees, chess associations, et cetera, I'm usually on the losing side financially" (p. 48). Flow is so enjoyable that, according to Csikszentmihalyi (1975), ". . . people are sometimes willing to forsake a comfortable life for its sake" (p. 37), such as the "starving artist" who struggles to pay the

bills or the musician who tours the United States in an unreliable bus. Any material reward is secondary to the experience.

Summary of the flow experience. Across contexts, from making music to playing a sport to performing surgery, the subjective experience of flow seems to include nine common elements. It requires a perceived balance of challenge and skill, such that the task at hand is perceived as formidable but manageable. It elicits a merging of action and awareness, such that actions seem to happen effortlessly. One becomes completely concentrated on the task at hand and feels completely in control of her or his performance. Self-consciousness is lost. In the moment, the goals of the activity are clear and the feedback about one's performance is unambiguous. Time may seem to move faster or slower than usual. Ultimately, the activity is extremely pleasurable, so much so that one would continue to participate without any extrinsic reward.

The nine elements of flow paint a picture of a highly enjoyable state of subjective experiencing. Flow is so enjoyable that Nakamura and Csikszentmihalyi (2002) posited that "a good life is one that is characterized by complete absorption in what one does" (p. 89); in other words, a good life is one spent in flow. Indeed, flow experiences have been associated with a variety of positive outcomes, including long-term persistence in an activity, skill development, academic performance, self-esteem, and even alleviation of physical pain (see Nakamura & Csikszentmihalyi, 2002, for an overview of the consequences of flow).

Given that flow is such a positive experience, it would be ideal for everyone to experience flow multiple times a day; however, Rich (2013) reported that about one fifth of the population reports never having felt flow. In order to help all people achieve flow more

easily, it is important to explore the differences between people who do and do not experience flow frequently.

Dispositional flow. Flow theory and associated research has largely focused on the in-the-moment phenomenology of the flow experience rather than the propensity to experience flow over time or across individuals (Nakamura & Csikszentmihalyi, 2002). Although the capacity to experience flow appears to be nearly universal, people vary considerably in the frequency and intensity with which they report entering flow states (Nakamura & Csikszentmihalyi, 2002). The tendency to experience flow is known as *dispositional flow* (Jackson & Eklund, 2002). Developing a better understanding of dispositional flow could be an important step toward creating interventions that will allow more people to experience flow more often.

Dispositional flow is most commonly assessed by frequency of flow experiences, although quality of flow experiences has also been used as an indicator (Johnson, Keiser, Skarin, & Ross, 2014). Historically, researchers have looked at dispositional flow in a single domain; for example, Jackson, Kimiecik, Ford, and Marsh (1998) originally developed the Trait Flow Scale (later renamed the Dispositional Flow Scale; see Jackson, Thomas, Marsh, & Smethurst, 2001) to assess dispositional flow in sports. Participants were asked to indicate the frequency with which they experienced the nine dimensions of flow while participating in a specific sport or activity. Wang, Liu, and Khoo (2009) later adapted this measure to assess dispositional flow in internet gaming. However, Johnson et al. (2014) recently suggested that dispositional flow should be conceptualized as the propensity to experience flow across a wide range of activities. This conceptualization of dispositional flow as a cross-situational characteristic unites it with another closely related construct, the autotelic personality.

***The autotelic personality*.** Much of the extant research on dispositional flow has focused on individuals who experience flow frequently and intensely. People with high levels of dispositional flow are thought to possess an *autotelic personality*. An autotelic person "generally does things for their own sake, rather than in order to achieve some later external goal" (Csikszentmihalyi, 1997, p. 117). These people may possess either a greater ability or a greater desire (or both) to find challenges and build the associated skills (Baumann, 2012).

The autotelic personality has received considerable attention from theorists interested in finding a personality-oriented explanation for differences in frequency and quality of flow experiences. Csikszentmihalyi (1997) suggested that finding challenges and building skills may require diverse, sometimes dialectical traits, including pure curiosity, a need to achieve, the capacity to experience enjoyment, persistence, openness to new experiences, narrow concentration, integration, differentiation, independence, and cooperation. Individuals who possess all of these traits—in other words, autotelic personalities—find challenges by opening their minds to new information, and build skills by concentrating on the aspects of these challenges that are slightly ahead of their current skills but still manageable. In this way, autotelic individuals continue to find challenges, build skills, and maintain flow states (Csikszentmihalyi, 1997).

Csikszentmihalyi (1997) also framed the autotelic personality in terms of motivation orientation. He suggested that individuals with high levels of dispositional flow may have a high capacity for "disinterested interest." *Disinterested interest* refers to the tendency to focus on task-inherent rather than purpose-related incentives, or a mastery-oriented approach rather than a performance-oriented approach. In other words, people with autotelic

personalities focus on experiences themselves rather than the outcome or consequences of these experiences.

Although studying the autotelic personality offers a fascinating glimpse into the minds of people who seem to have mastered the art of flow, it does not fully explain the challenges faced by people who experience flow less often. Indeed, the idea that personality characteristics alone explain differences in frequency and quality of flow experiences is likely to be criticized by some feminist theorists, who caution against locating the origin of psychological phenomena strictly within individuals. "We have already incorporated into feminist thinking generally the idea that the external world and the internal psychological world are intrinsically and intricately interrelated," Lerman (1986, p. 8) wrote in a critique of traditional theories of personality. Following Lerman's logic, it seems that the current body of research on the autotelic personality ignores situational factors that could inhibit some people from experiencing flow, such as pervasive environmental distractions or lack of available challenges or skill-building activities. In this way, conceptualizing dispositional flow simply as an individual's propensity for experiencing flow across domains allows for the possibility of not only personality differences, but also situational and environmental differences in explaining why some people experience flow more or less frequently than others. However, studying dispositional flow is not without its own challenges; assessing dispositional flow can be difficult, and this problem seems to be exaggerated in extant research on flow within the objectification theory framework.

Measuring dispositional flow. Measuring state flow is difficult because the very act of asking people to think about flow pulls them out of whatever flow state they might be experiencing at the time. Measuring dispositional flow, a more stable characteristic, should

be much easier; however, there exist few measures of dispositional flow that have been evaluated for reliability and validity (Johnson et al., 2014). The two most frequently used measures of dispositional flow are the Experience Sampling Method (ESM) and the Dispositional Flow Scale-2 (DFS-2).

The ESM. Csikszentmihalyi (1975) developed the ESM to capture individuals' perception of the balance of challenge and skill in a naturalistic way. Using this method, participants carry pagers and are paged throughout the day by the researchers at random times. Whenever participants are paged, they complete brief questionnaires about their psychic states and activities, including their mood and their perceptions of the challenges presented, and the skills demanded by whatever task they are engaged in. From these reports, researchers can classify participants' challenge-skill balance as indicative of one of the four subjective states prominent in flow theory: flow (high challenge, high skill), boredom (low challenge, high skill), apathy (low challenge, low skill), or anxiety (high challenge, low skill). Studies using the ESM have generally found that participants' subjective experiences matched the subjective state predicted by their challenge-skill balance. For example, participants in the flow quadrant reported more positive experiences than participants in the other three quadrants (see Whalen, 1997, for a summary of the history of flow measurement, including an overview of the ESM). The ESM can be used to measure dispositional flow by measuring frequency or quality of high challenge, high skill experiences (Johnson et al., 2014).

According to Johnson et al. (2014), the ESM has become the standard of flow measurement due to its naturalistic methodology, its ability to identify the contingencies of behavior, and the limitations of the alternative retroactive self-report measures. Furthermore,

the ESM has generally demonstrated good reliability and validity across studies of flow in a variety of contexts (Marszalek, 2009). The primary limitation of the ESM is that, like other measures of dispositional flow, it relies on respondents' self-reports (Csikszentmihalyi & Larson, 1987). A second limitation of the ESM is that it is more cumbersome for researchers and more intrusive for participants than one-time self-report measures of flow proclivity. Finally, it is difficult to analyze data collected through the ESM, because it often violates basic assumptions of the General Linear Model. The data are within-subjects, but they do not have the same time intervals between measures. Furthermore, the data are often on the ordinal scale, and they often have missing observations. For these reasons, alternative methods of measuring flow are necessary.

The DFS-2. Jackson and Marsh (1996) developed the Flow State Scale (FSS) to assess flow experiences within a specific sport. Respondents are asked to respond to items "in relation to your experience in the event that you have just completed" (p. 34). The FSS contains 36 items that load on nine factors that correspond with the nine elements of flow (i.e., challenge-skill balance, merging of action and awareness, clear goals, unambiguous feedback, concentration, sense of control, loss of self-consciousness, transformation of time, and the autotelic experience), as well as a single higher-order factor (Jackson & Marsh, 1996).

Jackson et al. (1998) adapted the FSS to create the Trait Flow Scale (TFS) by changing the wording of the instructions and items to create a measure of how frequently respondents experienced the dimensions of flow in general while participating in a specific sport or activity. For example, the FSS item "I was challenged, but I believed my skills would allow me to meet the challenge" was changed for the TFS to "I am challenged but I

believe my skills will allow me to meet the challenge." Jackson et al. (2001) changed the name of the TFS to the Dispositional Flow Scale (DFS) "to more accurately reflect what it purports to measure" (p. 136).

Jackson and Eklund (2002) modified the FSS and the DFS to improve the measurement of some of the dimensions of flow that had performed poorly in previous studies, including sense of control, loss of self-consciousness, unambiguous feedback, and transformation of time. These modifications produced the Flow State Scale-2 (FSS-2) and the DFS-2. Johnson et al. (2014) modified the instructions of the DFS-2 to target "any activity in life" rather than respondents' experiences in a specific activity, as had been done in most previous studies.

The FSS-2 and the DFS-2 have strong psychometric properties of internal consistency, content validity, and factorial validity (Johnson et al., 2014). Jackson and Eklund (2002) reported that, consistent with Csikszentmihalyi's conceptualization of the nine elements of flow, the scores produced by the FSS-2 and especially the DFS-2 fit a model with nine first-order factors (i.e., the nine dimensions of flow) better than a model with only one first-order factor and slightly better than a model with nine first-order factors and one higher order factor.

The DFS-2 is limited by its reliance on retroactive self-report. However, self-report measures are commonly seen in the bodies of objectification theory and flow literature, presumably because they allow researchers to establish contact with a larger, more diverse sample of participants more easily than measures such as the ESM.

Summary of dispositional flow. Much of the extant research on flow theory focuses on the state experience; relatively little is known about dispositional flow, or an individual's

proclivity to experience flow in a variety of domains. Research on the autotelic personality suggests that high levels of dispositional flow may be related to other personality characteristics, including perseverance, curiosity, and mastery orientation; however, feminist theory would encourage researchers to look beyond these internal traits and consider the ways in which the external world may influence people's ability to achieve flow states. Consequently, dispositional flow may be better conceptualized as simply the extent to which an individual experiences the nine dimensions of flow across domains. Several measures have been developed to assess dispositional flow, including the ESM and the DFS-2. Although the ESM is renowned for allowing researchers to access respondents' subjective experiences in real time, the DFS-2 may be preferable for many researchers due to its ease of use and good reliability and validity. Consistent and proper use of the DFS-2 may be an important step in gaining a better understanding of the role of flow in objectification theory.

Flow and objectification theory. As discussed earlier, little empirical evidence exists to support Fredrickson and Roberts's (1997) hypothesis that flow mediates the relationship between self-objectification and mental health risks. Studies that have assessed the role of flow are often limited by operationalization or measurement concerns (e.g., Greenleaf, 2005; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001). In order for a study to more accurately assess the role of flow in objectification theory, three conditions must be met: (a) flow must be conceptualized properly; (b) flow must be measured properly; and (c) dimensions of flow that are theorized to be more closely related to self-objectification must be given special attention.

***Conceptualization of flow in the objectification literature*.** Whether or not they employ the term, most studies that explore the role of flow in the objectification theory

framework are referring to dispositional flow. Studying dispositional flow rather than state flow is appropriate in this context because sexual objectification experiences and self-objectification are chronic stressors that affect women on a daily basis, across situations. Although some experimental studies in which objectification was manipulated have used performance-related variables as proxies for state flow (e.g., Fredrickson et al., 1998; Hebl et al., 2004; Quinn et al., 2006), the majority of objectification theory studies that include the role of flow conceptualize objectification as a chronic, relatively stable factor, and flow as a dispositional, relatively stable factor (e.g., Greenleaf, 2005; Greenleaf & McGreer, 2006; Szymanski & Henning, 2007; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001; Tiggemann & Williams, 2012). In other words, within the objectification theory literature, the phrase "reduced flow experiences" often refers to reduced levels of dispositional flow.

Measurement of flow in the objectification literature. Within the objectification theory literature, there is little consistency in the measurement of dispositional flow. In their decade review of objectification theory literature, Moradi and Huang (2008) noted that some authors studying the role of flow in objectification theory have used the FSS or FSS-2, some have used the TFS/DFS or the DFS-2, some have developed study-specific measures, and some have developed new measures. Moradi and Huang (2008) concluded that "the breadth of these measures ranges from a narrow focus on concentration to assessing multiple dimensions [of flow] that include concentration, loss of self-consciousness, balance between challenge and skills, goal clarity, and other aspects of flow" (p. 384-385). In other words, different researchers are not only measuring dispositional flow in different ways, but they are also operationalizing it in different ways. Because of this inconsistency, it is difficult to draw

any firm conclusions about the role of flow in objectification theory based on extant literature.

When objectification theory researchers have used established flow scales, there is a tendency to use a global flow score without investigating subscale scores (e.g., Greenleaf, 2005; Tiggemann & Kuring, 2004). This trend is problematic for several reasons. First, in Jackson and Eklund's (2002) original validation study of the FSS-2 and the DFS-2, the models containing nine first-order factors or nine first-order factors and one higher order factor fit the data much better than a model with only one first-order global factor. Second, some dimensions of flow (i.e., high concentration, sense of control, and loss of self-consciousness; see next section) may be more strongly affected by sexual objectification than other dimensions; using only a single global flow score may mask the unique effects on and of these dimensions. Indeed, Grotewiel and Marszalek (2013) found that scores on three dimensions of dispositional flow (i.e., high concentration, sense of control, and loss of self-consciousness), but not a global dispositional flow score, were predicted by scores on measures of body surveillance and/or appearance anxiety.

Another trend in the objectification literature is the creation of study-specific and new flow scales. Although these scales may be grounded in Csikszentmihalyi's (1975) conceptualization of flow, they rarely follow his nine-dimensional model. For example, Tiggemann and Slater (2001) developed a study-specific measure of dispositional flow that has subsequently been used by other researchers (e.g., Greenleaf & McGreer, 2006). It contains four items: "I feel so involved that nothing else seems to matter;" "I concentrate without feeling self-conscious;" "I become so involved that I lose track of time;" and "I concentrate so intensely that I can't think about anything else" (Tiggemann & Slater, 2001, p.

59). These questions tap the dimensions of high concentration, loss of self-consciousness, and transformation of time, but neglect the other six dimensions of flow. Szymanski and Henning (2007) also developed a new measure of dispositional flow, the Flow Scale, which has been used by other researchers (e.g., Tiggemann & Williams, 2012). This self-report measure contains 18 items that load on three factors: intense concentration; lack of worry; and feedback, skills, and goals. Although Szymanski and Henning (2007) reported good internal consistency of their scale and significant correlations between the full scale score and scores on measures of habitual body monitoring and depression, the Flow Scale lacks validation with other measures of flow more concretely rooted in Csikszentmihalyi's (1975) theory.

Moradi and Huang (2008) declared that "operationalization of flow in objectification theory research can be advanced by attention to the broader literature on flow" (p. 392). This broader literature includes a number of well-established measures of dispositional flow, including the DFS-2, which would be preferable to the types of measures currently being used in the objectification theory literature because it most closely mirrors Csikszentmihalyi's (1975) conceptualization of the construct. The broader literature on flow and objectification can also be combined to suggest dimensions of flow that may be most affected by objectification.

Dimensions of flow most relevant to objectification theory. In their seminal article on objectification theory, Fredrickson and Roberts (1997) did not differentiate between the nine elements of flow. However, they did suggest ways in which objectification may reduce women's levels of dispositional flow. First, a woman's flow experience can be interrupted if someone calls attention to her body or appearance, or when she feels threatened that someone

might. The interruption of experience implicates the concentration dimension of flow. The control dimension is also implicated, since women have little control over when, how, where, or by whom their appearance will be evaluated. Second, Fredickson and Roberts proposed that women's internalization of an observer's perspective on their appearance is a form of self-consciousness, which makes losing self-consciousness (a third dimension of flow) difficult for women even under ideal circumstances.

Concentration. The sense of complete concentration inherent in a flow experience can be difficult for women to achieve in an objectifying culture for two reasons. First, research shows that as early as elementary school, girls' activities and thoughts are frequently disrupted by boys, often with comments focused on "cooties," "girl germs" or other fictitious or real aspects of their bodies (Thorne, 1993). As girls enter puberty, attention is increasingly called to their developing bodies, and they may feel the need to monitor the fit of their clothing, especially while playing sports or exercising. These overt instances of objectification are obviously distracting; however, self-objectification, as manifested through body surveillance, can be equally damaging to concentration. Any time a woman wonders if she looks fat, or questions whether her blouse is cut too low for work, or senses that a colleague may be evaluating her appearance, her concentration on the task at hand is broken.

Sense of control. Women have little control over when or how they may be evaluated by others. This loss of control is posited to result in appearance anxiety (Fredrickson & Roberts, 1997). It may also make feeling in complete control in any situation difficult. For example, it may be challenging for a woman to feel in complete control over her performance on the basketball court if she feels that not just her athletic performance, but also her body is

being evaluated by people in the stands. This lack of control may be reinforced if she hears spectators making comments about her physical appearance.

Loss of self-consciousness. Loss of self-consciousness is an important aspect of the flow experience; yet, it can be very difficult for women used to functioning in a constant state of socially reinforced body surveillance to completely abandon an outside view of themselves. As Fredrickson and Roberts (1997) wrote, "Women's internalization of an observer's perspective on their bodies, by definition, creates a form of self-consciousness. . . . To be 'doubled,' as de Beauvoir put it, is simply incompatible with the single-mindedness of flow states" (p. 184). Indeed, Nakamura and Csikszentmihalyi (2002) defined loss of self-consciousness as "loss of awareness of oneself as a social actor" (p. 90), an experience that would be difficult for a woman to achieve in a culture that incessantly objectifies the female body. For example, it could be difficult for a female orator to get lost in the experience of public speaking if she is distracted by concern about her physical appearance.

Effects on mental health outcomes. Since there have been few studies that use a dimensional conceptualization of flow within the objectification theory framework, there is little research directly linking these three dimensions of flow to the mental health risks (i.e., disordered eating, depression, and sexual dysfunction). However, Fredrickson and Roberts (1997) posited that having fewer positive experiences (i.e., flow experiences) would increase susceptibility to depression. Similarly, Fredrickson and Roberts (1997) proposed that reduced ability to experience flow would make sexual experiences less satisfying and more anxiety-provoking, resulting in sexual dysfunction. Reduced concentration, sense of control, and loss of self-consciousness may all contribute to these two outcomes. The link from flow dimensions to disordered eating is less obvious, but still tenable; for example, eating

disorders, particularly anorexia nervosa, have been conceptualized as an attempt to gain control (Bruch, 1978). Attending to these three dimensions of flow that seem most relevant should illuminate they ways in which they function similarly and differently within the objectification theory framework.

***Summary of flow in objectification theory*.** Extant studies of flow in the objectification theory literature offer fertile ground for deepening understanding of this complex relationship. Attention to the measurement of flow is particularly needed. There is a need for studies that use the DFS-2 in the way that it was intended to be used, as a 36-item questionnaire that loads onto nine first-order factors or nine first-order factors and one higher-order factor. There is also a need for greater care in hypothesizing relationships between the different elements of the objectification theory framework and the nine dimensions of flow.

Understanding the role of flow in objectification theory using measures and hypotheses more consistent with flow theory will be a helpful step toward developing a clearer understanding of objectification theory itself. However, the relationship among objectification and flow is of little use without knowledge of ways in which this link can be weakened. The development of strategies to intervene in the link between self-objectification and flow—as well as the link between self-objectification and other objectification theory mediators—will require a better understanding of qualities that moderate this relationship. In the spirit of bringing together the interests of feminist and positive psychology, it seems appropriate to focus on potential strength-based moderators.

Strength-Based Moderators

In their review of the literature on sexual objectification of women, Szymanski, Carr, and Moffitt (2011) called for research exploring potential moderators of the objectification-mental health link. They suggested a variety of potential moderators, ranging from personality traits to cognitive ability to social support to feminist, racial, and sexual minority identity (Szymanski, Carr, & Moffitt, 2011). Several researchers have answered this call. Watson et al. (2013) examined the moderating role of an internalized multiculturally inclusive racial identity for African American women. They found that internalized multiculturally inclusive racial identity attitudes moderated the relationship between sexually objectifying experiences and internalization of dominant cultural standards of beauty, such that participants were more likely to internalize these standards when sexually objectifying experiences were high and internalized multiculturally inclusive racial attitudes were low. Higher internalization of dominant standards of beauty was associated with increased body surveillance, body shame, appearance anxiety, and disordered eating, as well as with decreased internal bodily awareness. Watson et al. suggested that these results could be used to develop interventions to assist African American women in developing a positive, salient racial identity to buffer against the effects of sexual objectification.

Szymanski and Feltman (2014) studied the moderating role of resilience in the links between sexual objectification experiences and psychological distress and coping with sexist oppression via internalization, self-objectification, and internalization of cultural standards of beauty. Their sample consisted of heterosexual women ages 18-23, the majority of whom identified as White. Szymanski and Feltman (2014) defined *resilience* as "an individual's ability to successfully manage or overcome adverse experiences, manage stress, and rise

above disadvantages" (p. 161) and did not specify whether they were conceptualizing it as a personality trait or a behavioral method of adaptation. Results of a path analysis showed that resilience moderated a) the direct effect of sexually objectifying experiences on coping via internalization and b) the conditional indirect effects of objectifying experiences on psychological distress, such that both of these relationships were not significant for women with high (versus low or moderate) levels of resilience.

Beyond these two studies, there is a need to investigate additional moderators of the objectification-mental health link. The focus on integrating Csikszentmihalyi's (1975) conceptualization of flow into the objectification theory framework is an attempt to bring together two complimentary camps of psychological research that both emphasize strength-based conceptualization and treatment, positive psychology and feminist psychology. It is fitting, then, to consider potential strength-based moderators of the objectification-mental health link. It is important to explore positive traits that women could cultivate through counseling and other intervention programs as groundwork before developing these programs. Two cultivatable strengths that have been receiving increased research attention are mindfulness and self-compassion.

Mindfulness. The practice of mindfulness in a therapeutic context has been gaining popularity in the fields of counseling and clinical psychology since the early 1980s (Bishop et al., 2004). Within this context, *mindfulness* has been defined as "nonjudgmental moment-to-moment awareness" (Miller, Fletcher, & Kabat-Zinn, 1995, p. 193) or "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 1994, p. 4). The growth of mindfulness-based therapeutic strategies can be traced to the introduction of Mindfulness-Based Stress Reduction (MBSR), a manualized treatment

program originally developed to treat chronic pain (Kabat-Zinn, 1982). MSBR is now used to treat emotional and behavioral disorders and the psychological symptoms associated with physical illness (Bishop et al., 2004). Mindfulness has origins in Eastern spirituality and the teachings of Buddha in particular, and it is a component of many religious practices. However, anyone can learn and practice mindfulness as a skill, regardless of faith affiliation (Brown, Marquis, & Guiffrida, 2013).

Theoretical and empirical background. Empirical research on mindfulness was relatively limited until the early 2000s, when a panel of mindfulness researchers convened to develop an operational definition of the construct (Bishop et al., 2004). Using descriptions from qualitative studies of mindfulness, as well as descriptions of meditation from outside the field of psychology, Bishop et al. (2004, p. 233) proposed a two-component model of mindfulness consisting of (a) "the self-regulation of attention so that it is maintained on immediate experience, thereby allowing for increased recognition of mental events in the present moment" and (b) "adopting a particular orientation toward one's experience in the present moment, an orientation that is characterized by curiosity, openness, and acceptance." Later theorists further deconstructed this two-component conceptualization. Feldman, Hayes, Kumar, Greeson, and Laurenceau (2006) identified four components of mindfulness in Bishop et al.'s (2004) definition: attention regulation, orientation to the present experience, awareness of the present experience, and acceptance of the present experience. Alternatively, Baer et al. (2008) identified five components: observing, describing, acting with awareness, nonjudging of inner experience, and nonreactivity to inner experience. Still other researchers, such as Brown and Ryan (2004), have contended that mindfulness is best conceptualized as a unidimensional construct, positing that awareness of the present moment is impossible

without acceptance of the present moment. Scales have been developed to reflect all four of these conceptualizations of mindfulness, and all remain popular in the literature (American Mindfulness Research Association, 2014).

Regardless of the specific conceptualization or scale used, the documented benefits of mindfulness in general are numerous. Mindfulness has been shown to have affective benefits (including improved emotion regulation, decreased reactivity, and increased response flexibility), interpersonal benefits, and benefits related to frontal lobe functioning (see Davis & Haynes, 2011, for an overview of empirical literature on mindfulness). Similarly, in a review of the literature on mindfulness-based interventions in counseling, Brown et al. (2013) cited studies documenting the efficacy of mindfulness in alleviating the symptoms of generalized anxiety disorder, depression relapse, borderline personality disorder, eating disorders, and drug addiction, as well as improving general well-being.

Many studies on mindfulness, especially within the counseling environment, focus on the effects of mindfulness interventions. However, theorists have also proposed that individuals may naturally vary in their tendencies toward mindful (versus mindless) states (see Dijkstra & Barelds, 2011). *Dispositional mindfulness* refers to an individual's proclivity to practicing mindfulness on a day-to-day basis. Indeed, Bishop et al.'s (2004) conceptualization of mindfulness as consisting of self-regulation of attention and orientation to experience, as well as many of the subsequent conceptualizations and scales that emerged from it, was developed to address the "general tendency to be mindful in daily life" (Baer et al., 2008, p. 330). Mindfulness is distinct from a similar personality characteristic, conscientiousness, in that there is no element of responsibility (to self or others) associated with mindfulness. Indeed, in a meta-analysis of the relationships among mindfulness and the

Big Five personality traits, Giluk (2009) found only a moderate correlation between mindfulness and conscientiousness. Like conscientiousness and dispositional flow, dispositional mindfulness is a relatively stable personality characteristic, but it is amenable to change through education and practice (Brown et al., 2013).

Mindfulness and objectification theory. Dijkstra and Barelds (2011) proposed several theoretical reasons why dispositional mindfulness may be related to objectification theory. First, the mindfulness construct of non-judgment is incompatible with comparing oneself against societal standards of attractiveness; highly mindful women would be expected to pass less judgment on their own bodies. Second, higher levels of mindfulness should be associated with better concentration, which may be associated with greater dispositional flow. Highly mindful individuals may be better able to fully focus their attention on the task at hand and block out distractions, including intrusive thoughts related to their appearance.

Several studies have explored on the benefits of dispositional mindfulness as they relate to body concerns. Dijkstra and Barelds (2011) studied the links between dispositional mindfulness, body comparison, and body dissatisfaction using a sample of Dutch women. They defined dispositional mindfulness as "being conscious and intentional in what you do, being open and creative with possibilities, or being aware of the present moment without grasping onto judgments" (p. 420). The results of their descriptive study indicated that dispositional mindfulness was negatively correlated with body comparison and positively correlated with body satisfaction, suggesting that as women are more mindful, they engage in less body comparison and are more satisfied with their bodies. Dijkstra and Barelds also tested two mediational models; for the first model, body comparison was hypothesized to

partially mediate the positive relationship between mindfulness and body satisfaction, and for the second model, mindfulness was hypothesized to partially mediate the negative relationship between body comparison and body satisfaction. Both models produced significant indirect effects, suggesting partial mediation; however, the mediation effect of the second model was slightly stronger, suggesting that it was a better fit for the data.

Dekeyser et al. (2008) studied the relationships among mindfulness and interpersonal and intrapersonal feelings and performance, including body satisfaction. They defined mindfulness as the extent to which an individual practices each of four mindfulness skills: mindful observation, mindful action, mindful acceptance, and mindful description. Using a student sample consisting of predominantly female college students enrolled in a psychology class at a university in Belgium, and a parent sample consisting of predominantly female parents from Belgium and the Netherlands, they looked at the associations of the four components of mindfulness with a variety of interpersonal and intrapersonal thoughts and feelings. Their results indicated that body satisfaction was positively correlated with all four elements of mindfulness, except for mindful observation in the student sample. Other aspects of mindfulness were positively associated with expressing oneself in various social situations, empathy, and identification and description of feelings, and negatively associated with social anxiety and distress contagion.

The results of Dijkstra and Barelds' (2011) and Dekeyser et al.'s (2008) studies provide good support for a link between mindfulness and the body-related concerns included in objectification theory, such as body surveillance and body shame. This inverse relationship is likely due to the nonjudgment component of mindfulness, as explained by Dijkstra and

Barelds (2011). There is also theory and evidence to suggest that mindfulness may affect two of the proposed mediators of objectification theory: flow and internal bodily awareness.

There is considerable conceptual overlap between dispositional mindfulness and dispositional flow: both involve focused attention and orientation to the present-moment experience. However, dispositional mindfulness involves active, intentional regulation of attention, whereas dispositional flow reflects perceived capacity for having flow experiences. It is likely that (state) mindfulness enables (state) flow experiences, and also likely that people with higher levels of dispositional mindfulness would report higher levels of dispositional flow. A positive relationship between mindfulness and flow has been documented in two studies conducted with student athletes. Kee and Wang (2008) proposed that the present-moment focus of mindfulness may enable athletes to enter and remain in flow states. Focusing on the present moment may positively affect several dimensions of flow, including concentration, merging of action and awareness, clear goals, loss of self-consciousness, challenge seeking, and skill building. Indeed, in a sample of student athletes, Kee and Wang found that participants with a high level of dispositional mindfulness scored higher on the DFS-2 subscales of challenge-skill balance, merging of action and awareness, clear goals, concentration, and loss of self-consciousness compared to students low in dispositional mindfulness. Similarly, using a between-groups experimental design with a sample of student athletes, Aherne et al. (2011) found that students who participated in an experimental mindfulness group scored significantly higher on the clear goals, sense of control, and global flow factors of the FSS-2 post-treatment compared to a control group.

The relationship between mindfulness and internal bodily awareness has also been explored. Silverstein, Brown, Roth, and Britton (2011) proposed that by practicing

attentional focusing on bodily sensations during mindfulness meditation, women could cultivate a nonjudgmental moment-to-moment awareness of their internal bodily state. Silverstein et al. were specifically interested in using meditation to improve women's interoceptive awareness of sexual arousal, since women are significantly more likely than men to report feeling unaroused even when their bodies show objective signs of sexual arousal. To test their hypothesis that mindfulness training would help women improve their interoceptive awareness, Silverstein et al. compared the post treatment interoceptive awareness of women who participated in a 12-week mindfulness meditation course to the post treatment interoceptive awareness of women who participated in two control conditions. Between-groups analyses showed that treatment group participants developed significantly better interoceptive awareness of sexual arousal than participants in the control groups.

These studies offer a promising starting point for studying dispositional mindfulness as a potential moderator in the links between self-objectification and dispositional flow and internal bodily awareness. If this proposed buffering relationship is supported empirically, there is promising evidence that it can be used to inform treatments to prevent or ameliorate the consequences of objectification. For example, studies suggest that yoga, a meditative practice that has been shown to increase mindfulness (Brisbon & Lowery, 2009), may be a useful intervention for reducing body image concerns. Using a sample of predominantly White women, Daubenmier (2005) found that women who practiced yoga reported greater awareness and responsiveness to bodily sensations, lower self-objectification, greater body satisfaction, and fewer disordered eating attitudes than women involved in aerobic exercise or no exercise. Impett et al. (2006) also found that participation in a two-month yoga immersion program decreased self-objectification for a sample of women and increased body

awareness, positive affect, and life satisfaction for women and men. Despite these promising studies, research on the role of mindfulness in self-objectification is still relatively limited, and there is a need to test the potential effects of mindfulness within the full model of objectification theory.

Self-compassion. A second potential moderator that has often been studied alongside mindfulness is self-compassion. Self-compassion has been defined as "being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness" (Neff, 2003b, p. 87). Like mindfulness, self-compassion has roots in Buddhist philosophy (Neff, 2003b). It has been conceptualized as an Eastern take on a similar Western trait, self-esteem. Whereas self-esteem is characterized by judgments and comparisons of oneself against others, self-compassion involves viewing one's own experiences in the context of the larger, shared human experience (Neff, 2003b). It consists of forgiving one's own failings, respecting oneself as a human, and recognizing the interconnectedness and equality of all people (Neff, 2003b).

Theoretical and empirical background. Neff (2003b) proposed that self-compassion is comprised of three components: self-kindness, "extending kindness and understanding to oneself rather than harsh judgment and self-criticism;" common humanity, "seeing one's experiences as part of the larger human experience rather than seeing them as separate and isolated," and mindfulness, "holding one's painful thoughts and feelings in balanced awareness rather than over-identifying with them" (p. 89). Neff argued that a certain degree of mindfulness is necessary to allow individuals to experience enough space between their

negative thoughts and their self-evaluations to allow feelings of self-kindness and common humanity to develop.

Despite these conceptual similarities, however, mindfulness and self-compassion are two distinct constructs in theory and application. Whereas mindfulness focuses on present moment awareness and nonjudgmental experiencing, self-compassion is an active process of engaging in self-soothing behavior when confronted with suffering (Bluth & Blanton, 2013). In other words, mindfulness is applicable across situations, whereas self-compassion is most relevant to moments of pain, anger, or embarrassment (Bluth & Blanton, 2013). Bluth and Blanton (2013) created a simple distinction between the two constructs when they wrote, "mindfulness brings awareness to one's suffering and. . . self-compassion addresses and ameliorates that suffering" (p. 3). Due to these conceptual differences, recent research on the interplay between mindfulness and self-compassion have conceptualized and measured them as discrete constructs (see Baer, Lykins, & Peters, 2012; Bluth & Blanton, 2013; Keng, Smoski, & Robins, 2011; Kuyken et al., 2010; Robins, Keng, Ekblad, & Brantley, 2012; Van Dam, Sheppard, Forsyth, & Earleywine., 2011).

Scholarly work on self-compassion has gained traction since Neff (2003b) first introduced the construct as an alternative to self-esteem. MacBeth and Gumley (2012) conducted a meta-analysis of 20 samples from 14 different studies that looked at the relationship between self-compassion and different facets of psychopathology. They observed a large effect size for the relationship between self-compassion and psychopathology, suggesting that higher levels of self-compassion were associated with fewer symptoms of depression, anxiety, and stress. Other researchers have found positive correlations between self-compassion and life satisfaction (Neff, 2003a), self-worth (Neff &

Vonk, 2009), happiness (Neff & Vonk, 2009), optimism (Neff & Vonk, 2009), positive affect (Neff & Vonk, 2009), emotional intelligence (Heffernan, Griffin, McNulty, & Fitzpatrick, 2010), coping skills (Leary, Tate, Adams, Batts Allen, & Hancock, 2007; Neff, Hsieh, & Dejitterat, 2005), mastery goals (Neff et al., 2005) self-improvement motivation (Breines & Chen, 2012), and overall psychological well-being (Baer et al., 2012; Neely, Schallert, Mohammed, Roberts, & Chen, 2009; Neff, Kirkpatrick, & Rude, 2007) in both community samples and undergraduates. The connection between self-compassion and facets of objectification theory has not been explored as thoroughly as the connection between mindfulness and objectification theory; however, several studies have investigated the relationship between self-compassion and body shame and appearance anxiety.

Self-compassion and objectification theory. Albertson et al. (2014) explained how the three components of self-compassion outlined by Neff (2003b) could reduce body dissatisfaction and associated constructs, such as body shame and eating disorder behaviors. First, self-kindness directly counters the root of body dissatisfaction, the tendency to criticize one's own body rather than accept it as it is. Second, a sense of common humanity may help women think about their bodies from a broader perspective, mitigating body dissatisfaction and body shame. Third, mindfulness should enable women to acknowledge their negative thoughts and feelings about their bodies without fixating on them. To test this theory, Albertson et al. (2014) conducted a mixed between- and within-groups experiment with a sample of predominantly White women. Participants in the treatment group listened to self-compassion meditation audio recordings. Results suggested that participants in the treatment group experienced significantly greater reductions in body dissatisfaction, body shame, and

contingent self-worth based on appearance, and significantly greater increases in self-compassion and body appreciation, compared to the control group.

Several other researchers have also used Neff's (2003b) conceptualization of self-compassion to explore its relationship with other body- and eating-related concerns. Wasylkiw et al. (2012) studied the association between self-compassion and body-related concerns using a cross-sectional design. Using samples of predominantly White undergraduate women in Canada, they found that greater self-compassion predicted fewer body concerns, fewer weight concerns, less body preoccupation, and less eating guilt. Furthermore, self-compassion partially mediated the relationship between body preoccupation (a construct similar to body surveillance) and depressive symptoms. Wasylkiv et al. concluded that self-compassion plays a unique role in women's self-acceptance of their bodies.

In a multi-part study, Breines, Tool, Tu, and Chen (2014) studied the relationships among self-compassion, body image, and disordered eating using both a naturalistic and a laboratory study. In the first study, a sample of female undergraduates of diverse racial/ethnic backgrounds completed daily records of appearance-related self-compassion, self-esteem, and disordered eating behaviors. Results of a hierarchical linear modeling analysis showed that participants reported less disordered eating on days when they reported higher levels of self-compassion. In the second study, a second sample of female undergraduates of diverse racial/ethnic backgrounds were primed to think about a perceived body flaw, then completed measures of state appearance-related self-compassion, state self-esteem, state body shame, and anticipated disordered eating behaviors. Participants were then given the choice to consume chocolate candies while completing a neutral word search task; those participants

who did not eat any candies or who indicated that they ate fewer candies than they wanted completed an additional questionnaire assessing restrained eating. A structural equation model indicated that body shame partially mediated the negative relationship between self-compassion and two measures of disordered eating (i.e., anticipated disordered eating and weight-gain concern motives for restrained eating), such that self-compassion predicted less body shame, and less body shame predicted less disordered eating. They concluded that self-compassion may serve as a protective factor against negative body image and disordered eating.

Ferreira, Pinto-Gouvelia, and Duarte (2013) studied the relationships among self-compassion, external shame, and eating disordered behaviors and attitudes (including drive for thinness, bulimia, and body dissatisfaction) in a sample of female patients with eating disorders and a community sample of women, both from Portugal. Regression analysis indicated that self-compassion partially mediated the positive relationship between external shame and drive for thinness in the community sample, such that higher levels of self-compassion lessened the positive effect of external shame on drive for thinness. In the clinical sample, self-compassion partially mediated the positive relationship between external shame and drive for thinness as well as the relationship between body image dissatisfaction and drive for thinness. In other words, among women diagnosed with eating disorders, higher levels of self-compassion lessened the positive effects of external shame *and* body image dissatisfaction on drive for thinness. Ferreira et al. concluded that cultivating self-compassion is important in combatting eating disordered attitudes and behaviors, especially for women diagnosed with eating disorders.

Mosewich, Kowalski, Sabiston, Sedgwick, and Tracy (2011) explored the relationships among self-compassion, proneness to self-conscious emotions, and unhealthy self-evaluation thoughts and behaviors in a sample of young women athletes. They found that self-compassion uniquely predicted variance in shame proneness, objectified body consciousness, fear of failure, and fear of negative evaluation, such that greater self-compassion was associated with lower levels of these four variables.

Together, the results of these six studies provide strong support for exploring the relationships among self-compassion and body surveillance, body shame, and disordered eating. Specifically, the results of Breines et al.'s (2014) second study and Ferreira et al.'s (2013) study suggest that self-compassion may moderate the relationship between body surveillance and body shame. Self-compassion may help women treat their bodies more kindly, think about their bodies as connecting them to all of humanity, and keep a healthy distance from critical thoughts or feelings about their bodies.

There is also evidence to suggest that self-compassion may affect women's experiences of appearance anxiety. Neff (2003b) theorized that self-compassion may protect against anxiety in general by decreasing self-judgment and increasing self-supportiveness. Indeed, Neff (2003a) found that scores on a measure of self-compassion that she developed were negatively correlated with scores on a measure of trait anxiety. Mindfulness has also been shown to negatively correlate with anxiety (see Brown et al., 2013); some researchers have found that mindfulness is a more robust predictor of reduced anxiety than self-compassion (e.g., Bergen-Cico & Cheon, 2013; Soysa & Wilcomb, 2013), whereas others (e.g., Van Dam et al., 2011) have found self-compassion to be a better predictor. However, in light of Bluth and Blanton's (2013) explication of the conceptual differences between

mindfulness and self-compassion (i.e., mindfulness is a way of acknowledging emotions, whereas self-compassion is a way of addressing them, especially self-conscious emotions), it seems that self-compassion may better predict *appearance anxiety* due to its specific self-evaluative component. Indeed, in a large-scale study using a community sample of men and women, Neff and Vonk (2009) found that self-compassion was negatively correlated with appearance-contingent self-worth, a construct similar to appearance anxiety.

Summary of strength-based moderators. Mindfulness and self-compassion are two ways of relating to oneself and one's experiences in a noncritical, appreciative, holistic way. Both constructs have been shown to be inversely correlated with negative body-related thoughts and behaviors, including body dissatisfaction, body shame, disordered eating thoughts, and disordered eating behaviors. Mindfulness has also been shown to be positively associated with dispositional flow and internal bodily awareness; all three of these constructs are associated with women's experiences of themselves within the present moment. Self-compassion has been shown to be negatively associated with body shame and appearance anxiety; all three of these constructs involve a woman's affective evaluation of herself. Results of several intervention studies (e.g., Albertson et al., 2014; Aherne et al., 2011; Impett et al., 2006; Silverstein et al., 2011) suggest that programs and treatments that incorporate mindfulness and self-compassion could help buffer against or ameliorate some of the negative effects of objectification.

Purpose of the Study

The purpose of the present study was twofold. First, we attempted to establish a clearer understanding of the role of flow in objectification theory by addressing some of the methodological limitations of previous studies. Specifically, we used a dispositional,

dimensional conceptualization of flow; measured it using an appropriate, well-validated instrument (i.e., the DFS-2) developed from Csikszentmihalyi's (1975) theory; and selected the three most relevant dimensions to analyze. Second, we investigated the moderating effects of (a) mindfulness on the links from body surveillance to flow and body responsiveness and (b) self-compassion on the links from body surveillance to body shame and appearance anxiety. Addressing these concerns contributes to the understanding of objectification theory and can provide direction for developing individual- and community-level strength-based interventions that are rooted in positive psychology and consistent with feminist psychology's goal of ameliorating the consequences of objectification. In accordance with objectification theory, flow theory, and prior research on mindfulness and self-compassion, the following relationships were predicted:

1. Concentration will mediate the relationships between (a) body surveillance and disordered eating; (b) body surveillance and depression symptoms; and (c) body surveillance and sexual functioning (see Figure 2).
2. Sense of control will mediate the relationships between (a) body surveillance and disordered eating; (b) body surveillance and depression symptoms; and (c) body surveillance and sexual functioning (see Figure 2).
3. Loss of self-consciousness will mediate the relationships between (a) body surveillance and disordered eating; (b) body surveillance and depression symptoms; and (c) body surveillance and sexual functioning (see Figure 2).
4. Dispositional mindfulness will moderate the relationships between (a) body surveillance and concentration; (b) body surveillance and sense of control; (c) body surveillance and loss of self-consciousness; and (d) body surveillance and body

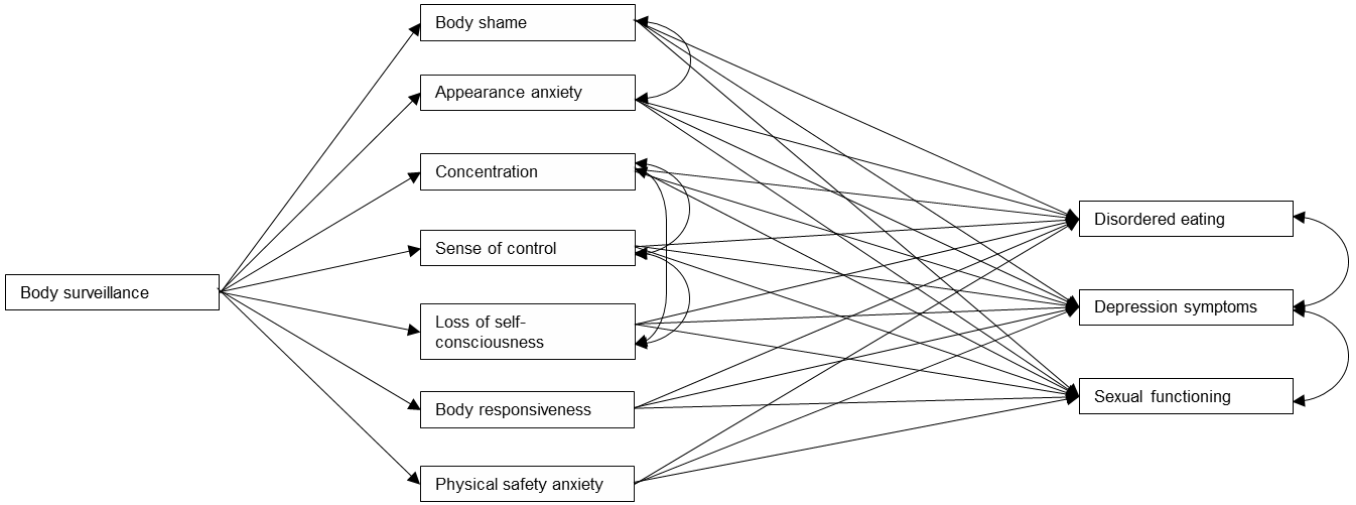


Figure 2. Proposed model of the mediating role of three dimensions of flow in objectification theory.

responsiveness, such that these relationships will be weaker for women with higher levels of dispositional mindfulness (see Figure 3).

5. Dispositional mindfulness will moderate the mediation of the links between body surveillance and (a) disordered eating, (b) depression symptoms, and (c) sexual functioning by concentration, such that the relationship between body surveillance and these outcome variables through concentration will be weaker for women with higher levels of dispositional mindfulness (see Figure 3).
6. Dispositional mindfulness will moderate the mediation of the links between body surveillance and (a) disordered eating, (b) depression symptoms, and (c) sexual functioning by control, such that the relationship between body surveillance and these outcome variables through control will be weaker for women with higher levels of dispositional mindfulness (see Figure 3).
7. Dispositional mindfulness will moderate the mediation of the links between body surveillance and (a) disordered eating, (b) depression symptoms, and (c) sexual functioning by loss of self-consciousness, such that the relationship between body surveillance and these outcome variables through loss of self-consciousness will be weaker for women with higher levels of dispositional mindfulness (see Figure 3).
8. Dispositional mindfulness will moderate the mediation of the links between body surveillance and (a) disordered eating, (b) depression symptoms, and (c) sexual functioning by body responsiveness, such that the relationship between body surveillance and these outcome variables through body responsiveness will be weaker for women with higher levels of dispositional mindfulness (see Figure 3).

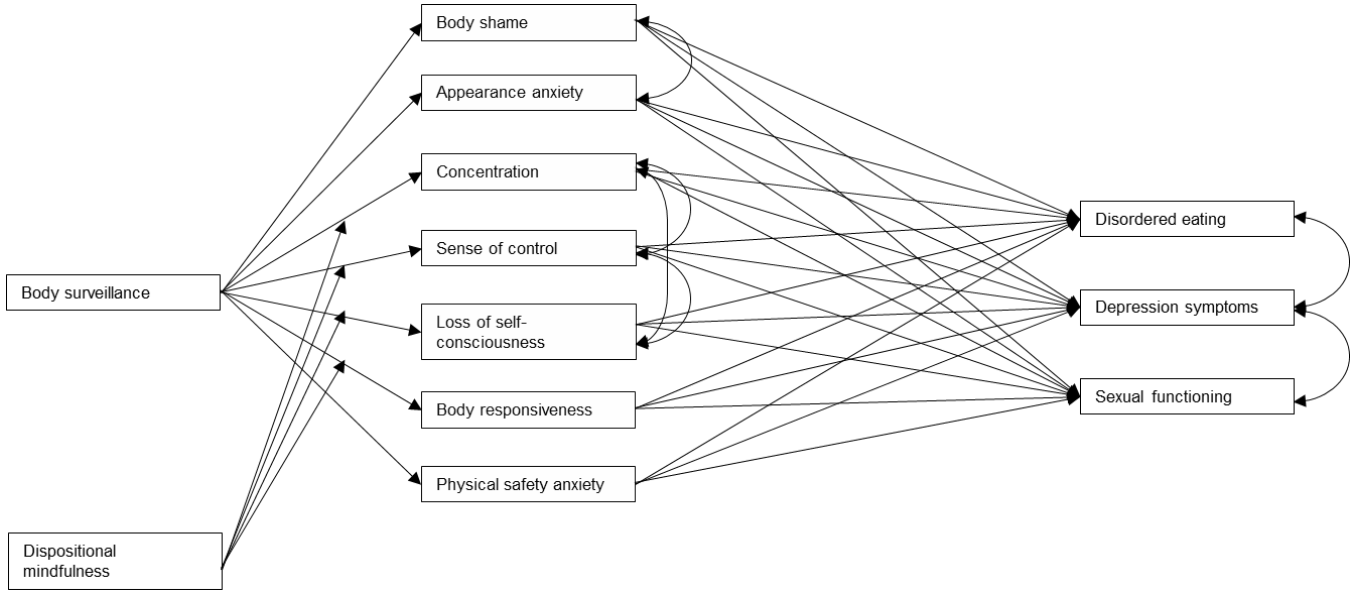


Figure 3. Proposed model of the moderating role of dispositional mindfulness in objectification theory.

9. Within the objectification theory model, dispositional mindfulness will moderate the following links: body surveillance and concentration, body surveillance and sense of control, body surveillance and loss of self-consciousness, and body surveillance body responsiveness, resulting in first-stage moderated mediation of disordered eating, depression symptoms, and sexual functioning (see Figure 3).
10. Self-compassion will moderate the relationships between (a) body surveillance and body shame and (b) body surveillance and appearance anxiety, such that these relationships will be weaker for women with higher levels of self-compassion.
11. Self-compassion will moderate the mediation of the links between body surveillance and (a) disordered eating, (b) depression symptoms, and (c) sexual functioning by body shame, such that the relationship between body surveillance and these outcome variables through body shame will be weaker for women with higher levels of self-compassion (see Figure 4).
12. Self-compassion will moderate the mediation of the links between body surveillance and (a) disordered eating, (b) depression symptoms, and (c) sexual functioning by appearance anxiety, such that the relationship between body surveillance and these outcome variables through appearance anxiety will be weaker for women with higher levels of self-compassion (see Figure 4).
13. Within the objectification theory model, self-compassion will moderate the following links: body surveillance and body shame and body surveillance and appearance anxiety, resulting in first-stage moderated mediation of disordered eating, depression symptoms, and sexual functioning (see Figure 4).

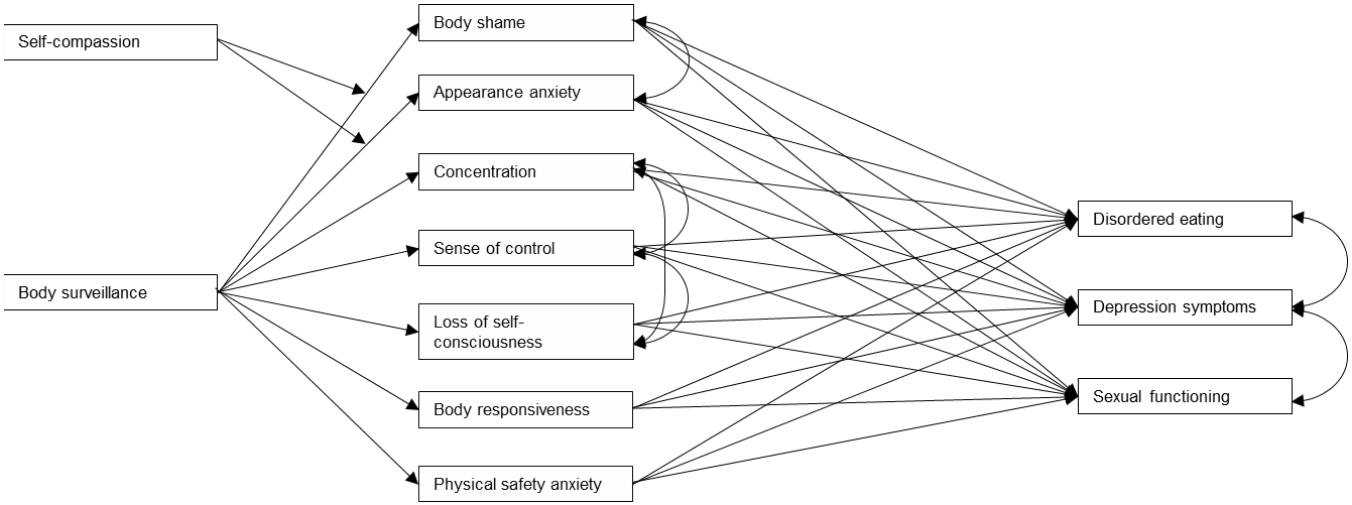


Figure 4. Proposed model of the moderating role of self-compassion in objectification theory.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

The present study employed a quantitative descriptive correlational design using structural equation modeling (SEM).

Participants

Fredrickson and Roberts (1997) suggested that although objectification affects women throughout the lifespan, its effects are felt most acutely during adolescence and middle-age. In order to control for the effects of age, participation in this study was limited to women ages 18-50. Objectification theory was also developed specifically to explain women's experiences in Western cultures; to control for the effects of culture, participation in the proposed study was limited to women who identified as United States citizens. The accessible population included women ages 18-50 who identified as United States citizens and were a) enrolled in an undergraduate psychology class at UMKC, b) using MTurk, or c) accessible through social media websites.

The projected sample size of this study was 600 women. Although adequate sample size for path analysis can be difficult to determine, a generally accepted heuristic is at least 5-10 participants per free parameter and no fewer than 100 participants total (Norman & Streiner, 2003). The most complex hypothesized moderation model (i.e., the proposed model of the moderating role of dispositional mindfulness; see Figure 3) contains 55 free parameters. Sampling at least 550 women ensured that there would be enough usable cases to garner meaningful interpretations from the data.

Procedure

Recruitment. Approval was received from the UMKC Social Sciences Institutional Review Board prior to recruiting participants. Participants were recruited from three sources: Psych Pool, MTurk, and chain-referral sampling through social media websites. Using multiple methods of recruitment helped reach a larger, more diverse sample and allowed for comparisons to be made among groups recruited in different ways.

UMKC Psych Pool. Psych Pool is the online participant recruitment system at UMKC. Its goals are to "facilitate recruitment of research participants by Department of Psychology researchers" and to "enhance student education by facilitating participating in psychology research" (University of Missouri-Kansas City, 2014b). In fall 2013, 65% of students enrolled at UMKC identified their race/ethnicity as White, 13% identified as Black/African American, 7% identified as Asian, 7% identified as Non-resident International, 5% identified as Hispanic/Latino, and 2% identified as two or more ethnicities (University of Missouri-Kansas City, 2014a). As anticipated based on data gathered by Grotewiel and Marszalek (2013), students who identify as White were overrepresented in our sample, and students with "other" racial/ethnic/cultural identities were overrepresented. The average age of participants recruited through Psych Pool was 22.11 years (*SD* = 4.15); age ranged from 18 through 36 years.

MTurk. Amazon's Mechanical Turk (MTurk) is an online marketplace that connects "requesters" (i.e., task creators) and "workers" (i.e., paid task completers) to facilitate task creation, labor recruitment, compensation, and data collection (Buhrmester, Kwang, & Gosling, 2011). Paolacci and Chandler (2014) reported that the MTurk workforce is currently

comprised of more than 500,000 workers from 190 countries, with three-quarters of workers residing in the United States or India. Workers tend to be diverse but not representative of their country's larger populations: They tend to be younger (around 30 years old), overeducated, underemployed, less religious, and more liberal than the general population (Paolacci & Chandler). Within the United States, Asian individuals are overrepresented in the MTurk worker pool and Black and Hispanic individuals are underrepresented (Paolacci & Chandler). Several reviews of studies using MTurk for participant recruitment have concluded that MTurk workers are more diverse than college samples and that MTurk is a high-quality alternative to more traditional methods of convenience sampling for psychological research (Buhrmester et al., 2011; Paolacci & Chander, 2014). The average age of participants recruited through MTurk was 31.71 years (*SD* = 7.67); age ranged from 18 through 50 years.

Social media websites. Snowball sampling through social media platforms such as Facebook and Reddit is a modern form of *chain-referral sampling*. Chain-referral sampling acknowledges the roles of relationships and shared environment (problems also inherent but rarely discussed explicitly in college student samples) and provides easier access to "hidden" populations not traditionally accessible through other methods of convenience sampling. The primary websites used for this sampling procedure were the social networking website Facebook and the entertainment, social networking, and news website Reddit. On Reddit, the specific community that was targeted was r/SampleSize, which is described as "a community dedicated to the scientific, fun, and creative surveys produced by redditors" (Reddit, Inc., 2014). For this study, it was anticipated that chain-referral sampling would help reach

participants who are older than participants recruited through PsychPool and MTurk and do not live in the Midwestern United States The average age of participants recruited through social media websites was 30.09 years (*SD* = 7.12); age ranged from 18 through 50 years.

Participant procedure. Participants completed the study entirely online, in one sitting, wherever and whenever they chose from the time the study launched until data collection was complete. The study was in survey format and hosted on SurveyMonkey. The survey opened to an informed consent document, which participants were asked to read and required to agree to before moving forward in the study. The next three pages that participants saw were screening questions that asked participants to select their gender identification, age range, and whether or not they were United States citizens to confirm that they met inclusion criteria. Participants who failed any of these screening questions were directed to the debriefing screen. Participants who passed all three of these questions were taken to the study survey.

The first page of survey questions included a brief demographic questionnaire used to collect participants' sex assigned at birth, gender identity, age, race/ethnicity, sexual orientation, educational attainment, annual income, height, and weight. The following 11 pages (approximately 160 questions) in the study consisted of the measures of body surveillance, body shame, appearance anxiety, physical safety anxiety, dispositional flow, body responsiveness, disordered eating, depression symptoms, sexual functioning, dispositional mindfulness, and self-compassion. Measures were presented in the same order to all participants. The final page contained a debriefing statement, including contact information for the researcher, the UMKC Counseling Center (for UMKC participants),

and/or hotline information, as well as a link to a separate survey for participants to follow for compensation for their participation. The pages containing the demographic survey and the other measures contained links to the debriefing screen as well so that participants had the option of exiting the survey at any time without penalty (with the exception of the MTurk participants, who were required to complete the survey in order to be compensated). The survey was anticipated to take approximately 45 minutes to complete.

Participants were compensated for their time and as a way to prevent attrition. Psych Pool participants received one Psych Pool credit for their psychology class. MTurk participants received a small ($0.90) payment consistent with MTurk standards for completing survey work that takes between 30 minutes and one hour (see Buhrmester et al., 2011). Participants recruited through social media websites had the option of following a link to a separate webpage to enter a raffle for one of four $25 gift cards to Amazon.com. Identifying information for the raffle was collected separately and could not be connected to survey responses.

Measures

Demographic data. Demographic information was collected using a questionnaire designed by the researchers that asked participants to disclose their biological sex assigned at birth, gender identification, age, race/ethnicity/cultural identity, sexual orientation, height, and weight (see Appendix A).

Body surveillance. Body surveillance was measured using the body surveillance subscale of the Objectified Body Consciousness Scale (OBC; McKinley & Hyde, 1996). The full OBC contains 24 self-report items that measure the extent to which responders view their

bodies as objects and endorse related beliefs (i.e., objectified body consciousness). The response format is a 7-point scale used to indicate endorsement of an objectified body consciousness (1 = *strongly disagree* through 7 = *strongly agree*) with the option of marking an item as not applicable as well. Participants' scores are considered invalid when they mark two or more questions not applicable. Scores are determined by participants' average score on all completed items. Higher scores indicate higher levels of objectified body consciousness. Results of a Confirmatory Factor Analysis (CFA) of the OBC suggested the presence of three factors: body control, body shame, and body surveillance.

The eight items that comprise the body surveillance subscale (OBC-Surv; see Appendix C) measure how frequently participants think about their bodies and to what extent they judge their bodies based on how they look rather than how they feel. In McKinley and Hyde's (1996) scale development study, Cronbach's alpha for the body surveillance subscale was .89. Convergent validity for the body surveillance subscale has been evidenced by a negative correlation with scores on the Body Esteem Scale (Franzoi & Shields, 1984), a strong positive correlation with scores on the body shame subscale of the OBC, and a moderate positive correlation with scores on the body control beliefs subscale of the OBC (McKinley & Hyde). Construct validity has been demonstrated by a strong correlation with scores on the public self-consciousness subscale of the Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975) and by a positive correlation with a measure of personal endorsement of cultural standards (McKinley & Hyde, 1996). Discriminant validity has been evidenced by the lack of correlation with scores on the private self-consciousness and social anxiety

subscales of the Self-Consciousness Scale (McKinley & Hyde, 1996). An example item from the body surveillance subscale is, “I rarely think about how I look” (reverse-scored).

Body shame. Body shame was measured using the body shame subscale of the OBC Scale (OBC-Shame; McKinley & Hyde, 1996; see Appendix C). Cronbach’s alpha for the OBC-Shame with McKinley and Hyde’s (1996) original sample of undergraduate women was .75. Convergent validity for the subscale has been evidenced by a strong positive correlation with the OBC-Surv, a small positive correlation with the body control subscale of the OBC Scale, and a strong negative correlation with body esteem (McKinley & Hyde). Construct validity has been demonstrated by a positive correlation with personal endorsement of cultural standards (McKinley & Hyde). An example item from the body shame subscale is, “When I can't control my weight, I feel like something must be wrong with me.”

Appearance anxiety. Appearance anxiety was measured using the Social Appearance Anxiety Scale (SAAS; Hart et al., 2008), a 16 item self-report measure (see Appendix D). The SAAS was developed from other measures of social anxiety, body image dissatisfaction, and body dysmorphic disorder and normed on several samples of undergraduate college students (Hart et al., 2008). The response format is a 5-point scale used to indicate agreement with statements about appearance anxiety (1 = *not at all* to 5 = *extremely*), with higher scores indicating higher levels of appearance anxiety. Item scores are summed to create a scale score. Results of an Exploratory Factor Analysis (EFA) and a CFA analysis from the scale development study support a unidimensional factor structure (Hart et al., 2008). Hart et al. (2008) reported strong internal consistency estimates of at least .94 for

three samples and a one-month test-retest reliability correlation of .84. Convergent validity was evidenced by positive correlations with other measures of social anxiety, depression, and body image disturbance (Hart et al., 2008). The SAAS was shown to predict a unique proportion of variability in social anxiety above and beyond negative body image and social anxiety, evidencing discriminant validity (Hart et al., 2008). An example item is, "I feel comfortable with the way I appear to others" (reverse-scored).

Dispositional flow. Dispositional flow was measured using the Dispositional Flow Scale-2 Long Form (DFS-2; Jackson & Eklund, 2002), a 36 item self-report measure (see Appendix E). The DFS-2 is based on the nine elements of flow proposed by Csikszentmihalyi (1990) and was developed from the Trait Flow Scale (TFS; Jackson et al., 1998), which was created from the Flow State Scale (FSS; Jackson & Marsh, 1996). The DFS-2 contains four questions about the degree to which participants experience each of the nine elements of flow; results of two CFAs supported this nine first-order factor model, which is consistent with Csikszentmihalyi's conceptualization of the nine elements of flow. The response format of the DFS-2 is a 5-point scale used to indicate agreement with statements about the frequency of flow experiences (1 = *never* through 5 = *always*), with higher scores indicating increased levels of dispositional flow. Item scores are summed to create subscale scores. Jackson et al. (2001) reported strong internal consistency estimates for every subscale of the DFS-2: challenge skill balance = .81, action awareness = .87, clear goals = .80, unambiguous feedback = .87, concentration on task = .85, sense of control = .83, loss of self-consciousness = .89, transformation of time = .87, and autotelic experience = .83. Cross-validation reliability estimates ranged from .78 to .86, with a mean alpha of .82

(Jackson et al.). The full DFS-2 was administered to participants, although only scores on the Concentration, Control, and Loss of Self-Consciousness subscales were analyzed for this study. An example item from the Concentration subscale is, “My attention is focused entirely on what I am doing.” An example item from the Control subscale is, “I have a sense of control over what I am doing.” An example item from the Loss of Self-Consciousness subscale is, “I am not concerned with what others may be thinking of me.”

The original DFS-2 was created to measure propensity for experiencing flow in a specific activity. For the purposes of this study, the instructions were modified to target “any activity in life” rather than experiences in a single activity. Using these modified instructions with an undergraduate sample, Johnson et al. (2014) found coefficient alphas ranging from .80 for the autotelic experience subscale to .91 for the clear goals subscale. As evidence of criterion-related validity, Johnson et al. (2014) demonstrated that scores on the DFS-2 could be predicted from scores on measures of neuroticism (inversely related to dispositional flow) and conscientiousness (positively related to dispositional flow), and that time spent in flow could be predicted from DFS-2 scores.

Physical safety anxiety. Physical safety anxiety was assessed using three items taken from Ferraro’s (1996) Fear of Crime scale (see Appendix F). The three questions on this modified measure of physical safety anxiety (PSA) ask respondents to use a 10-point scale to indicate how afraid they are of being raped or sexually assaulted, attacked by someone with a weapon, or being robbed or mugged on the street (1 = *not afraid at all* to 10 = *very afraid*). Higher scores indicate greater physical safety anxiety. Item scores are summed to create a scale score. Ferraro (1996) reported that women scored higher on all three of these items than

men. Furthermore, consistent with objectification theory, scores on all three of these items could be predicted from indirect victimization (i.e., awareness of a friend's or family member's recent victimization). An example item assesses fear of "being raped or sexually assaulted."

Body responsiveness. Body responsiveness was measured using Daubenmier's (2005) body responsiveness (BR) scale, a 7-item self-report measure (see Appendix G). Daubenmier developed this scale to measure body responsiveness within the context of objectification theory. Unlike a more commonly used measure of internal bodily awareness, the Body Awareness Questionnaire (BAQ; Shields, Mallory, & Simon, 1989), this measure reflects Daubenmier's (2005) conceptualization of the construct of internal bodily awareness as including responsiveness to bodily sensations. The scale was normed on a predominantly White sample of women who were yoga practitioners, aerobic exercisers, and non-exercisers. The response format is a 7-point scale used to indicate agreement with statements about body responsiveness (1 = *not at all true about me* to 7 = *very true about me*), with higher scores indicating greater levels of body responsiveness. Item scores are averaged to create a scale score. Martin et al. (2013) used this scale as a measure of internal bodily awareness and found that scores on this measure mediated the relationship between yoga participation and both mindful eating and disordered eating. Daubenmier (2005) found that scores on this measure mediated the relationship between self-objectification and disordered eating attitudes, whereas scores on the BAQ did not. Daubenmier (2005) reported a Cronbach's alpha of .83 and Martin et al. (2013) reported a Cronbach's alpha of .77 for this scale. Convergent validity was evidenced by a positive correlation with the BAQ (Daubenmier,

2005). An example item is, “I am confident that my body will let me know what is good for me.”

Eating disorder attitudes and behaviors. Eating disorder attitudes and behaviors were measured using the Eating Attitudes Test-26 (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982; see Appendix H). The EAT-26 is a 26-item scale derived from the original Eating Attitudes Test-40. The EAT-26 contains three factors: dieting (13 items), bulimia and food preoccupation (6 items), and oral control (7 items), although a total has been supported and was used for this study (Garner et al., 1982). The response format is a 6-point scale used to indicate frequency of eating disordered thoughts and behaviors (1 = *never* through 6 = *always*). Consistent with Kozee and Tylka (2006) and Watson, Grotewiel, Farrell, Marshik, and Schneider’s (2015) scoring methodology, we calculated total scores by summing all responses in order to avoid floor effects associated with Garner et al.’s (1982) scoring in nonclinical samples. Higher scores indicate greater eating disorder attitudes and behaviors. Garner et al. (1982) reported a Cronbach’s alpha of .83 for the entire EAT-26 for a sample of undergraduate women and a Cronbach’s alpha of .90 for a sample of women receiving treatment for anorexia nervosa. Construct validity of the EAT-26 was evidenced by positive correlations with body size estimate, body dissatisfaction, body-image, and symptoms on the Hopkins Symptom Checklist (HSCL; Derogatis, Lipman, Rickets, Uhlenhuth, & Covi, 1974) and a negative correlation with ideal body size estimate for the anorexia nervosa sample (Garner et al., 1982). An example item is, “[I] am terrified about being overweight.”

Depressive symptoms. Depressive symptoms were assessed using the Center for Epidemiologic Studies Depression Scale Short Form (CES-D-SF; Cole, Rabin, Smith, &

Kaufman, 2004; see Appendix I). The CES-D is a 10-item self-report measure developed to assess depressive symptomology in non-clinical populations for research purposes. It was developed from the 20-item CES-D (Radloff, 1977). The full CES-D scale was normed on predominantly White clinical and nonclinical adult samples. The CES-D-SF was developed with an undergraduate sample without reported demographic data and normed on a nonclinical multiethnic community sample (Cole et al., 2004). In line with Radloff's (1977) original conceptualization of the CES-D, Cole et al. (2004) found support for a single-factor structure of the CES-D-SF. The response format of the CES-D-SF is a 4-point scale used to indicate frequency of experiences associated with depression in the past two weeks (1 = *rarely or none of the time* to 4 = *most or all of the time*), with higher scores indicating greater depressive symptomology. Item scores are summed to create a scale score. Cole et al. (2004) reported a Cronbach's alpha .82 for the undergraduate sample and .75 for the community sample. The correlation between scores on the CES-D-SF and the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) for the community sample was .74, evidencing strong convergent validity. An example item is, "I was bothered by things that usually don't bother me."

Sexual functioning. An adapted version of the Female Sexual Function Index (FSFI; Rosen et al., 2000; see Appendix J) was used to assess sexual functioning. The complete FSFI is a self-report measure that produces a total score and subscale scores on five factors: desire/arousal, lubrication, orgasm, satisfaction, and pain. As suggested by Steer and Tiggemann (2008), the items related to lubrication and pain were omitted because they may feel too intrusive for some participants. Two questions related to satisfaction with a sexual

partner were also omitted to allow women without a partner to complete the scale. Similarly, the wording of the questions was changed from Rosen et al.'s (2000) reference to sexual experiences during the past four weeks to Steer and Tiggemann's (2008) reference to sexual experiences in general. This change was intended to allow women who were not currently sexually active to complete the scale. The response choices for these items ranged from 1 to 5 with varying anchor terms (e.g., 1 = *almost never or never* to 5 = *almost always or always*; 1 = *very high* to 5 = *very low or none at all*), with higher scores indicating greater sexual functioning. Item scores are summed to create a scale score.

Steer and Tiggemann (2008) reported good internal consistency of their adapted version of the FSFI. Rosen et al. (2000) reported high two-to-four week test-retest reliability for their original five subscales (r = .79 to .86). In Rosen et al.'s (2000) study, construct validity was demonstrated by a significant difference in mean FSFI scores between a group of women diagnosed with female sexual arousal disorder and a control group. Divergent validity was demonstrated with low or non-significant correlations between scores on the FSFI subscales and scores on a measure of marital satisfaction. An example item is, "Generally, how often do you feel sexual desire or interest?"

We added two additional items asking participants to indicate whether or not they considered themselves currently sexually active or sexually active sometime in the past. These items were not used in this analysis but could be useful in future analyses to explore differences between women who do and do not consider themselves sexually active.

Dispositional mindfulness. Dispositional mindfulness was measured using the Freiburg Mindfulness Inventory-Short Form (FMI-SF; Walach, Buchheld, Buttenmuller,

Kleinknect, & Schmidt, 2006; see Appendix K). The FMI-SF is a 14 item self-report measure developed as a shorter, alternative version of the Freiburg Mindfulness Inventory. It measures mindfulness as a general construct with interrelated attentional, awareness, and acceptance facets (Walach et al., 2006). The Short Form was specifically developed for use with a general population not necessarily familiar with Buddhism or meditation (Walach et al., 2006). The response format is a 4-point scale used to indicate frequency of mindful experiencing (1 = *rarely* to 4 = *almost always*), with higher scores indicating greater levels of dispositional mindfulness. Item scores are summed to create a scale score. Walach et al. (2006) reported an acceptable Cronbach's alpha level of .79 for a general population sample. As evidence of construct validity, they reported that scores on the FMI-SF positively correlated with scores on measures of self-awareness and self-knowledge as well as years of meditation experience. An example item is, "I am open to the experience of the present moment."

Self-compassion. Self-compassion was assessed using the Self-Compassion Scale—Short Form (SCS-SF; Raes, Pommier, Neff, & Gucht, 2011; see Appendix L). The SCS-SF is a 12 item self-report scale developed from the Self-Compassion Scale (SCS; Neff, 2003a) to assess overall self-compassion more efficiently. Like the SCS, the SCS-SF assesses six domains of self-compassion: self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification; however, Raes et al. (2011) recommended that only the total score of the SCS-SF be used. The response format is a 5-point scale used to indicate frequency of self-compassion experiences (1 = *almost never* to 5 = *almost always*), with higher scores indicating greater levels of self-compassion. Item scores are summed to create

a scale score. Raes et al. (2011) reported a Cronbach's alpha value of .86 for a sample of undergraduate students in the United States Scores on the SCS-SF correlated nearly perfectly with scores on the SCS (r = .98). As evidence of construct validity of the SCS, Neff (2003a) reported that the mean total score of a group of practicing Buddhists was significantly higher than the mean total score of an undergraduate control group. Furthermore, SCS scores correlated with years of Buddhist practice for the Buddhist group. As evidence of convergent validity, Neff (2003a) reported moderate positive correlations with other measures of positive self-regard, including measures of self-esteem, self-acceptance, and self-determination. As evidence of discriminant validity, Neff (2003a) reported a non-significant correlation between the SCS and the Narcissistic Personality Inventory. An example item is, "When I fail at something important to me I become consumed by feelings of inadequacy" (reverse-scored).

CHAPTER 4

RESULTS

Missing Data

In total, 590 individuals accessed the survey. Fifteen would-be participants were prevented from completing the survey because they did not meet the inclusion criteria (i.e., two identified as men, five identified as over 50 years old, five did not identify as United States citizens, and three exited the survey before answering all of the screening questions). In addition, 13 respondents were removed for not identifying as women on the demographics form (i.e., 3 only identified as gender fluid, 1 only identified as genderqueer, 3 only identified as gender non-binary, and 6 did not respond to this item). Three were removed for identifying their age as over 50 years on the demographics form, and eight were removed for not indicating age. Three respondents were removed for not identifying height and/or weight, and 47 respondents were removed because they neglected to complete one or more entire scales. Finally, one participant was removed because she exhibited a suspicious response pattern (e.g., indicated the same value for each item on multiple inventories, including reverse-scored items). Therefore, a total of 500 cases were included in the data analysis moving forward. Although 550 participants were desired in order to create a 10:1 ratio of cases to free parameters, a sample size of 500 was deemed sufficient because it surpassed the minimum recommended ratio of 5:1 (Norman & Streiner, 2003). With 500 participants and 55 free parameters, the cases to free parameters ratio in this study was 9.1:1.

We examined the data for nonignorable patterns of missing responses and found none. Notably, no variable was missing more than 5% of its data. Using listwise deletion

would have resulted in the loss of 158 cases, so expectation maximization (EM) was used to impute missing-item level data instead.

Participant Description

Data from 500 women between ages 18-50 who reported living in the United States were analyzed. Most participants (497; 99.4%) identified their sex assigned at birth as female; two (0.4%) reported their sex assigned at birth as male, and one (0.2%) did not respond to this question. The average age was 30.59 years (*SD* = 7.91); age ranged from 18 through 50 years. For gender identity, race/ethnicity/cultural identity, and sexual orientation, participants were asked to select all identities with which they identified, so percentages sum to greater than 100%. For gender identity, all 500 participants (100.0%) identified as women; two participants (0.4%) also identified as gender queer; one participant (0.2%) also identified as gender fluid, and one participant (0.2%) also identified as gender non-binary.

For race/ethnicity/cultural identity, the majority of participants (*n* = 382; 76.4%) identified as Caucasian/White/European American. Respondents also identified as Asian/Pacific Islander (*n* = 39; 7.8%), Hispanic/Latina (*n* = 38; 7.6%), Black/African American (*n* = 32; 6.4%), Native American/American Indian/Alaskan Native (*n* = 29; 5.8%), Multiracial/Multiethnic (*n* = 15; 3.0%), East Indian (*n* = 2; 0.4%), Middle Eastern (*n* = 1; 0.2%), and West Indian (*n* = 1; 0.2%). Racial/ethnic makeup of the entire sample was checked against comparable United States Census data (United States Census Bureau, 2015). The United States Census categorizes Hispanic ethnicity as a separate construct than race, such that there is no Hispanic/Latina racial category. In 2014, of the 70,059,476 United States women ages 18-50 included in the Census, 73.7% identified as White, 14.7%

identified as Black or African American, 1.3% identified as American Indian or Alaska Native, 6.7% identified as Asian, .3% identified as Native Hawaiian or Other Pacific Islander, and 2.4% identified as Two or More Races. Of all United States women, 83.1% identified as non-Hispanic. When differences in operationalization of Hispanic ethnicity are considered, our sample is fairly representative of the United States population of women within this age range.

For sexual orientation, the majority of participants identified as straight/heterosexual (*n* = 426; 85.2%). Respondents also identified as bisexual (*n* = 54; 10.8%), lesbian (*n* = 10; 2.0%), queer (*n* = 7; 1.4%), pansexual (*n* = 2; 0.4%), questioning (*n* = 2; 0.4%), and other sexual orientation (self-identifying as asexual, *n* = 5, 1.0%; biromantic asexual, *n* = 1, 0.2%; and straight, *n* = 1, 0.2%). Sexual orientation identity of the entire sample was checked against comparable data from the Centers for Disease Control and Prevention (Ward, Dahlhamer, Galinsky, & Joestl, 2014). Within a nationally representative sample of 118,833 adult women, 97.7% identified as heterosexual, 1.5% identified as gay or lesbian, and 0.9% identified as bisexual. Compared to these national statistics, women who identify as heterosexual were underrepresented in our study and women who identify as lesbian or bisexual were overrepresented.

Regarding racial/ethnic/cultural identity and sexual orientation identity within this study, proportions were similar across recruitment methods: For PsychPool, 83.7% of participants identified as Caucasian/White/European American and 81.6% identified as heterosexual; for MTurk, 74.5% of participants identified as Caucasian/White/European

American and 85.4% identified as heterosexual; and for social media, 88.5% of participants identified as Caucasian/White/European American and 78.2% identified as heterosexual.

Participants were also asked to select categories that best described their highest education and annual income level. The highest percentage of respondents reported that they held a bachelor's degree (*n* = 184; 36.8%). Other respondents reported some college, no degree (*n* = 110; 22.0%); master's degree (*n* = 83; 16.6%); associate's degree (*n* = 54; 10.8%); high school diploma (*n* = 32; 6.4%); vocational or trade school (*n* = 13; 2.6%); doctorate degree (*n* = 12; 2.4%); professional degree (*n* = 7; 1.4%); or GED (*n* = 3; 0.6%); with two participants (0.4%) not responding. Regarding annual income, 97 (19.4%) respondents reported $0-9,999; 59 (11.8%) reported $10,000-19,999; 76 (15.2%) reported $20,000-29,999; 70 (14.0%) reported $30,000-39,000; 69 (13.8%) reported $40,000-49,000; 39 (7.8%) reported $50,000-59,000; 28 (5.6%) reported $60,000-69,000; 20 (4.0%) reported $70,000-79,000; 6 (1.2%) reported $80,000-89,000; 11 (2.2%) reported $90,000-99,000; 22 (4.4%) reported $100,000 or more; and 3 (0.6%) did not respond to this question.

Participants were asked to enter their height in inches and weight in pounds. The Centers for Disease Control and Prevention's (2015) formula was used to calculate body mass index (BMI), and their classification system was used to sort BMIs into four categories: BMIs below 18.5 indicate underweight; BMIs 18.5-24.9 indicate normal or healthy weight; BMIs 25.0-29.9 indicate overweight; and BMIs 30.0 and above indicate obese. The average BMI of our sample was 26.12. Twenty-eight (5.6%) participants were classified as underweight, 252 (50.4%) were classified as normal or healthy weight, 102 (20.4%) were classified as overweight, and 118 (23.6%) were classified as obese. BMI classification of the

entire sample was checked against comparable data by the Centers for Disease Control and Prevention in 2005-2006 analyzed by Sharma (n.d.). Within a nationally representative sample of 118,833 women ages 20-49, 3.1% were classified as underweight, 39.1% were classified as normal weight, 22.6% were classified as overweight, and 35.2% were classified as obese. Compared to these national statistics, women classified as normal weight were overrepresented in our study and women classified as obese were underrepresented.

Data Screening

As suggested by Warner (2011), continuous scores were screened for normality and violation of assumptions prior to performing inferential statistical analyses. Z-scores were examined for univariate outliers. Seven z-scores for BMI and two z-scores for other scales from two participants fell between |3.00| and |3.50|. Because these data were not severely non-normal, and because SEM is robust to minor violations of normality, we did not remove these cases. All scale skewness values were less than |3.00| and all kurtosis values were less than |10.00|, suggesting that data were normally distributed. Visual inspection of univariate histograms also demonstrated normal distribution.

Finally, normality of the relationships among variables was assessed. Scatter plots evidenced bivariate linearity, or at least no curvilinearity. Homoscedasticity was demonstrated using a scatterplot of standardized residual values by predicted values. Mahalonobis values were examined to assess for multivariate normality. Amos (Arbuckle, 2012) provides two Mahalonobis *p* values that indicate multivariate outliers: *p*1, which is the probability of an observation from a multivariate normal distribution being that far from the centroid, and *p*2 <, which is the probability of the ordered values of *N* distances being that far

from the centroid. Cases that are significant at both *p*1 and *p*2 are interpreted as multivariate outliers; there were 48 such cases in the data. Models were analyzed using all 500 cases and the 452 cases with multivariate outliers removed; local and global fit was comparable, so multivariate outliers were retained.

Exploratory Factor Analyses

The dimensionality and reliability of each scale and subscale were assessed. A principal factors analysis (also known as principal axis factoring, or PAF) was conducted with all scales to verify that their dimensional structures were appropriate for this sample. Direct oblimin rotation was used to permit correlations between factors (Field, 2013). The number of factors extracted for each measure was determined by theory specific to the constructs measured, previous research, the Kaiser-Meyer-Oklin (KMO) measure of sampling adequacy, and scree plots. We looked for factor loadings of .32 and above and no or few crossloadings (Tabachnick & Fidell, 2012). Cronbach's alpha was then calculated for each scale or subscale to assess internal consistency. Structural characteristics for all scales are indicated in Table 1.

OBC-Surv. For the eight items on this scale, KMO = .84, suggesting "meritorious" sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity was significant, $\chi 2(28) = 1{,}517.11$, $p < .001$, demonstrating that the correlations between items were sufficiently large for EFA. Examination of the scree plot suggested a single factor solution that explained 42.65% of the scale variance and is consistent with conventional scoring procedures. It is important to note that analyses for this scale used pairwise deletion

Table 1
Structural Characteristics of Instruments

	N	Items	KMO	Bartlett's test	Perecent var. explained	α
Objectified Body Consciousness Scale--Body Surveillance	456[a]	8	.84	1,517.11(28)**	42.65	.85
Objectified Body Consciousness Scale--Body Shame	451[a]	8	.84	1,398.33(28)**	42.34	.84
Social Appearance Anxiety Scale	500	16	.96	6,902.54(120)**	60.84	.96
Dispositional Flow Scale-2 Long Form, Concentration subscale	500	4	.79	841.31(6)**	58.08	.84
Dispositional Flow Scale-2 Long Form, Control subscale	500	4	.78	644.50(6)**	51.94	.81
Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale	500	4	.80	728.51(6)**	55.18	.83
Daubenmier's body responsiveness scale	500	7	.75	1,363.73(21)**	58.09	.86 & .74[b]
Physical safety anxiety scale	500	3	.70	1,378.98(3)**	82.55	.93
Eating Attitudes Test-26	500	26	.92	234.98(3)**[b]	41.17	.93
Center for Epidemiologic Studies Depression Scale Short Form	500	10	.90	1,880.82(45)**	41.07	.87
Female Sexual Function Index	500	10	.89	3,638.07(45)**	55.03	.92
Freiburg Mindfulness Inventory--Short Form	500	14	.92	2,592.66(91)**	37.57	.89
Self-Compassion Scale—Short Form	500	12	.92	3,053.93(66)**	43.29	.90

Note: All scales except BR yielded a single-factor solution. KMO = Kaiser- Meyer-Olkin; α = Cronbach's alpha.
a. Missing data for the Objectified Body Consciousness Scale subscale scores was imputed at the scale rather than item-level, resulting in smaller sample sizes for these exploratory factor analyses. b. BR yielded a two-factor solution, BR-Congruence and BR-Incongruence.

of items to handle “N/A” and truly missing responses. Cronbach’s alpha using the PFA correlation matrix was .85.

OBC-Shame. For the eight items on this scale, KMO = .84, suggesting “meritorious” sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett’s test of sphericity was significant, $\chi 2(28) = 1{,}398.33$, $p < .001$. Examination of the scree plot suggested a single factor solution that explained 42.34% of the scale variance and is consistent with conventional scoring procedures. Cronbach’s alpha was .84. It is important to note that analyses for this scale used pairwise deletion of items to handle “N/A” and truly missing responses. Cronbach’s alpha using the PFA correlation matrix was .84.

SAAS. For the 16 items on this scale, KMO = .96, suggesting “marvelous” sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett’s test of sphericity was significant, $\chi 2(120) = 6{,}902.54$, $p < .001$. Examination of the scree plot suggested a single factor solution, which is consistent with the conventional scoring procedure. This single factor solution explained 60.84% of the variance with all items retained. Cronbach’s alpha was .96.

DFS-2 Concentration. Three separate PFAs were conducted for the three DFS-2 subscales used in the primary analysis. For the four items on the Concentration (CONC) subscale, the KMO = .79, suggesting “middling” (but acceptable) sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett’s test of sphericity was significant, $\chi 2(6) = 841.31$, $p < .001$. Examination of the scree plot suggested a single factor solution, which is consistent with the conventional scoring procedure. This single factor solution explained 58.08% of the variance with all items retained. Cronbach’s alpha was .84.

DFS-2 Control. For the four items on the Control (CONT) subscale, the KMO = .78, suggesting "middling" sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity was significant, $\chi 2(6) = 644.50$, $p < .001$. Examination of the scree plot suggested a single factor solution, which is consistent with the conventional scoring procedure. This single factor solution explained 51.94% of the variance with all items retained. Cronbach's alpha was .81.

DFS-2 Loss of Self-Consciousness. For the four items on the Loss of Self-Consciousness (LOSS) subscale, the KMO = .80, suggesting "meritorious" sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity was significant, $\chi 2(6) = 728.51$, $p < .001$. Examination of the scree plot suggested a single factor solution, which is consistent with the conventional scoring procedure. This single factor solution explained 55.18% of the variance with all items retained. Cronbach's alpha was .83.

PSA. For the three items on this scale, the KMO = .70, suggesting "middling" sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity was significant, $\chi 2(3) = 1{,}378.98$, $p < .001$. Examination of the scree plot suggested a single factor solution, which explained 82.55% of the variance with all items retained. Cronbach's alpha was .93.

BR. For the seven items on this scale, the KMO = .75, suggesting "middling" sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity was significant, $\chi 2(21) = 1{,}363.73$, $p < .001$. Examination of the scree plot suggested a two factor solution that explained 58.09% of the variance. Items 1, 5, 6, and 7 loaded on Factor 1, labeled Mind-Body Congruence; these items all assess trust and appreciation for bodily

feelings. Items 2, 3, and 4 loaded on Factor 2, labeled Mind-Body Incongruence; these items all assess discrepancies between thoughts and bodily feelings or sensations. Because the three items on Factor 2 were originally reverse-scored, we considered the possibility of an artifact effect; however, the correlations among the items from different factors are very low, suggesting that the factors truly are measuring different constructs. For theoretical consistency, original rather than reversed scores were used for this subscale, such that higher scores indicate greater mind-body incongruence. Cronbach's alpha for the Mind-Body Congruence subscale was .86. Cronbach's alpha for the Mind-Body Incongruence subscale was .74.

EAT-26. For the 26 items on this scale, the KMO = .92, suggesting "marvelous" sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity was significant, $\chi 2(325) = 7{,}262.75$, $p < .001$. Examination of the scree plot suggested that a three-factor solution would fit the data well and explain 50.34% of the variance. The three factors that emerged somewhat paralleled the three factors identified by Garner et al. (1982). Items 1, 3, 4, 10, 11, 12, 14, 18, 21, and 22 loaded on Factor 1, which may be described as bulimic behaviors and food preoccupation. Items 2, 5, 8, 9, 13, 15, 20, 24, and 26 loaded on Factor 2, which included restrictive behaviors and a social pressure to eat. Items 6, 7, 16, 17, 19, and 23 loaded on Factor 3, which may be described as diet behaviors. Item 25, "[I] enjoy trying rich new foods" (reverse-scored), did not load on any factor. An alternative, single factor solution explained 35.29% of the variance. All items other than 25 and 19 ("[I] display self-control around food") loaded on this single factor with loadings of .32 or greater. Both of these items correlated poorly with the rest of the scale: for Item 25, $r = -.07$, and for Item 19,

r = .13. We determined that removing these two items would not change the nature of the scale. Item 25 was only tangentially related to eating disordered thoughts and behaviors; many people choose to try or abstain from rich new foods for reasons unrelated to eating issues. Likewise, Item 19 was worded with a positive valence, but not reverse-scored, and thus a participant's response to this item may be unrelated to their responses to the rest of the scale. After removing these two items, the single factor solution explained 37.60% of the variance. Garner et al. (1982) postulated that a multi-factor approach to the EAT-26 may be helpful in predicting treatment responsiveness; however, we were interested in overall severity of eating-related thoughts and behaviors. For this reason, we chose to retain the 24 item single factor solution. Cronbach's alpha for the single-factor scale was .93.

CES-D. For the ten items on this scale, the KMO = .90, suggesting "marvelous" sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity was significant, $\chi 2(45) = 1{,}880.82$, $p < .001$. Examination of the scree plot suggested a single factor solution, which explained 41.07% of the variance with all items retained and was consistent with conventional scoring procedure. Cronbach's alpha was .87.

FSFI. For the ten items on this scale, the KMO = .89, suggesting "meritorious" sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity was significant, $\chi 2(45) = 3{,}638.07$, $p < .001$. Examination of the scree plot suggested a single factor solution, which explained 55.03% of the variance with all items retained and was consistent with conventional scoring procedure. Cronbach's alpha was .92.

FMI. For the 14 items on this scale, the KMO = .92, suggesting "marvelous" sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett's test of sphericity was

significant, $\chi 2(91) = 2{,}592.66$, $p < .001$. Examination of the scree plot suggested a single factor solution, which explained 37.57% of the variance. Item 13, “I am impatient with myself and with others,” the only reverse-scored item, did not load on this factor at our threshold of .32; however, we decided to retain it because it correlated with the rest of the scale at $r = .24$, suggesting that a participant’s response to this item was related to their responses to other items. Further, if this item were deleted, the scale variance would decrease from 58.72 to 54.94, and Cronbach's alpha would remain the same. The low factor loading is likely due to a measurement artifact (i.e., the reverse-scoring wording). Cronbach’s alpha for this scale was .89.

SCS. For the 12 items on this scale, the KMO = .92, suggesting “marvelous” sampling adequacy (Hutcheson & Sofroniou, 1999). Bartlett’s test of sphericity was significant, $\chi 2(66) = 3{,}053.93$, $p < .001$. Examination of the scree plot suggested a two factor solution that explained 55.51% of the variance; however, all of the reverse-scored items loaded on one factor and all of the other items loaded on the second factor, suggesting that this solution was the result of differences in item wording rather than item functioning. The analysis was rerun forcing a single factor solution. This solution explained 43.29% of the scale variance with all items retained. Cronbach’s alpha was .90.

Descriptive Analyses

Mean scores, standard deviations, minimum and maximum values, and 95% confidence intervals for continuous demographic variables and scales for the entire sample are reported in Table 2. Score means and ranges were consistent with those reported in scale

Table 2

Means, Standard Deviations, Minimum and Maximum Values, and 95% Mean Confidence Intervals Among All Variables (N = 500)

	M	*SD*	Minimum	Maximum	95% CI
Age	30.59	7.91	18.00	50.00	(29.90, 31.29)
BMI	26.12	7.11	10.30	63.50	(25.49, 26.74)
OBC-Surv	4.31	1.23	1.00	7.00	(4.20, 4.42)
OBC-Shame	3.74	1.32	1.00	7.00	(3.63, 3.86)
SAAS	43.61	15.11	16.00	80.70	(42.28, 44.94)
CONC	13.80	3.04	6.00	20.00	(13.53, 14.07)
CONT	14.08	2.95	5.00	20.00	(13.82, 14.34)
LOSS	11.09	3.47	4.00	20.00	(10.78, 11.39)
BR-Con	4.66	1.31	1.00	7.00	(4.54, 4.77)
BR-Incon	3.62	1.41	1.00	7.00	(3.49, 3.74)
PSA	16.75	8.46	3.00	30.00	(16.02, 17.50)
EAT-26	68.17	21.25	26.00	131.00	(66.30, 70.04)
CES-D	9.37	6.38	0.00	30.00	(8.81, 9.93)
FSFI	34.39	8.72	10.00	50.00	(33.62, 35.16)
FMI-SF	36.80	7.66	17.00	56.00	(36.13, 37.47)
SCS-SF	35.49	9.43	12.00	60.00	(34.66, 36.31)

Note: BMI = Body Mass Index; OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; PSA = Physical safety anxiety scale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index; FMI-SF = Freiburg Mindfulness Inventory-Short Form; SCS-SF = Self-Compassion Scale—Short Form.

development studies as well as Grotewiel and Marszalek (2013), which used some of the same measures.

Correlations, covariances, and variances for the entire sample are reported in Table 3. Significant correlations among scale variables were generally in the expected directions, with the exception of a small, positive correlation between mind-body congruence and physical safety anxiety ($r = .10$, $p < .05$), which may have been spurious or due to errors in the measurement of physical safety anxiety. In general, correlations with mental health outcome variables were significant, with the exception of the following pairs: concentration and disordered eating; body surveillance and sexual functioning; physical safety anxiety and sexual functioning.

Age and BMI were not analyzed in the path analysis, but attention to their relationships with other variables could be useful to future researchers in this area. Older age was generally associated with more desirable scale scores, including significant positive correlations with concentration and self-compassion and significant negative correlations with body surveillance, mind-body incongruence, physical safety anxiety, disordered eating, and depression symptoms. Higher BMI was generally associated with less desirable scale scores, including positive correlations with body shame, appearance anxiety, and mind-body incongruence and negative correlations with mind-body congruence, dispositional mindfulness, and self-compassion. Age and BMI were positively correlated.

Table 3

Correlations and Variances Among All Variables (N = 500)

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
1. Age	62.50															
2. BMI	.19**	50.59														
3. OBC-Surv	-.10*	.01	1.51													
4. OBC-Shame	-.04	.24**	.45**	1.74												
5. SAAS	-.05	.29**	.44**	.70**	228.41											
6. CONC	.11*	-.01	-.20**	-.18**	-.24**	9.23										
7. CONT	.06	-.07	-.21**	-.30**	-.42**	.70**	8.70									
8. LOSS	.03	-.05	-.51**	-.39**	-.45**	.43**	.47**	12.03								
9. BR-Con	.02	-.17**	-.25**	-.26**	-.36**	.38**	.45**	.35**	1.72							
10. BR-Incon	-.18**	.16**	.13**	.40**	.42**	-.20**	-.23**	-.15**	-.16**	1.99						
11. PSA	-.17**	-.04	.09	.17**	.18**	.09	-.02	-.08	.10*	.13**	71.51					
12. EAT-26	-.11*	.07	.24**	.61**	.50**	-.03	-.16**	-.13**	-.09*	.45**	.28**	451.48				
13. CES-D	-.23**	.05	.17**	.41**	.53**	-.36**	-.47**	-.30**	-.29**	.46**	.21**	.44**	40.64			
14. FSFI	.05	-.03	-.05	-.21**	-.25**	.20**	.27**	.17**	.30**	-.09*	-.02	-.16**	-.22**	76.06		
15. FMI-SF	.06	-.10*	-.31**	-.40**	-.48**	.51**	.60**	.51**	.53**	-.25**	-.06	-.16**	-.52**	.34**	58.72	
16. SCS-SF	.14**	-.10*	-.38**	-.49**	-.56**	.40**	.47**	.45**	.42**	-.37**	-.18**	-.31**	-.63**	.30**	.77**	88.83

Note: BMI = Body Mass Index; OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; PSA = Physical safety anxiety scale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index; FMI-SF = Freiburg Mindfulness Inventory-Short Form; SCS-SF = Self-Compassion Scale—Short Form. Diagonal with underlined coefficients represents scale variances.

* = $p < .05$, ** = $p < .0$

Inferential Statistical Tests

A 1 X 3 multivariate analysis of variance (MANOVA) was conducted to test for differences on 14 scale and subscale scores based on sampling method. Results of the Box's *M* test were significant, Box's $M = 250.80$, $F(182, 49{,}724.97) = 1.26$, $p < .05$, suggesting that the assumption of equality of covariances was violated. Because of this violation, instead of interpreting the results of the MANOVA, we conducted 14 analyses of variance (ANOVA; i.e., one for each scale or subscale) using a Bonferroni adjusted alpha coefficient of .004 (i.e., .05/14 = .004). Levene's test was used to evaluate the homogeneity of variances for all analyses. For 12 analyses, this statistic was not significant at $p = .004$, indicating that equal variances could be assumed across groups (see Table 4). For two analyses (i.e., eating disordered behaviors and depression), Levene's statistic was significant, $p < .004$. Because equal variances could not be assumed for these two analyses, Welch's statistic was interpreted in place of the *F* statistic. Results showed no significant differences among groups. For eating disordered behaviors, Welch's $F(2, 107.09) = 1.98$, $p > .05$. For depression, Welch's $F(2, 101.65) = 1.72$, $p > .05$. Because results of all 14 ANOVAs showed no differences on any mean scale or subscale scores between groups, we chose to perform SEM using the entire sample.

Table 4
Analyses of Variance in Scale Scores by Recruitment Method

						Levene's Test			
Scale	*df1*	*df2*	*F*	*p*	η^2	Statistic	*df1*	*df2*	*p*
3. OBC-Surv	2	497	1.41	.246	.01	3.30	2	497	.038
4. OBC-Shame	2	497	1.59	.205	.01	0.27	2	497	.764
5. SAAS	2	497	1.69	.185	.01	1.88	2	497	.154
6. CONC	2	497	6.06	.003	.02	0.99	2	497	.371
7. CONT	2	497	2.83	.060	.01	0.67	2	497	.514
8. LOSS	2	497	1.12	.326	.00	0.72	2	497	.487
9. BR-Con	2	497	3.34	.036	.01	2.59	2	497	.076
10. BR-Incon	2	497	1.48	.229	.01	2.68	2	497	.069
11. PSA	2	497	0.73	.482	.00	2.17	2	497	.115
12. EAT-26	2	497	1.51	.222	.01	9.26	2	497	.000
13. CES-D	2	497	1.51	.222	.01	6.25	2	497	.002
14. FSFI	2	497	0.42	.657	.00	1.02	2	497	.361
15. FMI-SF	2	497	2.48	.084	.01	0.91	2	497	.402
16. SCS-SF	2	497	1.73	.178	.01	3.32	2	497	.037

Note: OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; PSA = Physical safety anxiety scale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index; FMI-SF = Freiburg Mindfulness Inventory-Short Form; SCS-SF = Self-Compassion Scale—Short Form.

Structural Equation Models

The purposes of this study were to: (a) establish a clearer understanding of the role of flow in objectification theory, and (b) investigate the moderating effects of dispositional mindfulness and self-compassion on the relationships between body surveillance and flow, body shame, appearance anxiety, and body responsiveness. The model depicted in Figure 2 was proposed to examine the role of flow; the model depicted in Figure 3 was proposed to examine the role of dispositional mindfulness; and the model depicted in Figure 4 was proposed to examine the role of self-compassion. Note that these proposed models included conceptualization of body responsiveness as two constructs, mind-body congruence and mind-body incongruence, as suggested by the EFA. Also, we included the following correlations in all models based on previous research and theory: (a) body shame and appearance anxiety (Grotewiel & Marszalek, 2013; Tiggemann & Williams, 2012); (b) concentration, sense of control, and loss of self-consciousness (Csikszentmihalyi, 1975; Jackson & Eklund, 2002); and (c) disordered eating, depression symptoms, and sexual functioning (Tiggemann & Williams, 2012).

All models were estimated and evaluated using maximum likelihood estimation in Amos v23.0 (Arbuckle, 2012). The appropriateness of each structural regression model for the data was measured by the following global indices of goodness-of-fit: the chi-square goodness-of-fit index, the Comparative Fit Index (CFI), the root mean square error of approximate (RMSEA), and standard root mean square residual (SRMR; Kline, 2016). The chi-square statistic indicates the amount of difference between expected and observed covariance matrixes for the model; a value close to 0 with a probability value greater than .05

suggests that the model is a good fit for the data. The CFI is an incremental fit index and goodness-of-fit statistic. It compares departure from close fit of the data to the model against a null model. A CFI value over .95 indicates good fit (Kline, 2016). RMSEA assesses model departure from assumed close fit; values less than .05 indicate close fit and values greater than .10 indicate poor fit (Kline, 2016). RMSEA is usually reported with a 90% confidence interval; a 90% confidence interval is used rather than the more traditional 95% confidence interval because if RMSEA = 0 (which indicates perfect fit), the lower bound value of the confidence interval would also equal 0, creating a one-sided confidence interval, which is analogous to conducting a one-tailed hypothesis test. SRMR assesses the mean absolute covariance residual. An SRMR of 0 indicates perfect model fit, and values greater than .10 may indicate poor fit (Kline, 2016). Finally, good local fit of the data is demonstrated by standardized residual covariances less than or equal to |2.00| (Arbuckle, 2012).

Model 1: The mediating role of flow. Model fit statistics were examined to verify adequacy of the hypothesized model demonstrating the role of flow in the objectification theory framework (Figure 2). This model was theoretically identified (i.e., a recursive path model with $df \geq 0$; Kline, 2016). Using Kline's (2016) criteria, fit statistics for this model were poor: $\chi^2(27) = 376.54$, $p < .001$, CFI = .84, RMSEA = .16, 90% CI [.15, .18], and SRMR = .13. Many standardized residual covariances were greater than |2.00|, evidencing poor local fit. Together, these results suggested that the model should be modified to incorporate direct pathways or covariances between variables with large standardized residual covariances in cases in which a relationship would be theoretically supported. Paths were added one by one and fit statistics were examined after the addition of each path. For

purposes of parsimony, however, paths are discussed in small, thematic groups in this section.

The relationships between the two indicators of body responsiveness, mind-body congruence and mind-body incongruence, and other consequences for women's subjective experiences were modified first. Direct paths were added from body shame to mind-body congruence (standardized residual covariance = -3.34) and mind-body incongruence (residual covariance = 7.54); it is likely that higher levels of body shame would decrease one's motivation and/or ability to cue into internal bodily signals. This link is supported by the findings of Tylka and Hill (2004), who demonstrated that body shame predicted unique variance in poor awareness of hunger, satiety, and emotions. The confidence about bodily messages inherent in mind-body congruence is inconsistent with high levels of body-related anxiety, suggesting a negative effect of appearance anxiety on mind-body congruence (residual covariance = -5.54) and an exacerbating effect on mind-body incongruence (residual covariance = 8.02). Direct pathways were added from the body responsiveness variables to sense of control (residual covariance = 8.82 for mind-body congruence and residual covariance = -4.57 for mind-body incongruence). This aspect of dispositional flow taps into one's feelings of control over his or her body; it is likely that sense of control is affected by one's ability to sense and respond to their bodily feelings. Similarly, direct pathways were added from the body responsiveness variables to loss of self-consciousness; lack of mind-body congruence (residual covariance = 4.94) and mind-body incongruence (residual covariance = 1.95) may contribute to an increased reliance on others' evaluations of one's body and performance. Finally, the body responsiveness variables were allowed to

correlate with concentration due to the overlaps with the other dispositional flow variables and high standardized residual covariances (7.40 for mind-body congruence and -3.84 for mind-body incongruence). Fit statistics for this alternate model were $\chi^2(17) = 98.49$, $p < .001$, CFI = .96, RMSEA = .10, 90% CI [.08, .12], and SRMR = .06. Although this model fits the data significantly better than the original model, $\Delta\chi2(10) = 278.05$, $p < .001$, it is still a poor global fit based on Kline's (2016) criteria. In addition, several standardized covariance residuals were still greater than |2.00|.

The next set of modifications were made around appearance anxiety based on findings in Grotewiel and Marszalek's (2013) study. In this study, social appearance anxiety was found to be associated with loss of self-consciousness, sense of control, and concentration as well or better than body surveillance. Drawing from work on the role of affect on evaluations of experiences (e.g., Klaaren, Hodges, & Wilson, 1994), it was assumed that affect (in this case, appearance anxiety) would influence whether or not a person experiences flow. For example, a woman therapist who fears that her appearance is being evaluated by a client may have difficulty getting into flow because she appraises the situation as threatening. These effects are likely to carry over to the trait level. Thus, direct pathways were added from appearance anxiety to concentration (standardized residual covariance = -3.31), control (standardized residual covariance = -3.89), and loss of self-consciousness (standardized residual covariance = -3.25). Fit statistics for this alternate model were $\chi^2(14) = 59.95$, $p < .001$, CFI = .98, RMSEA = .08, 90% CI [.06, .10], and SRMR = .04. This model again fit the data significantly better than the previous model, $\Delta\chi2(3) = 38.54$, $p < .001$, but it still had poor local fit and mixed indicators of global fit.

The final set of modifications were made around physical safety anxiety. Like body responsiveness, physical safety anxiety has received relatively less empirical attention than other consequences for women's subjective experience. Theoretically, it is possible that women who have experienced threats to their physical safety (i.e.., being raped, assaulted, attacked, robbed, or mugged) will have higher levels of physical safety anxiety as well as higher levels of shame. Thus, physical safety anxiety and body shame were allowed to correlate (standardized residual covariance = 2.91). Furthermore, high levels of physical safety anxiety are likely associated with high levels of anxiety across the board, including social appearance anxiety, so physical safety anxiety and social appearance anxiety were allowed to correlate (standardized residual covariance = 3.15). A path was added from physical safety anxiety to concentration due to its distracting effect (standardized residual covariance = 2.28). Finally, physical safety anxiety was allowed to correlate with the body responsiveness variables (for mind-body congruence, 2.70 and for mind-body incongruence, 2.64). It is likely that a reciprocal effect exists between physical safety anxiety and body responsiveness, such that high levels of physical safety anxiety (including vigilance) make listening and responding to one's own body more difficult, whereas high levels of body responsiveness (e.g., feeling in touch with and control over one's own body) may decrease physical safety anxiety. Fit statistics for this alternate model were $\chi^2(9) = 16.17$, $p > .05$, CFI = 1.0, RMSEA = .04, 90% CI [.00, .07], and SRMR = .01. This model again fit the data significantly better than the previous model, $\Delta\chi2(5) = 43.78$, $p < .001$. Global model fit was improved overall. Local fit was also improved, with no standardized covariance residuals

greater than |2.00|. This final model, with a total addition of 18 paths and correlations, was retained.

Summary of retained Model 1. Departures from the original Model 1 include the addition of paths from body shame to (1) mind-body congruence and (2) mind-body incongruence; appearance anxiety to (3) mind-body congruence and (4) mind-body incongruence, as well as (5) concentration, (6) control, and (7) loss of self-consciousness; mind-body congruence to (8) control and (9) loss of self-consciousness; mind-body incongruence to (10) control and (11) loss of self-consciousness; and physical safety anxiety to (12) concentration. Correlations were added between (1) mind-body congruence and concentration; (2) mind-body incongruence and concentration; (3) physical safety anxiety and body shame; (4) physical safety anxiety and social appearance anxiety; (5) physical safety anxiety and mind-body congruence; and (6) physical safety anxiety and mind-body incongruence.

Combined, all predictors in this final model accounted for 48% of the variance in disordered eating, 43% of the variance in depression symptoms, and 13% of the variance in sexual functioning. Variance estimates and squared multiple correlations (R^2) for all variables are summarized in Table 5. Using Cohen's (1988) guidelines for interpreting effect size (i.e., .01 = small, .09 = medium, .25 = large), the combined predictors had a large effect on disordered eating and depression symptoms, and a medium effect on sexual functioning. Most direct effects were significant with small or medium effect sizes (see Table 6). Seventeen hypothesized paths were not supported by the model. These paths were from body surveillance to (1) control and (2) physical safety anxiety; body shame to (3) mind-body

Table 5

Variance Estimates of the Final Path Model 1

Variable	Unstandardized coefficient (*SE*)	R^2
OBC-Surv	1.51** (0.10)	
error 1 (OBC-Shame)	1.35** (0.09)	.22
error 2 (SAAS)	184.56**(11.68)	.19
error 3 (CONC)	8.43** (0.53)	.09
error 4 (CONT)	6.26** (0.40)	.28
error 5 (LOSS)	7.83** (0.50)	.35
error 6 (BR-Con)	1.48** (0.09)	.14
error 7 (BR-Incon)	1.58** (0.10)	.21
error 8 (PSA)	70.83** (4.48)	.01
disturbance 1 (EAT-26)	236.20**(14.95)	.48
disturbance 2 (CES-D)	23.00** (1.45)	.43
disturbance 3 (FSFI)	66.10** (4.18)	.13

Note: OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; PSA = Physical safety anxiety scale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index.

* = $p < .05$, ** = $p < .01$.

Table 6

Direct Path Coefficients of the Final Path Model 1

Path	Unstandardized coefficient (*SE*)	Standardized coefficient
OBC-Surv → OBC-Shame	0.47**(0.04)	.44
OBC-Surv → SAAS	5.37**(0.52)	.44
OBC-Surv → CONC	-0.29*(0.12)	-.12
OBC-Surv → CONT	0.01(0.11)	.00
OBC-Surv → LOSS	-1.03**(0.13)	-.36
OBC-Surv → BR-Con	-0.12*(0.06)	-.11
OBC-Surv → BR-Incon	-0.12*(0.06)	-.10
OBC-Surv → PSA	0.60(0.32)	.09
OBC-Shame → BR-Con	-0.04(0.06)	-.04
OBC-Shame → BR-Incon	0.24**(0.07)	.23
OCB-Shame → EAT-26	7.69**(0.09)	.12
OCB-Shame → CES-D	0.06(0.27)	.01
OCB-Shame → FSFI	-0.53(0.40)	-.08
SAAS → CONC	-0.04**(0.01)	-.21
SAAS → CONT	-0.05**(0.01)	-.27
SAAS → LOSS	-0.05**(0.01)	-.23
SAAS → BR-Con	-0.03**(0.01)	-.29
SAAS → BR-Incon	0.03**(0.01)	.30
SAAS → EAT-26	0.17*(0.09)	.12
SAAS → CES-D	0.12**(0.03)	.28
SAAS → FSFI	-0.05(0.04)	-.09
CONC → EAT-26	.57(0.34)	.08
CONC → CES-D	-.24*(0.10)	-.11
CONC → FSFI	.05(0.19)	.02
CONT → EAT-26	0.36*(0.36)	-.05
CONT → CES-D	-0.45**(0.13)	-.21
CONT → FSFI	-0.38(0.20)	.12
LOSS → EAT-26	0.80**(0.27)	.13
LOSS → CES-D	0.08(0.08)	.05
LOSS → FSFI	-0.08(0.15)	-.03
BR-Con → CONT	0.77**(0.11)	.34
BR-Con → LOSS	0.47**(0.12)	.18
BR-Con → EAT-26	0.78(0.68)	.05
BR-Con → CES-D	-0.18(0.21)	-.04
BR-Con → FSFI	1.39**(0.36)	.21
BR-Incon → CONT	-0.14(0.10)	-.07
BR-Incon → LOSS	0.05(0.11)	.02

Table 6--Continued

Path	Unstandardized coefficient (*SE*)	Standardized coefficient
BR-Incon → EAT-26	3.29**(0.59)	.22
BR-Incon → CES-D	1.13**(0.19)	.25
BR-Incon → FSFI	0.26(0.30)	.04
PSA → CONC	0.05**(0.01)	.13
PSA → EAT-26	0.37**(0.09)	.15
PSA → CES-D	0.10**(0.03)	.14
PSA → FSFI	-0.03(0.05)	-.02

Note: OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; PSA = Physical safety anxiety scale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index.
* = $p < .05$, ** = $p < .01$

congruence, (4) depression symptoms, and (5) sexual functioning; appearance anxiety to (6) sexual functioning; control to (7) eating disorder symptoms; concentration to (8) eating disorder symptoms and (9) sexual functioning; loss of self-consciousness to (10) depression symptoms and (11) sexual functioning; mind-body congruence to (12) disordered eating and (13) depressive symptoms; mind-body incongruence to (14) control, (15) loss of self-consciousness, and (16) sexual functioning; and physical safety anxiety to (17) sexual functioning (see Figure 5).

Mediation effects in retained model 1. In order to evaluate the mediation effects proposed in Hypotheses 1 through 3, the direct paths comprising these relationships were examined first. For cases in which all implicated direct effects were significant, Preacher and Leonardelli's (2016) interactive calculation tool for the Aroian version of the Sobel (1982) test equation was used to examine significance of indirect effects. The Aroian version of the equation was chosen because it incorporates the standard error of the implicated regression coefficients (Preacher & Leonardelli, 2016). This is important because internal, psychological mediators are likely to be measured with error; omitting the error terms often results in an underestimate of the effect of the mediator and an overestimate of the independent variable (often an exogenous variable), ultimately resulting in successful mediation being falsely rejected (Baron & Kenny, 1986).

Hypothesis 1, that concentration would mediate relationships between body surveillance and health consequences, was not supported. Body surveillance had a small direct effect on concentration, $b = -0.29$, $SE = 0.12$, $\beta = -.12$, $p < .05$, and concentration had a small direct effect on depression symptoms, $b = -0.24$, $SE = 0.10$, $\beta = -.11$, $p < .05$. The

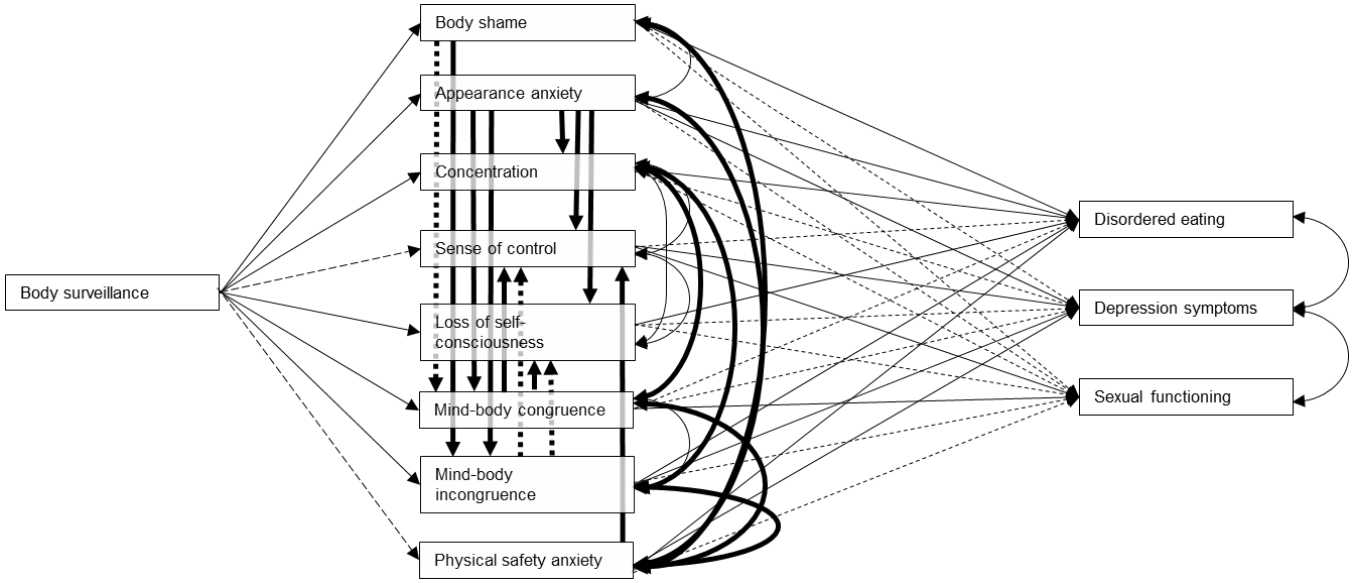


Figure 5. Retained model of the mediating role of three dimensions of flow (i.e., concentration, loss of self-consciousness, sense of control) in objectification theory. Solid lines indicate significant pathways ($p < .05$). Dotted lines indicate pathways that are not significant ($p > .05$). Bolded solid and dashed lines indicate pathways added to the proposed model in the modification process.

indirect effect of body surveillance on depression symptoms mediated by concentration was not significant, however, b = .07, SE = .04, β = .01, z = 1.64, p > .05. Furthermore, the practical significance of this indirect effect was very small. Concentration did not have a significant direct effect on disordered eating or sexual functioning. Hypothesis 2, that sense of control would mediate relationships between body surveillance and the mental health consequences, was not supported because body surveillance did not have a significant direct effect on sense of control. Hypothesis 3, that loss of self-consciousness would mediate relationships between body surveillance and the mental health outcomes, was partially supported. Body surveillance had a moderate direct effect on loss of self-consciousness, b = -1.03, SE = 0.13, β = -.36, p < .01, and loss of self-consciousness had a small direct effect on disordered eating, b = 0.80, SE = 0.27, β = .13, p < .05. The indirect effect of body surveillance on depression symptoms mediated by concentration was statistically significant but practically very small, b = -0.82, SE = .29, β = -.05, z = -2.77, p < .01. Loss of self-consciousness did not have a significant direct effect on depression symptoms or sexual functioning.

Model 2: The moderating role of dispositional mindfulness. Hypotheses 5-10 dealt with the moderating role of dispositional mindfulness within the objectification theory framework. We initially hypothesized that dispositional mindfulness would moderate the links from body surveillance to concentration, control, loss of self-consciousness, and body responsiveness. We also hypothesized that dispositional mindfulness would moderate the mediating relationships between these variables (i.e., concentration, control, loss of self-consciousness, and body responsiveness) and the body surveillance-mental health outcome

(i.e., disordered eating, depression symptoms, and sexual functioning) links. Before testing, we amended the original hypothesized Model 2 (Figure 3) based on the modifications we made to Model 1. See Figure 6 for the amended hypothesized Model 2.

Model fit statistics were examined to verify the adequacy of Model 2, which was theoretically identified. Fit statistics for this model were poor: $\chi^2(21) = 178.70$, $p < .001$, CFI = .94, RMSEA = .12, 90% CI [.11, .15], and SRMR = .08. Several standardized residual covariances were greater than |2.00|, evidencing poor local fit. Together, these results suggested that the model should be modified to incorporate direct pathways or covariances with large standardized residual covariances in cases in which a relationship would be theoretically supported. Examination of standardized residual covariances suggested that there should be links from dispositional mindfulness to body shame (standardized residual covariance = -5.66) and appearance anxiety (standardized residual covariance = -7.69). These relationships are theoretically supported. Previous studies have demonstrated links between mindfulness and other body-related cognitive processes, including body comparison and body dissatisfaction (Dekeyser et al., 2008; Dijkstra & Barelds, 2011). Furthermore, mindfulness has been shown throughout multiple studies to negatively predict anxiety (see Brown et al., 2013). We also added pathways to check for moderation by dispositional mindfulness of the mediating effects of body shame (standardized residual covariance = -1.34) and appearance anxiety (standardized residual covariance = -2.64) of body surveillance on the mental health outcomes. Finally, we also added paths from dispositional mindfulness to depression symptoms and sexual functioning. These pairs had large standardized residual covariances (-6.39 for mindfulness-depression and 3.59 for mindfulness-sexual functioning).

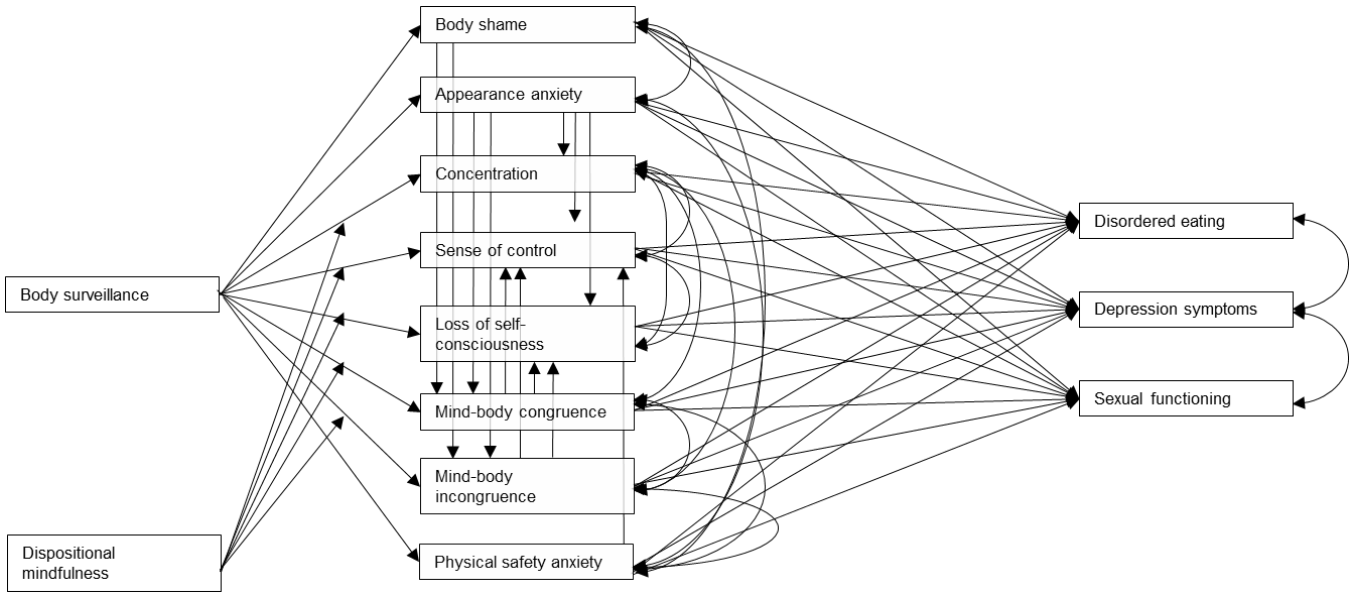


Figure 6. Modified proposed model of the moderating role of dispositional mindfulness in objectification theory.

Conceptually, mindfulness has repeatedly been linked to depression (see Brown et al., 2013), and it is not surprising that concentration, sense of control, loss of self-consciousness, and body responsiveness may not fully mediate the relationship between these two variables. Likewise, mindfulness training has recently been explored as a treatment for women experiencing sexual dysfunction, with promising results (Brotto, Bassoon, & Luria, 2008; Brotto, Heiman, et al., 2008; Brotto et al., 2012; Silverstein et al., 2011); it may affect female functioning directly. Fit of this model was much better than the previous model, $\chi^2(15) = 27.59$, $p = .02$, CFI = 1.0, RMSEA = .04, 90% CI [.02, .07], SRMR = .01, $\Delta\chi2(6) = 151.11$, $p < .001$, with all standardized residual covariances less than |2.00|. However, a significant chi square value indicated that there was a significant difference between expected and observed covariance matrixes for the model, prompting further modification.

Modification indexes were checked for further recommendations to improve fit. The addition of a pathway from body surveillance to sexual functioning was suggested (modification index = 4.65, parameter change = .61). When controlling for the moderating and mediating effects of dispositional mindfulness in the model, body surveillance had a direct effect on sexual functioning. In other words, body surveillance directly affects sexual functioning when all other variables in the model, including dispositional mindfulness and the interaction of dispositional mindfulness and body surveillance, are held constant. Fit of this model was much better than the previous model, with good global and local fit indices: $\chi2(14) = 20.72$, $p = .11$, CFI = 1.0, RMSEA = .03, 90% CI [.00, .06], SRMR = .01, $\Delta\chi2(1) = 6.87$, $p < .01$, all standardized residual covariances less than |2.00|. This final model was retained.

Summary of Retained Model 2. From the original hypothesized model, the modified Model 2 that was retained included the same changes made to Model 1 (i.e., the same addition of 18 paths and correlations). To the amended Model 2 that was initially tested, an additional seven paths were added: dispositional mindfulness to (1) body shame and (2) appearance anxiety; dispositional mindfulness to the mediating path from body surveillance to disordered eating, depression symptoms, and sexual functioning through (3) body shame and (4) appearance anxiety; dispositional mindfulness to (5) depression symptoms and (6) sexual functioning; and body surveillance to (7) sexual functioning.

Combined, all predictors in this final model accounted for 48% of the variance in disordered eating, 47% of the variance in depression symptoms, and 16% of the variance in sexual functioning. Variance estimates and squared multiple correlations (R^2) for all variables are summarized in Table 7. The combined predictors had a large effect on disordered eating and depression symptoms and a medium effect on sexual functioning. With the interaction of body surveillance and dispositional mindfulness in the model, most direct effects were significant with small or medium effect sizes (see Table 8). Thirty hypothesized paths were not supported by the model. These paths were from body surveillance to (1) concentration, (2) control, (3) mind-body congruence, and (4) physical safety anxiety; the interaction of body surveillance and dispositional mindfulness to (5) body shame, (6) concentration, (7) control, (8) loss of self-consciousness, (9) mind-body congruence, and (10) mind-body incongruence; dispositional mindfulness to (11) mind-body incongruence; body shame to (12) mind-body congruence, (13) depression symptoms, and (14) sexual functioning; appearance anxiety to (15) concentration, (16) mind-body congruence, and (17) sexual

Table 7

Variance Estimates of the Final Path Model 2

Variable	Unstandardized coefficient (*SE*)	R^2
OBC-Surv	1.51** (0.10)	
FMI-SF	58.6** (3.71)	
OBC-Surv x FMI-SF	96.45** (6.11)	
error 1 (OBC-Shame)	1.22** (0.08)	.29
error 2 (SAAS)	152.00** (9.62)	.33
error 3 (CONC)	6.68** (0.42)	.28
error 4 (CONT)	5.22** (0.33)	.40
error 5 (LOSS)	7.08** (0.45)	.41
error 6 (BR-Con)	1.20** (0.08)	.30
error 7 (BR-Incon)	1.58** (0.10)	.21
error 8 (PSA)	70.83** (4.48)	.01
disturbance 1 (EAT-26)	236.20**(14.95)	.48
disturbance 2 (CES-D)	21.61** (1.37)	.47
disturbance 3 (FSFI)	63.56** (4.02)	.16

Note: OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; FMI-SF = Freiburg Mindfulness Inventory-Short Form; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; PSA = Physical safety anxiety scale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index.

* = $p < .05$, ** = $p < .01$.

Table 8
Direct Path Coefficients of the Final Path Model 2

Path	Unstandardized coefficient (*SE*)	Standardized coefficient
OBC-Surv → OBC-Shame	0.39**(0.05)	.36
OBC-Surv → SAAS	4.04**(0.51)	.33
OBC-Surv → CONC	-0.14(0.11)	-.05
OBC-Surv → CONT	0.09(0.10)	.04
OBC-Surv → LOSS	-0.97**(0.13)	-.34
OBC-Surv → BR-Con	-0.08(0.05)	-.07
OBC-Surv → BR-Incon	-0.13*(0.06)	-.12
OBC-Surv → PSA	0.60(0.32)	.09
OBC-Surv → FSFI	0.96**(0.35)	.14
FMI-SF → OBC-Shame	-0.05**(0.01)	-.28
FMI-SF → SAAS	-0.74**(0.08)	-.37
FMI-SF → CONC	0.20**(0.02)	.50
FMI-SF → CONT	0.17**(0.02)	.44
FMI-SF → LOSS	0.14**(0.02)	.32
FMI-SF → BR-Con	0.08**(0.01)	.46
FMI-SF → BR-Incon	-0.01(0.01)	-.06
FMI-SF → CES-D	-0.25**(0.05)	-.29
FMI-SF → FSFI	0.24**(0.07)	.21
OBC-Surv x FMI-SF → OBC-Shame	-0.01(0.01)	-.05
OBC-Surv x FMI-SF → SAAS	-0.15*(0.06)	-.10
OBC-Surv x FMI-SF → CONC	0.01(0.01)	.00
OBC-Surv x FMI-SF → CONT	0.00(0.01)	.00
OBC-Surv x FMI-SF → LOSS	0.00(0.02)	.03
OBC-Surv x FMI-SF → BR-Con	0.01(0.01)	.07
OBC-Surv x FMI-SF → BR-Incon	0.00(0.01)	.03
OBC-Shame → BR-Con	0.00(0.06)	.00
OBC-Shame → BR-Incon	0.24**(0.07)	.23
OCB-Shame → EAT-26	7.69**(0.91)	.48
OCB-Shame → CES-D	-0.04(0.25)	-.01
OCB-Shame → FSFI	-0.65(0.40)	-.10
SAAS → CONC	0.00(0.01)	.01
SAAS → CONT	-0.03**(0.01)	-.14
SAAS → LOSS	-0.03**(0.01)	-.14
SAAS → BR-Con	-0.01(0.01)	-.10
SAAS → BR-Incon	0.03**(0.01)	.29
SAAS → EAT-26	0.17*(0.09)	.12

Table 8--Continued

Path	Unstandardized Coefficient (*SE*)	Standardized coefficient
SAAS → CES-D	0.10**(0.03)	.24
SAAS → FSFI	-0.05(0.04)	-.08
CONC → EAT-26	0.57(0.34)	.08
CONC → CES-D	-0.15(0.11)	-.07
CONC → FSFI	-0.01(0.19)	.00
CONT → EAT-26	-0.38(0.36)	-.05
CONT → CES-D	-0.30*(0.13)	-.14
CONT → FSFI	0.15(0.20)	.05
LOSS → EAT-26	.08**(0.27)	.13
LOSS → CES-D	0.17*(0.08)	.09
LOSS → FSFI	-0.03(0.15)	-.01
BR-Con → CONT	0.37**(0.11)	.17
BR-Con → LOSS	0.13(0.13)	.05
BR-Con → EAT-26	0.78(0.68)	.05
BR-Con → CES-D	0.18(0.21)	.04
BR-Con → FSFI	1.09**(0.37)	.17
BR-Incon → CONT	-.09(0.09)	-.04
BR-Incon → LOSS	.09(0.11)	.04
BR-Incon → EAT-26	3.29**(0.59)	.22
BR-Incon → CES-D	1.11**(0.18)	.25
BR-Incon → FSFI	0.35(0.30)	.06
PSA → CONC	0.04**(0.01)	.11
PSA → EAT-26	0.37**(0.09)	.15
PSA → CES-D	0.09**(0.03)	.12
PSA → FSFI	-0.02(0.05)	-.02

Note: OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; FMI-SF = Freiburg Mindfulness Inventory-Short Form; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; PSA = Physical safety anxiety scale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index.

* = $p < .05$, ** = $p < .01$.

functioning; concentration to (18) eating disorder symptoms, (19) depression, and (20) sexual functioning; control to (21) eating disorder symptoms and (22) sexual functioning; loss of self-consciousness to (23) sexual functioning; mind-body congruence to (24) loss of self-consciousness, (25) eating disorder symptoms, and (26) sexual functioning; mind-body incongruence to (27) control, (28) loss of self-consciousness, and (29) sexual functioning; and physical safety anxiety to (30) sexual functioning (see Figure 7).

Moderation effects. In order to evaluate the moderation effect proposed in Hypothesis 5 and the mediated moderation effects proposed in Hypotheses 6 through 10, the direct effects of the interaction of body surveillance and dispositional mindfulness on concentration, control, loss of self-consciousness, mind-body congruence, and mind-body incongruence were first examined. Counter to these hypotheses, none of these proposed relationships achieved statistical significance. Dispositional mindfulness did not appear to moderate the effect of body surveillance on these variables or to moderate the mediating effect of these variables on the relationship between body surveillance and the mental health outcomes.

As part of the model modification process, moderation by dispositional mindfulness of the mediation of the effect of body surveillance on the mental health outcomes by body shame and appearance anxiety was also tested. The moderating effect of dispositional mindfulness on the relationship between body surveillance and body shame was not significant. Analysis revealed a significant but small moderating effect on the relationship between body surveillance and appearance anxiety, $\beta = -.10$, $p < .05$, such that the negative effect of body surveillance on appearance anxiety was stronger for participants with lower

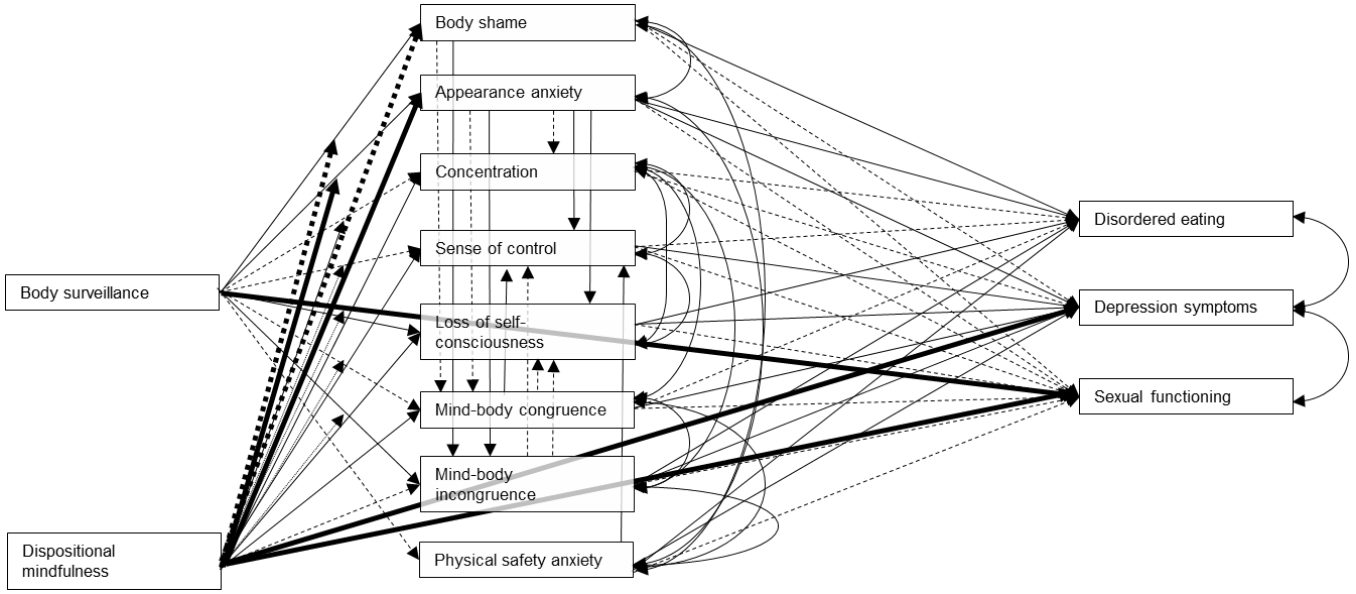


Figure 7. Retained model of the moderating role of dispositional mindfulness in objectification theory. Solid lines indicate significant pathways ($p < .05$). Dotted lines indicate pathways that are not significant ($p > .05$). Bolded solid and dashed lines indicate pathways added to the proposed model in the modification process.

levels of dispositional mindfulness (see Figure 8). Appearance anxiety had a significant, medium direct effect on depression symptoms, $\beta = .24$, $p < .05$, evidencing that dispositional mindfulness moderated the mediating effect of appearance anxiety on the relationship between body surveillance and depression symptoms.

Direct effects. In order to explore the direct effects of dispositional mindfulness on the mediating variables, the retained model was analyzed without the interaction term (i.e., body surveillance by dispositional mindfulness) included. This model was a good fit for the data, $\chi 2(10) = 17.12$, $p = .07$, CFI = 1.0, RMSEA = .04, 90% CI [.00, .07], SRMR = .01, all standardized residual covariances less than |2.00|. Dispositional mindfulness had significant, medium to large direct effects in the expected directions on body shame, $\beta = -.28$, $p < .05$, appearance anxiety, $\beta = -.38$, $p < .01$; concentration, $\beta = .50$, $p < .01$; control, $\beta = .44$, $p < .01$; loss of self-consciousness, $\beta = .32$, $p < .01$; and mind-body congruence, $\beta = .46$, $p < .01$. All direct effects for the final Model 2 are reported in Table 9.

Model 3: The moderating role of self-compassion. Hypotheses 11-14 dealt with the moderating role of self-compassion within the objectification theory framework. We initially hypothesized that self-compassion would moderate the links from body surveillance to body shame and appearance anxiety. We also hypothesized that self-compassion would moderate the mediating relationships between these variables (i.e., body shame and appearance anxiety) and the body surveillance-mental health outcome (i.e., disordered eating, depression symptoms, and sexual functioning) links. We amended the original hypothesized Model 3 (Figure 4) based on the modifications we made to Model 1. See Figure 9 for the amended hypothesized Model 3.

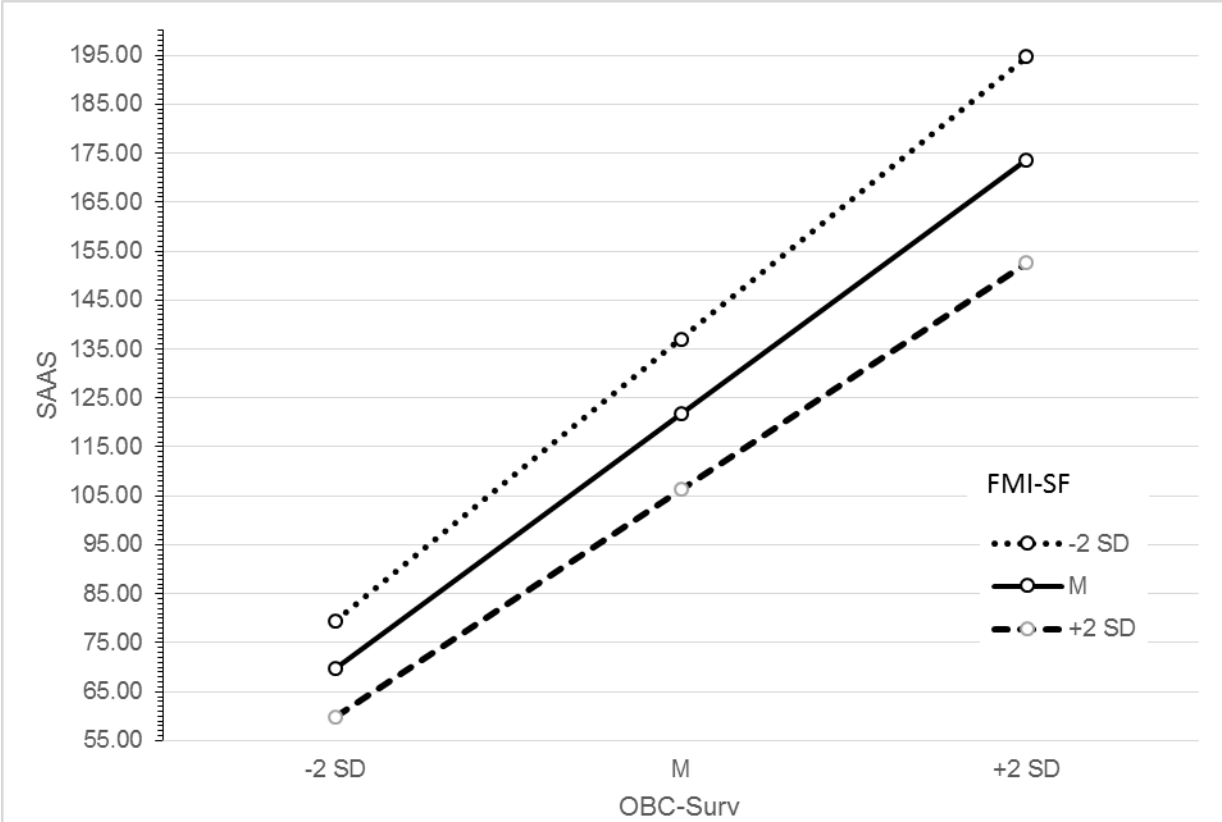


Figure 8. Effect of the interaction of body surveillance and dispositional mindfulness of appearance anxiety. OBC-Surv = Objectified Body Consciousness Scale; FMI-SF = Freiburg Mindfulness Inventory-Short Form; SAAS = Social Appearance Anxiety Scale.

Table 9
Direct Effects of Model 2

Path	Unstandardized coefficient (*SE*)	Standardized coefficient
OBC-Surv → OBC-Shame	0.38**(0.04)	.36
OBC-Surv → SAAS	9.91**(0.48)	.32
OBC-Surv → CONC	-0.14(0.11)	-.06
OBC-Surv → CONT	0.09(0.09)	.04
OBC-Surv → LOSS	-0.95**(0.11)	-.34
OBC-Surv → BR-Con	-0.06(0.05)	-.06
OBC-Surv → BR-Incon	-0.13*(0.05)	-.11
OBC-Surv → PSA	0.60(0.31)	.09
OBC-Surv → FSFI	0.96**(0.37)	.14
FMI-SF → OBC-Shame	-0.05**(0.01)	-.28
FMI-SF → SAAS	-0.75**(0.08)	-.38
FMI-SF → CONC	0.20**(0.02)	.50
FMI-SF → CONT	0.17**(0.02)	.44
FMI-SF → LOSS	0.14**(0.02)	.32
FMI-SF → BR-Con	0.08**(0.01)	.46
FMI-SF → BR-Incon	-0.01(0.01)	-.06
FMI-SF → CES-D	-0.25**(0.04)	-.29
FMI-SF → FSFI	0.24**(0.07)	.21
OBC-Shame → BR-Con	0.00(0.05)	.00
OBC-Shame → BR-Incon	0.24**(0.06)	.23
OCB-Shame → EAT-26	7.69**(0.75)	.48
OCB-Shame → CES-D	-0.04(0.23)	-.01
OCB-Shame → FSFI	-0.65(0.40)	-.10
SAAS → CONC	0.00(0.01)	.01
SAAS → CONT	-0.03**(0.01)	-.14
SAAS → LOSS	-0.03**(0.01)	-.14
SAAS → BR-Con	-0.01(0.01)	-.10
SAAS → BR-Incon	0.03**(0.01)	.29
SAAS → EAT-26	0.17*(0.09)	.12
SAAS → CES-D	0.10**(0.03)	.24
SAAS → FSFI	-0.05(0.04)	-.08
CONC → EAT-26	0.57(0.33)	.08
CONC → CES-D	-0.15(0.10)	-.07
CONC → FSFI	-0.03(0.14)	-.01
CONT → EAT-26	-0.38(0.36)	-.05
CONT → CES-D	-0.30*(0.11)	-.14

Table 9--Continued

Path	Unstandardized coefficient (*SE*)	Standardized coefficient
CONT → FSFI	0.15(0.19)	.05
LOSS → EAT-26	.08**(0.25)	.13
LOSS → CES-D	0.17*(0.08)	.09
LOSS → FSFI	-0.03(0.14)	-.01
BR-Con → CONT	0.37**(0.19)	.17
BR-Con → LOSS	0.14(0.11)	.05
BR-Con → EAT-26	0.78(0.62)	.05
BR-Con → CES-D	0.18(0.20)	.04
BR-Con → FSFI	1.09**(0.34)	.17
BR-Incon → CONT	-.09(0.08)	-.04
BR-Incon → LOSS	.09(0.09)	.04
BR-Incon → EAT-26	3.29**(0.55)	.22
BR-Incon → CES-D	1.11**(0.17)	.25
BR-Incon → FSFI	0.35(0.29)	.06
PSA → CONC	0.04**(0.01)	.11
PSA → EAT-26	0.37**(0.09)	.15
PSA → CES-D	0.09**(0.03)	.12
PSA → FSFI	-0.02(0.04)	-.02

Note: OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; FMI-SF = Freiburg Mindfulness Inventory-Short Form; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; PSA = Physical safety anxiety scale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index.

* = $p < .05$, ** = $p < .01$.

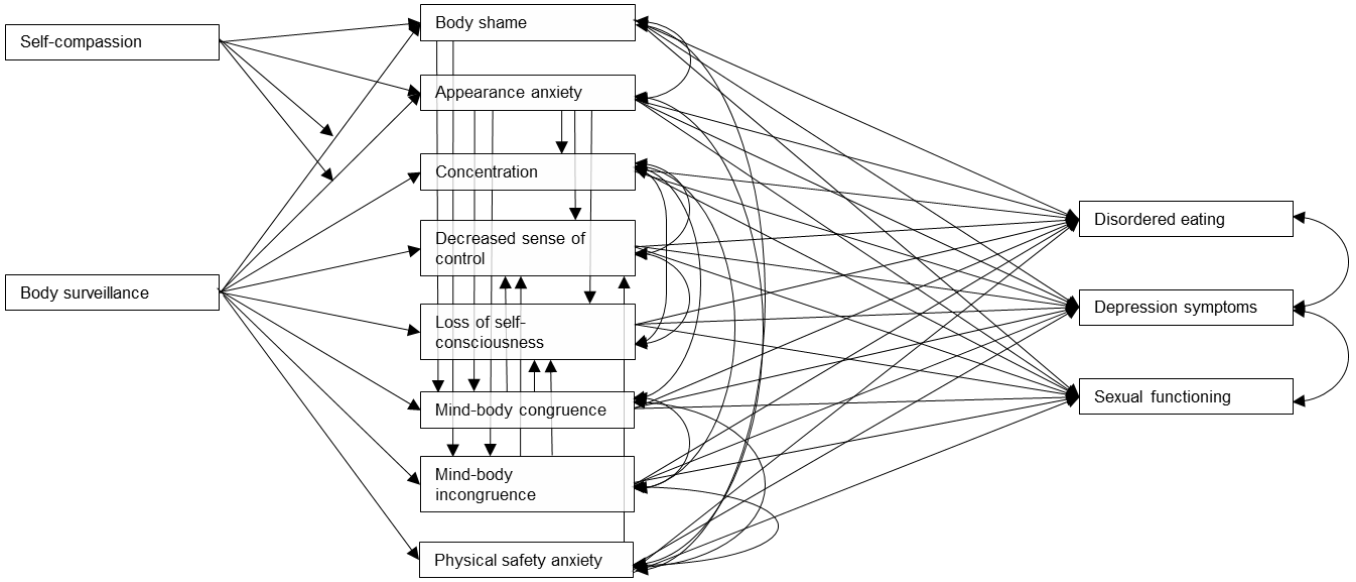


Figure 9. Modified proposed model of the moderating role of self-compassion in objectification theory.

Model fit statistics were examined to verify the adequacy of Model 3, which was theoretically identified. Fit statistics for this model were poor: $\chi^2(27) = 244.24$, $p < .001$, CFI = .92, RMSEA = .13, 90% CI [.11, .14], and SRMR = .06. Several standardized residual covariances were greater than |2.00|, evidencing poor local fit. Together, these results suggested that the model should be modified to incorporate direct pathways or covariances between variables with large standardized residual covariances in cases in which a relationship would be theoretically supported.

Examination of standardized residual covariances suggested that there should be links from self-compassion to concentration (standardized residual covariance = 5.28), control (standardized residual covariance = 5.12), loss of self-consciousness (standardized residual covariance = 3.24), mind-body congruence (standardized residual covariance = 4.37), and mind-body incongruence (standardized residual covariance = -2.85). These relationships are theoretically supported. Self-compassion consists of self-kindness, common humanity, and mindful awareness; it is conceptually similar to and highly correlated with mindfulness (Neff, 2003b). Previous studies have shown mindfulness and flow (Aherne et al., 2011; Kee & Wang, 2008) and internal bodily awareness (Silverstein et al., 2011) to be highly correlated. A direct path from self-compassion to physical safety anxiety (standardized residual covariance = -1.88) was also added. Like body shame and appearance anxiety, physical safety anxiety involves worry, which may be ameliorated by higher levels of self-compassion. Broadly, self-compassion has been shown to negatively correlate with anxiety (see MacBeth & Gumley, 2012). More specific to concern about physical safety, Mantzios (2013) found that self-compassion was negatively related to worrying in a study of military

recruits. We did not test for moderation of the mediating effects of these variables (i.e., concentration, control, loss of self-consciousness, mind-body congruence, mind-body incongruence, and physical safety anxiety) since moderated mediation was generally not supported in Model 2 and standardized residual covariances were low in this model.

We also added paths from self-compassion to depression symptoms (standardized residual covariance = -7.41) and sexual functioning (standardized residual covariance = 3.43). Like the relationship between mindfulness and these outcome variables, it is not surprising that the relationships between self-compassion and depression symptoms and sexual functioning are not fully mediated by the consequences for women's subjective experiences (i.e., body shame, appearance anxiety, concentration, control, loss of self-consciousness, body responsiveness, and physical safety anxiety). Across studies, higher levels of self-compassion have repeatedly been associated with lower levels of depression symptoms (see MacBeth & Gumley, 2012). The relationship between self-compassion and sexual functioning has been less well researched; however, it is likely that the affective components of self-compassion that may affect sexual functioning (e.g., forgiving one's own failings; respecting oneself as a human) are not fully captured by the proposed mediating variables. Fit of this model was much better than the previous model, $\chi^2(19) = 46.03$ $p < .05$, CFI = .99, RMSEA = .05, 90% CI [.03, .07], SRMR = .02, $\Delta\chi2(8) = 198.21$, $p < .001$. However, a significant chi square value indicated that there was a significant difference between expected and observed covariance matrixes for the model, prompting further modification.

Modification indexes were checked for further recommendations to improve fit. The addition of pathways from body surveillance to depression (modification index = 7.30, parameter change = -.42) and sexual functioning (modification index = 5.34, parameter change = .68) were suggested. When controlling for the moderating and mediating effects of self-compassion in the model, body surveillance had direct effects on depression symptoms and sexual functioning. In other words, body surveillance directly affects depression and sexual functioning when all other variables in the model, including self-compassion and the interaction of self-compassion and body surveillance, are held constant. Fit of this model was much better than the previous model, with good global and local fit indices: $\chi 2(17) = 25.81$, $p = .08$, CFI = 1.0, RMSEA = .03, 90% CI [.00, .06], SRMR = .02, $\Delta\chi 2(2) = 20.22$, $p < .01$. Two standardized covariance residuals, between (a) the interaction of body surveillance and self-compassion and mind-body congruence and (b) the interaction of body surveillance and self-compassion and physical safety anxiety, remained greater than |2.00| at 2.10 and 2.17, respectively; however, because testing pathways between these variables could not be justified without testing similar pathways involving concentration, control, loss of self-consciousness, and mind-body incongruence, they were left untested. This final model was retained.

Summary of retained Model 3. From the original hypothesized model, the modified Model 3 that was retained included the same changes made to Model 1 (i.e., the same addition of 18 paths and correlations). To the Model 3 that was first tested, an additional 10 paths were added: self-compassion to (1) concentration, (2) control, (3) loss of self-consciousness, (4) mind-body congruence, (5) mind-body incongruence, and (6) physical

safety anxiety; and self-compassion to (7) depression and (8) sexual functioning; and body surveillance to (9) depression and (10) sexual functioning.

Combined, all predictors in this final model accounted for 48% of the variance in disordered eating, 53% of the variance in depression symptoms, and 16% of the variance in sexual functioning. Variance estimates and squared multiple correlations (R^2) for all variables are summarized in Table 10. The combined predictors had a large effect on disordered eating and depression symptoms, and a medium effect on sexual functioning. With the interaction of body surveillance and self-compassion in the model, most direct effects were significant with small or medium effect sizes (see Table 11). Twenty-four hypothesized paths were not supported by the model. These paths were from body surveillance to (1) concentration, (2) control, (3) mind-body congruence, and (4) physical safety anxiety; the interaction of body surveillance and self-compassion to (5) body shame and (6) appearance anxiety; body shame to (7) mind-body congruence, (8) depression symptoms, and (9) sexual functioning; appearance anxiety to (10) concentration and (11) sexual functioning; concentration to (12) disordered eating, (13) depression symptoms, and (14) sexual functioning; control to (15) disordered eating and (16) sexual functioning; loss of self-consciousness to (17) depression symptoms and (18) sexual functioning; mind-body congruence to (19) disordered eating and (20) depression; mind-body incongruence to (21) control, (22) loss of self-consciousness, and (23) sexual functioning; and physical safety anxiety to (24) sexual functioning (see Figure 10).

Table 10
Variance Estimates of the Final Path Model 3

Variable	Unstandardized coefficient (*SE*)	R^2
OBC-Surv	1.51** (0.10)	
SCS	88.65** (5.61)	
OBC-Surv x SCS	169.60** (10.74)	
error 1 (OBC-Shame)	1.15** (0.07)	.34
error 2 (SAAS)	142.36** (9.01)	.38
error 3 (CONC)	7.59** (0.48)	.18
error 4 (CONT)	5.90** (0.37)	.32
error 5 (LOSS)	7.56** (0.48)	.37
error 6 (BR-Con)	1.37** (0.09)	.20
error 7 (BR-Incon)	1.54** (0.10)	.23
error 8 (PSA)	70.18** (4.44)	.02
disturbance 1 (EAT-26)	236.20**(14.95)	.48
disturbance 2 (CES-D)	19.02** (1.21)	.53
disturbance 3 (FSFI)	63.95** (4.05)	.16

Note: OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; SCS-SF = Self-Compassion Scale—Short Form; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; PSA = Physical safety anxiety scale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index.
* = $p < .05$, ** = $p < .01$.

Table 11
Direct Path Coefficients of the Final Path Model 3

Path	Unstandardized coefficient (*SE*)	Standardized coefficient
OBC-Surv → OBC-Shame	0.33**(0.05)	.30
OBC-Surv → SAAS	3.27**(0.51)	.27
OBC-Surv → CONC	-0.14(0.12)	-.06
OBC-Surv → CONT	0.10(0.10)	.04
OBC-Surv → LOSS	-0.94**(0.14)	-.33
OBC-Surv → BR-Con	-0.07(0.06)	-.07
OBC-Surv → BR-Incon	-0.15**(0.06)	-.13
OBC-Surv → PSA	0.34(0.34)	.05
OBC-Surv → CES-D	-0.67**(0.19)	-.13
OBC-Surv → FSFI	1.07**(0.36)	.15
SCS-SF → OBC-Shame	-0.05**(0.01)	-.37
SCS-SF → SAAS	-0.73**(0.06)	-.46
SCS-SF → CONC	0.12**(0.02)	.37
SCS-SF → CONT	0.08**(0.02)	.26
SCS-SF → LOSS	0.07**(0.02)	.20
SCS-SF → BR-Con	0.04**(0.01)	.31
SCS-SF → BR-Incon	-0.03**(0.01)	-.19
SCS-SF → PSA	-0.09*(0.04)	-.10
SCS-SF → CES-D	-0.29**(0.03)	-.42
SCS-SF → FSFI	0.16**(0.05)	.18
OBC-Surv x SCS-SF → OBC-Shame	0.00(0.00)	.02
OBC-Surv x SCS-SF → SAAS	-0.07(0.04)	-.06
OBC-Shame → BR-Con	0.01(0.06)	.01
OBC-Shame → BR-Incon	0.22**(0.07)	.20
OCB-Shame → EAT-26	7.69**(0.91)	.48
OCB-Shame → CES-D	-0.08(0.25)	-.02
OCB-Shame → FSFI	-0.60(0.91)	-.09
SAAS → CONC	-0.01(0.01)	-.03
SAAS → CONT	-0.04**(0.01)	-.18
SAAS → LOSS	-0.04**(0.01)	-.17
SAAS → BR-Con	-0.01**(0.01)	-.16
SAAS → BR-Incon	0.02*(0.01)	.23
SAAS → EAT-26	0.17*(0.09)	.12
SAAS → CES-D	0.09**(0.02)	.21
SAAS → FSFI	-0.04(0.04)	-.07
CONC → EAT-26	0.57(0.34)	.08

Table 11--Continued

Path	Unstandardized coefficient (*SE*)	Standardized coefficient
CONC → CES-D	-0.15(0.10)	-.07
CONC → FSFI	0.02(0.19)	.01
CONT → EAT-26	-0.38(0.36)	-.05
CONT → CES-D	-0.31**(0.12)	-.15
CONT → FSFI	0.24(0.20)	.08
LOSS → EAT-26	0.80**(0.27)	.13
LOSS → CES-D	0.09(0.07)	.05
LOSS → FSFI	0.01(0.15)	.01
BR-Con → CONT	0.63**(0.11)	.28
BR-Con → LOSS	0.35**(0.12)	.13
BR-Con → EAT-26	0.78(0.68)	.05
BR-Con → CES-D	0.10(0.20)	.02
BR-Con → FSFI	1.27**(0.36)	.19
BR-Incon → CONT	-0.05(0.10)	-.03
BR-Incon → LOSS	0.13(0.11)	.05
BR-Incon → EAT-26	3.29**(0.59)	.22
BR-Incon → CES-D	0.85**(0.17)	.19
BR-Incon → FSFI	0.47(0.30)	.08
PSA → CONC	0.05**(0.01)	.13
PSA → EAT-26	0.37**(0.09)	.15
PSA → CES-D	0.09**(0.03)	.12
PSA → FSFI	-0.02(0.09)	-.02

Note: OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; SCS-SF = Self-Compassion Scale—Short Form; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; PSA = Physical safety anxiety scale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index.
* = $p < .05$, ** = $p < .01$.

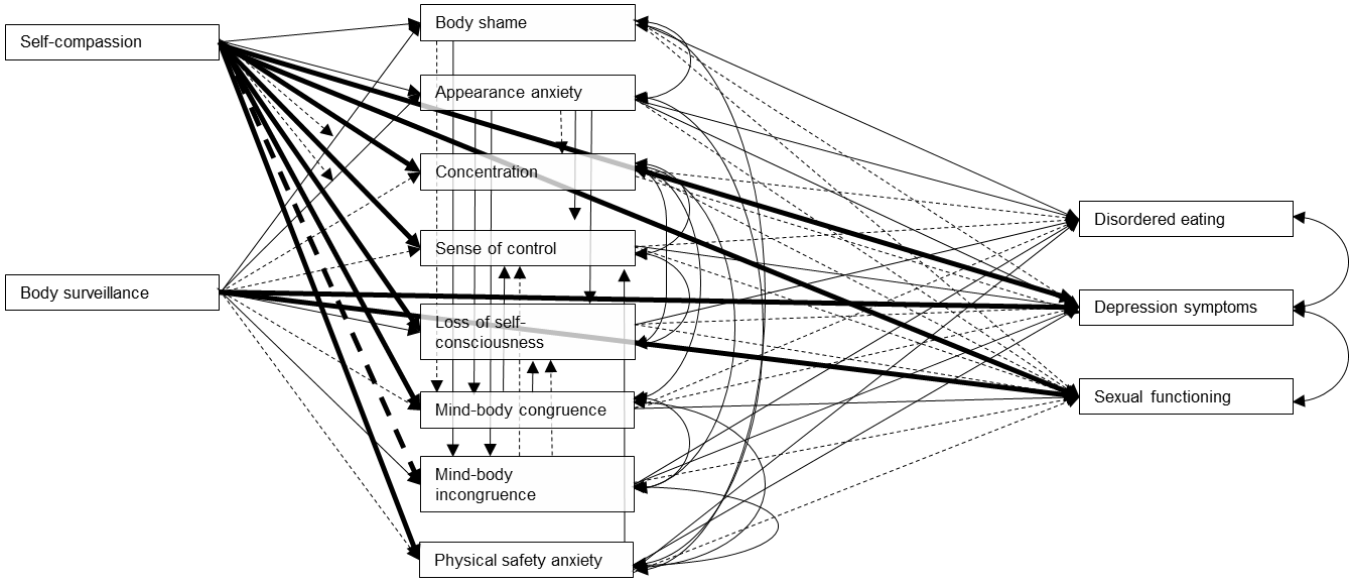


Figure 10. Retained model of the moderating role of self-compassion in objectification theory. Solid lines indicate significant pathways ($p < .05$). Dotted lines indicate pathways that are not significant ($p > .05$). Bolded solid and dashed lines indicate pathways added to the proposed model in the modification process.

Moderation effects. In order to examine the moderation effect proposed in Hypothesis 11 and the mediated moderation effects proposed in Hypotheses 12 through 14, the direct paths comprising these relationships were examined. Counter to these hypotheses, none of these proposed relationships achieved statistical significance. When controlling for other variables in the model, self-compassion did not appear to moderate the effect of body surveillance on these variables or to moderate the mediating effect of these variables on the relationship between body surveillance and the mental health outcomes (see Figure 10).

Direct effects. In order to explore the direct effects of self-compassion on the mediating variables, the retained model was analyzed without the interaction term (i.e., body surveillance by self-compassion) included. This model was a good fit for the data, $\chi 2(8) = 5.59$, $p = .69$, CFI = 1.0, RMSEA = .00, 90% CI [.00, .04], SRMR = .01, all standardized residual covariances less than |2.00|. Self-compassion had significant, medium to large direct effects in the expected directions on body shame, $\beta = -.37$, $p < .01$; appearance anxiety, $\beta = -.46$, $p < .01$; concentration, $\beta = .37$, $p < .01$; control, $\beta = .26$, $p < .01$; loss of self-consciousness, $\beta = .20$, $p < .01$; mind-body congruence, $\beta = .31$, $p < .01$; mind-body incongruence, $\beta = -.19$, $p < .01$; and physical safety anxiety, $\beta = -.10$, $p < .05$. All direct effects for the final model 3 are reported in Table 12.

Table 12
Direct Effects of Model 3

Path	Unstandardized coefficient (*SE*)	Standardized coefficient
OBC-Surv → OBC-Shame	0.33**(0.05)	.30
OBC-Surv → SAAS	3.27**(0.51)	.27
OBC-Surv → CONC	-0.14(0.12)	-.06
OBC-Surv → CONT	0.10(0.10)	.04
OBC-Surv → LOSS	-0.94**(0.14)	-.33
OBC-Surv → BR-Con	-0.07(0.06)	-.07
OBC-Surv → BR-Incon	-0.15**(0.06)	-.13
OBC-Surv → PSA	0.34(0.33)	.05
OBC-Surv → CES-D	-0.67**(0.19)	-.13
OBC-Surv → FSFI	1.07**(0.36)	.15
SCS-SF → OBC-Shame	-0.05**(0.01)	-.37
SCS-SF → SAAS	-0.74**(0.06)	-.46
SCS-SF → CONC	0.12**(0.02)	.37
SCS-SF → CONT	0.08**(0.02)	.26
SCS-SF → LOSS	0.07**(0.02)	.20
SCS-SF → BR-Con	0.04**(0.01)	.31
SCS-SF → BR-Incon	-0.03**(0.01)	-.19
SCS-SF → PSA	-0.09*(0.04)	-.10
SCS-SF → CES-D	-0.29**(0.03)	-.42
SCS-SF → FSFI	0.16**(0.05)	.18
OBC-Shame → BR-Con	0.01(0.06)	.01
OBC-Shame → BR-Incon	0.22**(0.07)	.20
OCB-Shame → EAT-26	7.69**(0.91)	.48
OCB-Shame → CES-D	-0.08(0.25)	-.02
OCB-Shame → FSFI	-0.60(0.91)	-.09
SAAS → CONC	-0.01(0.01)	-.03
SAAS → CONT	-0.04**(0.01)	-.18
SAAS → LOSS	-0.04**(0.01)	-.17
SAAS → BR-Con	-0.01**(0.01)	-.17
SAAS → BR-Incon	0.02**(0.01)	.23
SAAS → EAT-26	0.17*(0.07)	.12
SAAS → CES-D	0.09**(0.02)	.21
SAAS → FSFI	-0.04(0.04)	-.07
CONC → EAT-26	0.57(0.33)	.08
CONC → CES-D	-0.15(0.09)	-.07
CONC → FSFI	0.02(0.17)	.01

Table 12--Continued

Path	Unstandardized coefficient (*SE*)	Standardized coefficient
CONT → EAT-26	-0.38(0.36)	-.05
CONT → CES-D	-0.31**(0.10)	-.15
CONT → FSFI	0.24(0.19)	.08
LOSS → EAT-26	0.80**(0.25)	.13
LOSS → CES-D	0.09(0.08)	.05
LOSS → FSFI	0.01(0.14)	.01
BR-Con → CONT	0.63**(0.09)	.28
BR-Con → LOSS	0.35**(0.11)	.13
BR-Con → EAT-26	0.78(0.62)	.05
BR-Con → CES-D	0.10(0.18)	.02
BR-Con → FSFI	1.27**(0.33)	.19
BR-Incon → CONT	-0.05(0.09)	-.03
BR-Incon → LOSS	0.13(0.10)	.05
BR-Incon → EAT-26	3.29**(0.55)	.22
BR-Incon → CES-D	0.85**(0.16)	.19
BR-Incon → FSFI	0.47(0.29)	.08
PSA → OBC-Shame	0.02*(0.01)	.10
PSA → CONC	0.05**(0.01)	.13
PSA → EAT-26	0.37**(0.09)	.15
PSA → CES-D	0.09**(0.02)	.12
PSA → FSFI	-0.02(0.04)	-.02

Note: OBC-Surv = Objectified Body Consciousness Scale, Body Surveillance subscale; SCS-SF = Self-Compassion Scale—Short Form; OBC-Shame = Objectified Body Consciousness Scale, Body Shame subscale; SAAS = Social Appearance Anxiety Scale; CONC = Dispositional Flow Scale-2 Long Form, Concentration subscale; CONT = Dispositional Flow Scale-2 Long Form, Control subscale; LOSS = Dispositional Flow Scale-2 Long Form, Loss of Self-Consciousness subscale; BR-Con = Daubenmier's body responsiveness scale, mind-body congruence subscale; BR-Incon = Daubenmier's body responsiveness scale, mind-body incongruence subscale; PSA = Physical safety anxiety scale; EAT-26 = Eating Attitudes Test-26; CES-D = Center for Epidemiologic Studies Depression Scale Short Form; FSFI = Female Sexual Function Index.
* = $p < .05$, ** = $p < .01$.

CHAPTER 5

DISCUSSION

The purpose of the present study was to explore the mediating role of dispositional flow and moderating roles of dispositional mindfulness and self-compassion in the objectification theory framework. The ultimate goals were to deepen theoretical understanding of these constructs and inform interventions to address the consequences of sexual objectification. Most hypotheses were not supported. However, results raise important questions for future researchers. Model modification and results of hypothesis testing are discussed first, followed by other interesting or novel relationships that were proposed during model building.

Model Modification and Hypothesis Testing

Objectification theory framework. The basic theoretical model framing this investigation was Fredrickson and Roberts's (1997) objectification theory. Specifically, based on this theory, body surveillance was expected to be associated with consequences for women's subjective experiences (i.e., increased body shame, increased appearance anxiety, decreased flow experiences, decreased body responsiveness, and increased physical safety anxiety), which in turn were expected to be associated with deleterious mental health outcomes (i.e., increased disordered eating, increased depression symptoms, and decreased sexual functioning). Model 1 used Fredrickson and Roberts's basic structure, with the conceptualization of flow narrowed to include high concentration, feelings of control, and loss of self-consciousness as three separate constructs. In addition, based on the results of the

EFA, body responsiveness was conceptualized as two separate constructs, mind-body congruence and mind-body incongruence.

Before discussing specific hypotheses, it is important to acknowledge that we modified Fredrickson and Roberts's (1997) objectification theory model through model building, beginning with Model 1. Most notably, we added relationships among consequences for subjective experience. Fredrickson and Roberts did not propose any relationships among these constructs; however, our data suggested paths from (a) body shame to mind-body incongruence, (b) appearance anxiety to mind-body congruence and incongruence, (c) appearance anxiety to concentration, control, and loss of self-consciousness, (d) mind-body congruence to control and loss of self-consciousness, and e) physical safety anxiety to concentration. Among these variables, body shame, appearance anxiety, and physical safety anxiety could be categorized as cognitive, worry-related constructs, whereas dispositional flow and body responsiveness are more experiential consequences. Similar to this model, Grotewiel and Marszalek (2013) tested a model in which body surveillance and appearance anxiety were correlated with concentration, control, and loss of self-consciousness; results showed that appearance anxiety was associated with flow constructs, whereas body surveillance was only associated with loss of self-consciousness. It could be that an alternative model would list cognitive consequences for subjective experience as predictive of broader experiential consequences.

We retained the added pathways in Models 2 and 3. Although supported by theory, they were added post-hoc during the model building process, increasing the likelihood of type I error. Results from all models should be interpreted in light of these adaptations.

Flow in objectification theory. Within Model 1, the mediating role of dispositional flow was the primary concern, as captured by Hypotheses 1 through 3. Three aspects of flow (i.e., concentration, control, and loss of self-consciousness) were deemed most relevant to objectification theory based on theoretical underpinnings and results of prior studies.

High concentration was hypothesized to mediate the relationship between body surveillance and the mental health outcomes (Hypothesis 1). Body surveillance could increase depression symptoms by decreasing one's cognitive resources for concentration, an important aspect of flow. Indeed, in this study, body surveillance was found to be negatively associated with concentration, and concentration was negatively associated with depressive symptoms; however, the indirect effect of body surveillance on depressive symptoms was practically small and statistically not significant. Counter to hypothesized relationships, concentration was not associated with disordered eating or sexual functioning. Concentration was not correlated with disordered eating, and at face value, there seems to be little conceptual overlap between these constructs. Indeed, lack of relationship between these two variables highlights the importance of studying the roles of different components of flow within objectification theory. On the other hand, concentration and sexual functioning are more intuitively related, and they were significantly correlated, such that greater concentration was associated with greater sexual functioning. It is possible that the predictors of sexual functioning (i.e., sense of control and mind-body congruence) subsumed the variance explained by concentration.

Sense of control was hypothesized to mediate the relationship between body surveillance and the mental health outcomes (Hypothesis 2) due to feelings of decreased

autonomy and efficacy perpetuated by thinking about how others are perceiving one's body. This hypothesis was not supported because the path from body surveillance to sense of control was not significant. It is possible that paths from appearance anxiety and mind-body congruence added during model-building subsumed the variance in sense of control that would have been explained by body surveillance. Indeed, the significant negative correlation between body surveillance and sense of control was similar in size to the significant negative correlation between body surveillance and concentration.

On the other side of the model, sense of control was found to be negatively associated with depression symptoms and positively associated with sexual functioning. Sense of control is similar to self-efficacy, which has a long theoretical and empirical history of predicting depression (c.f., Bandura, 1993). Likewise, sense of control over one's body is intuitively related to sexual functioning, particularly the physiological components measured by the FSFI. Indeed, Randolph and Reddy (2006) found that among a sample of women who experienced chronic pelvic pain, perceived life control was positively associated with satisfaction with orgasm and negatively associated with pain severity, pain interference, and negative mood. Sense of control as conceptualized in flow theory is even more intimate, related to control over one's actions and body. So, although our model did not support sense of control as a mediator between body surveillance and the mental health risks, it did show that greater sense of control was associated with fewer symptoms of depression and greater sexual functioning.

Loss of self-consciousness was hypothesized to mediate the relationship between body surveillance and the mental health outcomes (Hypothesis 3) due to the self-

consciousness inherent in body surveillance. This hypothesis was partially supported: Body surveillance negatively predicted loss of self-consciousness, which positively predicted disordered eating. The direct effect of loss of self-consciousness on disordered eating is interesting because it was in an unexpected direction: Greater loss of self-consciousness predicted greater disordered eating. However, the two variables were negatively correlated. A direct pathway from body surveillance to disordered eating was not specified, so it is likely that the effect of body surveillance on disordered eating through loss of self-consciousness was larger than the direct, independent effect of loss of self-conscious on disordered eating. In other words, loss of self-consciousness may have suppressed the effect of body surveillance on disordered eating, which is evidence for a buffer effect, but would likely not fully mediate it if a direct path from body surveillance to disordered eating was included. An interesting alternative hypothesis is that some disordered eating behaviors are consistent with a loss of self-consciousness. For example, Heatherton and Baumeister (1991) wrote that "an eating binge occurs in a state in which the individual has successfully managed to shut all such broader concerns and consideration out of awareness" (p. 94), including meaning and long-term consequences. So, there could be a positive correlation between loss of self-consciousness and disordered eating for a subset of participants, such that women lose self-consciousness in the midst of a binge-eating episode. Regardless, the indirect effect of body surveillance on disordered eating through loss of self-consciousness was statistically significant but practically very small.

Loss of self-consciousness was negatively correlated with symptoms of depression and positively correlated with sexual functioning; however, it was not significantly

associated with either of these outcomes in the path model. This finding may further underscore the utility of differentiating among the different aspects of dispositional flow within the objectification theory framework, particularly in predicting depression. The absence of an effect of loss of self-consciousness on sexual functioning is surprising, however. Prior research has found that body self-consciousness during sexual activity predicts lower sexual esteem and less sexual satisfaction in men and women (Davison & McCabe, 2005; Dove & Wiederman, 2000; Pujols, Mestno, & Seal, 2009; Yamamiya, Cash, & Thompson, 2006). Limitations of the adapted version of the FSFI used for this study may have contributed to this discrepant finding. In addition, the DFS-2 loss of self-consciousness subscale does not address body self-consciousness specifically; it may be that a more nuanced measure would be necessary in order to ascertain the unique predictive effects of body self-consciousness.

Overall, results from Model 1 support the broad notion that different elements of flow function differently within the objectification theory framework. Within the model, paths from body surveillance to concentration and loss of self-consciousness (but not sense of control) were supported. Both concentration and sense of control (but not loss of self-consciousness) were negatively associated with depression symptoms. Sense of control was positively associated with sexual functioning. Loss of self-consciousness was, surprisingly, positively associated with disordered eating. All three flow variables were implicated in the model in different ways, suggesting that a dimensional conceptualization of dispositional flow is appropriate within objectification theory.

The moderating role of dispositional mindfulness. The second set of hypotheses (Hypotheses 4-9) and Model 2 investigated dispositional mindfulness as a potential moderator of the relationships between body surveillance and dispositional flow and body responsiveness. We also explored dispositional mindfulness as a moderator of the mediating effect of dispositional flow and body responsiveness on the relationship between body surveillance and the mental health outcomes (i.e., disordered eating, depression symptoms, and sexual dysfunction). This investigation began with the objectification theory structure suggested by Model 1 (i.e., including the added relationships and correlations among some of the consequences for subjective experience). In the model modification process, we also added direct paths from body surveillance to sexual functioning and from dispositional mindfulness to body shame, appearance anxiety, depression symptoms, and sexual functioning.

We originally hypothesized that dispositional mindfulness would moderate the relationships between body surveillance and dispositional flow and body responsiveness (Hypothesis 4). This hypothesis was not supported. By extension, Hypotheses 5-9, which involved moderation by dispositional mindfulness of the mediating effects of dispositional flow and body responsiveness on the relationship between body surveillance and the mental health outcomes, were also not supported. Notably, however, dispositional mindfulness had a significant direct effect on all consequences for subjective experiences other than mind-body incongruence and physical safety anxiety (which was not tested). It also had a significant direct effect on two mental health outcomes, depression symptoms and sexual functioning. Furthermore, with dispositional mindfulness in the model, paths from body surveillance to

concentration and mind-body congruence that were significant in Model 1 were no longer significant.

Although dispositional mindfulness did not moderate the effect of body surveillance as expected, it did directly affect a number of consequences for subjective experience, as well as depression symptoms and sexual functioning. (Direct effects were assessed without the interaction term in the model.) One explanation for this finding is the direct effect of body surveillance on most of these variables was small in Model 1, before dispositional mindfulness was even added to the model. Indeed, in Model 1, body surveillance had no direct effect on sense of control; small effects on loss of self-consciousness, mind-body congruence, and mind-body incongruence; and a medium-sized effect on concentration. In Model 2, these effect sizes remained unchanged or, in the cases of concentration and mind-body congruence, were no longer significant. Dispositional mindfulness clearly affected concentration, control, loss of self-consciousness, and mind-body congruence; however, the effect of body surveillance seemed too small and too independent from dispositional mindfulness for its effects to be moderated by dispositional mindfulness.

It is possible that other steps in the objectification theory process, such as sexual objectification experiences, would be more likely to have effects moderated by dispositional mindfulness. Indeed, it may be that dispositional mindfulness is unlikely to change the impact of body surveillance once it already exists. Dispositional mindfulness may be more helpful in moderating a woman's reaction to objectifying events when they occur; it may help her keep from internalizing them, thereby affecting the chain of effects (i.e., internalization of sociocultural standards of appearance; self-objectification) before body

surveillance. Overall, in line with our hypotheses, results from Model 2 show that dispositional mindfulness had a medium-sized effect on loss of self-consciousness, control, depression symptoms, and sexual functioning and a large effect on mind-body congruence and concentration. All of these relationships were in the expected directions. However, dispositional mindfulness served as its own predictor of these variables and not as a mediator between body surveillance and these variables.

The moderating role of self-compassion. The third set of hypotheses (Hypotheses 10-13) and Model 3 investigated self-compassion as a potential moderator of the relationships between body surveillance and body shame and appearance anxiety. We also explored self-compassion as a moderator of the mediating effect of body shame and appearance anxiety on the relationship between body surveillance and the mental health outcomes (i.e., disordered eating, depression symptoms, and sexual dysfunction). This investigation began with the objectification theory structure suggested by Model 1 (i.e., including the added relationships and correlations among some of the consequences for subjective experience). In the model modification process, we also added direct paths from body surveillance to depression symptoms and sexual functioning and from self-compassion to concentration, control, loss of self-consciousness, mind-body congruence, mind-body incongruence, and physical safety anxiety.

We originally hypothesized that self-compassion would moderate the relationships between body surveillance and body shame and appearance anxiety (Hypothesis 10). This hypothesis was not supported. By extension, Hypotheses 11-13, which involved moderation by self-compassion of the mediating effects of body shame and appearance anxiety on the

relationship between body surveillance and mental health outcomes, were also not supported. Notably, however, self-compassion had a medium-sized direct effect on body shame and a large direct effect on appearance anxiety. In addition, the paths from self-compassion to the other consequences for subjective experience, depression, and sexual functioning that were added during model modification were significant. Greater levels of self-compassion were associated with more adaptive scores on all consequences for subjective experience as well as depression and sexual functioning. Further, similar to Model 2, the paths from body surveillance to concentration and mind-body congruence that were significant in Model 1 were not significant in Model 3.

Lack of support for Hypothesis 10 was surprising. Prior studies have generally supported self-compassion as a mediator in at least some of these links. Wasylkiw et al. (2012) found that self-compassion partially mediated the relationship between body preoccupation and depression symptoms. Breines et al. (2014) found that body shame partially mediated the relationship between self-compassion and disordered eating. Ferreira et al. (2013) demonstrated support for self-compassion as a partial mediator of the relationship between external shame and drive for thinness. So, it was noteworthy that in this study, self-compassion did not at least moderate the relationship between body surveillance and body shame and moderate the mediation of the relationship between body surveillance and depression symptoms through body shame. One possible explanation is that prior studies did not control for the large number of variables controlled in this study. Further, within this model, the direct effect of body shame on depression was not significant, likely because this variance was better explained by the direct effect of self-compassion on depression

symptoms. More broadly, the effect of body surveillance on most consequences for subjective experience was already small, so there was little effect to moderate. Like dispositional mindfulness, it is likely that interventions to increase self-compassion would have a greater effect on earlier steps in the objectification theory process, such as sexual objectification experiences.

Post-Hoc Analyses and Observations

In order to explore the roles of dispositional flow, dispositional mindfulness, and self-compassion within the objectification theory framework, we assessed all variables in Fredrickson and Roberts's (1997) objectification theory model from body surveillance forward. Testing the full model allowed us to understand how these variables function in context. Further, during the model modification process, we added many pathways that were not proposed by Fredrickson and Roberts (1997). All of these additions were justified using theory, but they should be interpreted with caution because they were not the focus of our study and were added after data analysis had already begun. Interesting findings will be discussed briefly in light of these limitations.

Objectification theory framework. Across all three models tested in the present study, several relationships established in previous objectification theory research were not supported. First, the theorized predictive effect of body surveillance on physical safety anxiety was not supported. It is likely that this relationship was absent due to measurement problems. The physical safety anxiety scale was created for the current study and had no prior evidence of validity. It contained only three questions, all related to fear of highly violent crime (i.e., rape/sexual assault, attack with a weapon, robbery/mugging); anxiety

about other threats to physical safety, including intimate partner violence or pushing or shoving, and a more global, less specific fear for one's physical safety, was not captured by this scale. It is likely that variation in scores on this scale was more strongly related to other factors (e.g., age, socioeconomic status, veteran status, other identity statuses, location) than to body surveillance. Indeed, age was associated with lower levels of both body surveillance and physical safety anxiety. These results mirror the findings of previous studies. For example, in a comparison of women ages 18-24 versus 25-68, the younger women had significantly higher mean scores on measures of interpersonal sexual objectification and body surveillance (Augustus-Horvath & Tylka, 2009). Further, several studies have found that older people espouse less fear of crime than younger people, either due to lower perceived risk of crime (Ferraro & La Grange, 1992; McCoy, Woolredge, Cullen, Dubreck, & Browning, 1996) or by going to greater lengths to avoid situations they perceive to be dangerous (Tulloch, 2000). If age had been controlled in this study, a positive correlation between body surveillance and physical safety anxiety may have emerged.

Another deviation in the structure of this model was that sexual functioning was only directly predicted by components of two consequences for subjective experience (i.e., control and mind-body congruence), not by all five, as expected. This deviation may also be due to measurement problems; the adapted version of the FSFI was created by the researchers and not validated prior to this study. Most items were highly sensitive and personal in nature, which may have made participants more susceptible to social desirability bias when completing this scale. Likewise, rather than measuring cognitive or emotional sexual enjoyment, these questions largely related to physiological arousal; variation may be

attributable to factors not measured in this study. Furthermore, specificity of the FSFI was lost by using a full scale score (as also used by Steer and Tiggemann, 2008) rather than the subscale scores of desire/arousal, lubrication, orgasm, satisfaction, and pain (as originally supported by Rosen et al., 2000). Steer and Tiggemann (2008) did not validate the single factor structure of their revised scale; it may be that using specific subscales identified by Rosen et al. (2000), such as satisfaction, would have yielded the expected results. Finally, it is possible that participants who did not consider themselves sexually active may have answered these questions differently than participants who did.

Mediating role of appearance anxiety. Model 1 was designed to test mediation of the path from body surveillance to the mental health risks through concentration, control, and loss of self-consciousness. In building this model, paths were added from appearance anxiety to the flow variables. The path coefficient from body surveillance to appearance anxiety was much larger than the path coefficients from body surveillance to concentration and control; the latter path was not significant. It was similar in size to the path from body surveillance to loss of self-consciousness. These findings are in line with Grotewiel and Marszalek's (2013) results and suggest that body surveillance may operate on flow variables through appearance anxiety. This structure was retained and effect sizes remained similar in Models 2 and 3.

Moderating effect of dispositional mindfulness on body shame and appearance anxiety. As part of the modification process for Model 2, the moderating effects of dispositional mindfulness on (a) body shame, (b) appearance anxiety, and (c, d) the mediating effects of body shame and appearance anxiety on the relationship between body surveillance and the mental health outcomes were also tested. We did not initially

hypothesize relationships between dispositional mindfulness and body shame and appearance anxiety because we expected self-compassion to better predict these variables; however, self-compassion and dispositional mindfulness share several characteristics and benefits, and self-compassion was not included in this model. Results showed that dispositional mindfulness significantly moderated the effect of body surveillance on appearance anxiety, such that the relationship was weaker for women with higher levels of dispositional mindfulness (see Figure 8). Mindfulness has been shown to negatively correlate with anxiety (see Brown et al., 2013), and it has sometimes been shown to be a better predictor of anxiety than self-compassion (e.g., Bergen-Cico & Cheon, 2013; Soysa & Wilcomb, 2013). It appears that dispositional mindfulness buffers against the effects of body surveillance on appearance anxiety. It may be that the nonjudgmental aspects of mindfulness are particularly protective against anxiety.

Moderating effect of self-compassion on flow, body responsiveness, and physical safety anxiety. As part of the modification process for Model 3, direct paths from self-compassion to concentration, control, loss of self-consciousness, mind-body congruence, and mind-body incongruence were also tested. We did not initially hypothesize relationships between self-compassion and these variables because we expected dispositional mindfulness to better predict these variables; however, dispositional mindfulness and self-compassion are very similar constructs, and dispositional mindfulness was not included in this model. All of these direct paths were significant. Indeed, in prior studies, dispositional mindfulness has been correlated with flow (Aherne et al., 2011; Kee & Wang, 2008) and internal bodily awareness (Silverstein et al., 2011).

Also during the modification process, a direct pathway was added from self-compassion to physical safety anxiety. This modification was unique for Model 3 (i.e., a parallel pathway from dispositional mindfulness to physical safety anxiety was not added in Model 2). We initially hypothesized that self-compassion would have the greatest effect on body shame and appearance anxiety, the more cognitive consequences for subjective experience. Like body shame and appearance anxiety, physical safety anxiety also involves worry. Indeed, self-compassion, but not body surveillance, predicted physical safety anxiety, which predicted disordered eating and depression symptoms.

Direct effects of body surveillance on mental health risks. In Model 2, a pathway from body surveillance to sexual functioning was added during model building. The pathway was significant, suggesting that body surveillance had a small, positive direct effect on sexual functioning when controlling for dispositional mindfulness. This relationship did not exist in Model 1, in which dispositional mindfulness was not controlled. The effect is in an unexpected direction: Greater levels of body surveillance predicted greater sexual functioning.

Similarly, in Model 3, we added direct paths from body surveillance to depression and sexual functioning. Both were significant: body surveillance had a small, negative direct effect on depression symptoms and a small, positive direct effect on sexual functioning when controlling for self-compassion. Like the direct effect of body surveillance on sexual functioning in Model 2, these relationships were in unexpected directions: Body surveillance was negatively related to depression symptoms and positively related to sexual functioning.

In both models, these direct effects are statistically significant but practically small.

They may be spurious, given the large number of relationships assessed in this model. Alternatively, it may be that any true relationship that exists between these variables is due to other variables that affect them both. For example, it could be that women with higher levels of insight are more aware of both their self-surveying behaviors and emotional experiences during sex.

Direct effects of dispositional mindfulness and self-compassion on mental health risks. As part of the model-building process for Model 2, we added direct paths from dispositional mindfulness to depression and sexual functioning. Both paths were significant, such that greater dispositional mindfulness was associated with fewer symptoms of depression and greater sexual functioning. Similarly, we added direct paths from self-compassion to depression and sexual functioning in Model 3. Again, both paths were significant: self-compassion had a small direct effect on sexual functioning and a medium direct effect on depression symptoms. Dispositional mindfulness and self-compassion have promising implications for targeting depression symptoms and sexual functioning beyond the ameliorative effects on body shame, appearance anxiety, dispositional flow, and body responsiveness. Within the context of the extant body of literature, these results are not particularly surprising. Most prior studies have investigated correlations among relevant variables (e.g., Kee & Wang, 2008) or conducted experiments with mindfulness or self-compassion as the independent variable (e.g., Aherne et al., 2011; Silverstein et al., 2011), without looking at the moderating effects of these variables.

Research Implications and Future Directions

The present study contributes to extant knowledge of objectification theory and flow in several ways. First, the conceptualization and measurement of flow was grounded in flow theory. By focusing on the three components of flow most relevant to objectification theory, we were able to elucidate the ways in which these different experiences are affected by body surveillance and appearance anxiety and, in turn, uniquely affect women's mental health outcomes. Using a well-validated measure of flow strengthened confidence in our conclusions. The same measure can also be scored to produce a global flow score; future reasearchers may be interested in analyzing a model of objectification theory with flow as a latent variable. This approach could elucidate what role, if any, other dimensions of flow play in objectification theory. Future researchers may be interested in exploring how state flow functions within the objectification theory framework.

The positive association between loss of self-consciousness and disordered eating in the structural equation models raises an interesting question about the relationships among these variables. These variables were negatively correlated, so the positive association should be interpreted with caution; however, prior researchers (e.g., Heatherton & Baumeister, 1991) have posited that binge eating may function as a temporary escape from self-awareness. Further research should examine the relationships between loss of self-consciousness and specific disordered eating behaviors, especially those related to binge-eating.

Hypotheses about the moderating effects of dispositional mindfulness and self-compassion were largely unsupported by our results. Future researchers are encouraged to

explore other places in the objectification theory framework in which these variables may intervene, such as the effect of sexual objectification experiences on body surveillance. Notably, both mindfulness and self-compassion had direct effects on most consequences for subjective experience as well as depression symptoms and sexual functioning. Alternatively, it could be that dispositional mindfulness and self-compassion are additional consequences for subjective experience, decreased by body surveillance and protective against the mental health risks. Indeed, these constructs share many similarities with dispositional flow. Practicing mindfulness and self-compassion may be difficult in the presence of high levels of body surveillance.

The post-hoc analyses conducted as part of the model-building process raise some interesting questions about the structure of objectification theory. First, within the basic model of objectification theory that we tested (Model 1), physical safety anxiety and sexual functioning were related to few other constructs: physical safety anxiety was not predicted by body surveillance and only predicted disordered eating and depression symptoms, not sexual functioning; sexual functioning was only predicted by feelings of control and mind-body congruence. It is likely that physical safety anxiety is increased by experiences of sexual objectification; for example, Watson, Davids, et al. (2015) found that sexual objectification experiences were related to higher levels of perceived risk of crime, fear of rape, and fear of crime. Within our study, physical safety anxiety was associated with higher levels of body shame and lower levels of self-compassion and concentration. Future researchers are encouraged to (a) develop and validate measures of physical safety anxiety and sexual

functioning and (b) remain open to the ways in which these variables may function differently within the objectification theory framework than originally posited.

It may also be interesting to explore relationships among the consequences for subjective experience. Appearance anxiety in particular was related to most other consequences for subjective experience. A next step in better understanding the relationships among these variables is to selectively add additional exogenous variables to the objectification theory model that may explain some of the covariance among mediators, such as attachment style or emotional reactivity. Further, future researchers could conduct experimental studies in which the levels of body shame, appearance anxiety, or physical safety anxiety are manipulated so that causal effects on flow and body responsiveness can be measured. Fredrickson et al. (1998) pioneered a manipulation of objectification in which participants are asked to try on a swimsuit or sweater before performing tasks and completing relevant questionnaires. Using this manipulation, researchers could assess participants' levels of flow in a flow-enabling task and/or in-the-moment body responsiveness.

In general, experimental studies will be important in solidifying (a) concentration, control, and loss of self-consciousness as the elements of flow most affected by objectification theory and (b) the protective effects of mindfulness and self-compassion. These relationships have received support from this and other cross-sectional, associational studies, many involving SEM and purporting to explain directionality. However, in order to truly establish causality, studies involving manipulation (of either body surveillance and related constructs to test the role of flow or mindfulness or self-compassion to test the moderating effects of these variables) must be conducted. Mindfulness and self-compassion

workshops can be particularly useful manipulations because they provide immediate therapeutic benefit to participants as well as an easy opportunity for researchers to assess effects. Another helpful next step would be a longitudinal study measuring fluctuations in consequences for subjective experience and their effects on mental health outcomes over a substantial period of time.

The mental health outcome of sexual functioning deserves special attention because it has received relatively less research attention than disordered eating and depression. It also may be especially difficult to measure due to its sensitive nature. Future researchers are encouraged to take a creative approach to assessing the predictors of sexual functioning from a feminist and positive psychology lens. Physiological indicators of satisfaction that are frequently captured in sexual functioning scales, including the FSFI, may not adequately reflect sexual enjoyment/satisfaction for many individuals. Further, social and cultural expectations, beliefs, and values around sexuality may shape how satisfaction is experienced and evaluated. For example, operating from what they termed an "intimate justice" framework, McClelland (2010) posited that measures of sexual satisfaction should be accompanied by measures of sexual entitlement or importance in order to better understand quality of individuals' sexual lives. Qualitative studies may be especially important in developing a more nuanced understanding (and, eventually, measurement) of female sexual functioning that incorporates physiological, emotional, relational, and spiritual aspects of sexuality.

Clinical Considerations

The results of this study suggest several strategies for clinicians, especially those working with women around issues of eating concerns, depression, and sexual dysfunction. Broadly, results suggested that flow is an important part of the objectification theory framework that does affect disordered eating, depression symptoms, and sexual dysfunction. Similarly, although dispositional mindfulness and self-compassion were not found to moderate the effect of body surveillance on most consequences for subjective experience, higher levels of these variables were associated with lower levels of body shame, appearance anxiety, mind-body incongruence, physical safety anxiety, and depression symptoms and higher levels of concentration, control, loss of self-consciousness, mind-body congruence, and sexual functioning. Developing qualities of dispositional flow, dispositional mindfulness, and self-compassion may positively influence some of the traits and experiences negatively affected by objectification.

Results of this study provided support for the important role of flow in the objectification theory framework, specifically the components of high concentration, sense of control, and loss of self-consciousness. For the population of women sampled for this study (i.e., White, heterosexual, educated women ages 18-50), enabling these processes may help protect against symptoms of eating disorders, depression, and sexual dysfunction. Flow experiences are posited to occur when an individual's high level of perceived skill matches the high level of perceived challenge of the task at hand (Csikszentmihalyi, 1990). Csikszentmihalyi (1990) explained that games, sports, and art enable flow by requiring the participant to acquire new skills and set goals and by providing feedback and making control

possible. Counselors can provide psychoeducation to women about the preconditions for flow experiences and help them identify activities that may set the stage for a flow experience. Activities may be as diverse as individual or team sports, exercise, videogames, coding, reading, writing, creating art or music, cleaning, cooking, assembling furniture, or working with electronics.

When working with women in particular, counselors are advised to attend to environmental conditions that may make achieving flow more or less difficult. For example, a woman might enjoy strength training, but express concern that lifting weights in a male-dominated gym makes her feel anxious. Exploring the precedents of this anxiety and providing psychoeducation about sexual objectification may be important tasks of the counseling relationship. From there, the counselor can help the client identify safe spaces with fewer opportunities for objectification. Similarly, advocacy work within a system, such a university, can engender systemic change to help make more of these spaces available.

Results of this study provide further support to the large body of literature that has shown mindfulness to be effective in promoting psychological functioning (see Brown et al., 2013, and Davis & Hayes, 2011, for overviews). Within this study, dispositional mindfulness predicted higher levels of dispositional flow and mind-body congruence and lower levels of body shame and appearance anxiety. Importantly, dispositional mindfulness also directly predicted sexual functioning above and beyond the mediating effects of the consequences for subjective experience. Clinicians looking to incorporate mindfulness interventions to help clients address these presenting concerns have a wealth of resources from which to choose. Broad mindfulness intervention programs exist that are appropriate for treating a wide variety

of client concerns, such as anxiety (c.f., Greeson & Brantley), depression (c.f., Barnhofer & Crane), and eating disorders (c.f., Wolever & Best). Interventions that incorporate yoga may be especially helpful to bolster connection with one's body, most obviously on dispositional flow and body responsiveness but potentially also affecting body shame and appearance anxiety (Daubenmier, 2005; Impett et al., 2006). Finally, recent studies suggest that mindfulness interventions in conjunction with sex therapy may be promising treatments for increasing women's sexual functioning and enjoyment (Brotto, Basson, & Luria, 2008; Brotto, Heiman, et al., 2008; Brotto et al., 2012).

Results of this study also complement a smaller but similarly well-supported menagerie of interventions involving self-compassion. We found that self-compassion predicted body shame, appearance anxiety, dispositional flow, body responsiveness, physical safety anxiety, depression symptoms, and sexual functioning in the expected directions. Indeed, empirical studies have shown self-compassion interventions to be beneficial for treating binge eating disorder for women (Kelly & Carter, 2015) and self-criticism for female athletes (Mosewich, Crocker, Kowalski, & DeLongis, 2013). Among undergraduate samples of women and men, self-compassion training has been shown to reduce body dissatisfaction, body shame, and contingent self-worth based on appearance (Albertson et al., 2014) and increase body appreciation (Albertson et al., 2014), resilience, and well-being (Smeets, Neff, Alberts, & Peters, 2014). In a review of self-compassion literature, Barnard and Curry (2011) suggested that compassionate mind training, development of a compassionate image, two-chair, mindfulness based stress reduction and meditation, dialectical behavioral therapy, and

Acceptance and Commitment Therapy are all promising approaches to cultivating clients' self-compassion.

Overall, results of this study suggest that strength-based approaches may help reduce the deleterious consequences of objectification. In addition, broader, social-level reform is needed to change the cultural milieu in which sexual objectification is a daily component of many women's lives (Goodman et al., 2004; Vera & Speight, 2003). At systemic or institutional levels, psychoeducational programs can be instituted to help teach women and men how and when to confront incidences of sexism (c.f., Ashburn-Nardo, Morris, and Goodwin, 2008). Finally, psychology training programs are encouraged to help students explore their own experiences of gender role socialization as well as the many different types of sexism their clients may encounter (Szymanski, Carr, & Moffitt, 2011).

Strengths and Limitations

Results of the present study should be interpreted in light of several considerable strengths and weaknesses in the study design. This study was associational, allowing us to analyze relationships among many variables. By using an online survey to collect data, we were able to reach a large number of participants while minimizing discomfort or inconvenience required for participation. Our sample size was large, and most instruments were well-validated.

This study was also subject to several limitations. One limitation universal to associational studies is low internal validity as compared to strong experimental designs. Because there is no manipulation, it is difficult to know if the variables examined were related to each other in the proposed directions, or if another variable may have influenced

multiple variables within this model (e.g., self-objectification). Likewise, causal inferences cannot be drawn from associational studies; although SEM posits directionality, it cannot be assumed in lack of a true independent variable. Studies that utilize a self-report survey design such as this one are subject to participant attitude effects, such as social desirability bias. Monomethod bias is another threat, since all responses were collected through the same online survey. In addition, instrumentation may pose threats to internal validity of the study if the instruments have poor validity; the PSA and FSFI may both present threats to instrumentation since their validity was not assessed prior to this study. Related to measurement concerns, conceptualization of constructs assessed in this study occurred at the trait level. Although there is some evidence that personality traits are malleable, critics could argue that attending to state experiences (e.g., state flow; state mindfulness) may be more directly relevant to developing preventative and remedial interventions. Future researchers are encouraged to explore these constructs at a state level using an experimental design, such that flow, mindfulness, and self-compassion may be manipulated in ways applicable to intervention planning.

Special strengths and limitations apply to the sample and recruitment tactics. One strength of this study is the large sample. Another strength is the diversity of recruitment methods; although all participants were recruited online, we used three different recruitment methods, broadening generalizability. However, participation in this study was limited to women who had access to a computer. Further, all participants who completed the survey must have met a certain baseline level of emotion regulation in order to have the patience to complete such a lengthy study. Emotion regulation likely influences women's experiences of

variables in the model; for example, deficits in emotion regulation are thought to be implicated in binge eating disorder (Leehr et al., 2015). Related, participants must have had the education to understand the questionnaires and the means to access a computer and the internet. Future researchers are encouraged to use more diverse recruitment tactics to reach women who do not have regular access to the internet.

Generalizability is further limited to United States women between ages 18-50 due to inclusion criteria. In addition, the majority of participants identified as heterosexual and White. Caution should be taken if results are generalized to women who identify as lesbian, bisexual, or another non-heterosexual identity or to non-White women. Sexual orientation and ethnic minority women face special stressors based on their intersecting identities, which may affect the ways in which the variables studied in this project affect one another. For example, Watson, Marszalek, et al. (2015) found that women who identified as Black or African American reported more sexual objectification experiences and fear of crime than women who identified as White. Watson et al. (2012) situated Black/African American women's experiences of sexual objectification within a historical context of racism in which Black/African American women's bodies were literally owned by White men and were overly sexualized. Additional variables may also be implicated in the objectification theory model for certain groups of women; for example, Watson, Grotewiel et al. (2015) found that heterosexist experiences were associated with increased body image concerns for sexual minority women. Future researchers are encouraged to recruit a more diverse sample or to conduct studies specifically with populations with different identities in order to better tailor the model.

A final important limitation of this sample was that women who were obese were underrepresented and women who were underweight were overrepresented. Although research on objectification theory among overweight and obese women is lacking, Oehlhof (2012) found that these women do experience self-objectification and its consequences with some group-specific manifestations (e.g., they may experience different types of objectifying experiences). The majority of objectification theory studies have used samples of young, normal weight, White, heterosexual college women. Research on objectification theory among overweight and obese women would make an important contribution to the literature.

Also affecting generalizability, the results of this study are at risk of being over-specified to its sample and methods. The models retained deviated considerably from the traditional objectification model, which is generally well-supported. Modification decisions were considered in the context of theory, however, and raise important questions about alternative ways in which these constructs may interact with each other. In addition, novel relationships explored in this study, including the specific roles of different components of flow as well as mindfulness and self-compassion, provide an important step in better understanding the objectification process. Finally, these models controlled for a large number of variables. A helpful next step would be testing the models supported in this study using a new sample and different measures.

Conclusions

The present study investigated the relationships among body surveillance, body shame, appearance anxiety, dispositional flow, body responsiveness, physical safety anxiety, disordered eating, depression symptoms, sexual functioning, dispositional mindfulness, and

self-compassion within the objectification theory framework. Dispositional flow was studied using the nine-component conceptualization provided by Csikszentmihalyi (1990). Support was found for a model in which the three most relevant components of flow (i.e., concentration, control, and loss of self-consciousness) were measured separately. In separate models, dispositional mindfulness and self-compassion were found to be associated with many other variables within the objectification theory framework; however, they largely did not mediate the effects of body surveillance as hypothesized. Results demonstrate the importance of conceptualizing flow as a multidimensional construct in future studies of objectification theory, and researchers are encouraged to pay special attention to the roles of concentration, control, and loss of self-consciousness. Further, the potential buffering roles of dispositional mindfulness and self-compassion earlier within the objectification theory process should be investigated. Clinicians can use these results to support treatments for women's gender and body-related concerns that draw upon mindfulness and self-compassion practices. Indeed, recent trends in positive psychology appear to have promising implications for the treatment of mental health concerns born out of a sexist society.

APPENDIX A

SCREENING QUESTIONS

Instructions: You will first be asked to answer three separate screening questions. Please respond to all three items honestly.

1. Please select your gender identification.
    - Woman
    - Man

2. Please select your age range.
    - Under 18 years old
    - 18-50 years old
    - Over 50 years old

3. Are you a United States citizen?
    - Yes
    - No

APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE

Instructions: Please answer each of the following questions honestly.

1. Please identify your biological sex assigned at birth:
   - Female
   - Male
   - Intersex
   - Other (please specify): _____

2. Please identify your gender identification (check all that apply):
   - Woman
   - Transgender Woman
   - Man
   - Transgender Man
   - Gender Fluid
   - Gender Queer
   - Non-binary
   - Other (please specify): _____

3. Please identify your age in years: _____

4. Are you a citizen of the United States?
   - Yes
   - No

5. Please identify your race/ethnicity/cultural identity (check all that apply):
   - Asian/Pacific Islander
   - Black/African American
   - Caucasian/White/European American
   - East Indian
   - Hispanic/Latina
   - Middle Eastern
   - Multiracial/ethnic
   - Native American/American Indian
   - West Indian
   - Other (please specify): _____

6. Please identify your sexual orientation:
   - Bisexual

- Gay
- Pansexual
- Queer
- Questioning
- Straight or heterosexual
- Other (please specify): _____

7. Please indicate your highest level of education achieved.
    - Some High School/No Diploma
    - High School Diploma
    - GED
    - Vocational or Trade School
    - Some College/No Degree
    - Associates Degree
    - Bachelor's Degree (Ex: BA, BS, AB, BSW)
    - Master's Degree (Ex: MA, MS, MSW, MPH, MEd)
    - Doctorate Degree (Ex: Ph.D., Ed.D., Sc.D., DA, DB, DSW)
    - Professional Degree (Ex: JD, MD, DO, DDS, DVM, PsyD)

8. Please identify your personal annual income.
    - $0-9,999
    - $10,000-19,999
    - $20,000-29,999
    - $30,000-39,999
    - $40,000-49,999
    - $50,000-59,999
    - $60,000-69,999
    - $70,000-79,999
    - $80,000-89,999
    - $90,000-99,999
    - $100,000 or more

9. Please specify your height in feet and inches (e.g., 5 feet 9 inches). If you don't know your height, take your best guess.
    ____ feet, ____ inches

10. Please specify your weight in pounds (e.g., 170 pounds). If you don't know your weight, take your best guess.
    ____ pounds

APPENDIX C

THE BODY SURVEILLANCE SUBSCALE OF THE OBJECTIFIED BODY CONSCIOUSNESS SCALE

Instructions: Indicate the number that corresponds to how much you agree with each of the statements on the following page.

Indicate NA only if the statement does not apply to you. Do not indicate NA if you don't agree with a statement.

For example, if the statement says "When I am happy, I feel like singing" and you don't feel like singing when you are happy, then you would indicate one of the disagree choices. You would only indicate NA if you were <u>never</u> happy.

Item	1 Strongly disagree	2	3	4 Neither agree nor disagree	5	6	7 Strongly agree	N/A Does not apply
1. I rarely think about how I look.								
2. I think it is more important that my clothes are comfortable than whether they look good on me.								
3. I think more about how my body feels than how my body looks.								
4. I rarely compare how I look with how other people look.								
5. During the day, I think about how I look many times.								
6. I often worry about whether the clothes I am wearing make me look good.								
7. I rarely worry about how I look to other people.								

8. I am more concerned with what my body can do than how it looks.								

APPENDIX D

THE BODY SHAME SUBSCALE OF THE OBJECTIFIED BODY CONSCIOUSNESS SCALE

Instructions: Indicate the number that corresponds to how much you agree with each of the statements on the following page.

Indicate NA only if the statement does not apply to you. Do not indicate NA if you don't agree with a statement.

For example, if the statement says "When I am happy, I feel like singing" and you don't feel like singing when you are happy, then you would indicate one of the disagree choices. You would only circle NA if you were <u>never</u> happy.

Item	1 Strongly disagree	2	3	4 Neither agree nor disagree	5	6	7 Strongly agree	N/A Does not apply
1. When I can't control my weight, I feel like something must be wrong with me								
2. I feel ashamed of myself when I haven't made the effort to look my best								
3. I feel like I must be a bad person when I don't look as good as I could								
4. I would be ashamed for people to know what I really weigh.								
5. Even when I can't control my weight, I think I'm an okay person								
6. I never worry that something is wrong with me when I am not								

exercising as much as I should								
7. When I'm not exercising enough, I question whether I am a good enough person.								
8. When I'm not the size I think I should be, I feel ashamed.								

APPENDIX E

THE SOCIAL APPEARANCE ANXIETY SCALE

Instructions: Below is a list of statements which can be used to describe how people feel. Underneath each statement are four numbers which indicate how often each statement is true of you (e.g., 1 = not at all, 5 = extremely). Please read each statement carefully and select the number which best indicates how often, in general, the statement is true of you.

Item	1 Never	2 Rarely	3 Sometimes	4 Often	5 Extremely
1. I feel comfortable with the way I appear to others.					
2. I feel nervous when having my picture taken.					
3. I get tense when it is obvious people are looking at me.					
4. I am concerned people would not like me because of the way I look.					
5. I worry that others talk about flaws in my appearance when I am not around.					
6. I am concerned people will find me unappealing because of my appearance.					
7. I am afraid that people will find me unattractive.					
8. I worry that my appearance will make life more difficult for me.					
9. I am concerned that I have missed out on opportunities because of my appearance.					
10. I get nervous when talking to people because of the way I look.					
11. I feel anxious when other people say something about my appearance.					
12. I am frequently afraid I would not meet others' standards of how I should look.					
13. I worry people will judge the way I look negatively.					
14. I am uncomfortable when I think others are noticing flaws in my appearance.					

15. I worry that a romantic partner will/would leave me because of my appearance.					
16. I am concerned that people think I am not good looking.					

APPENDIX F

THE DISPOSITIONAL FLOW SCALE-2 LONG FORM

Instructions: Please answer the following questions in relation to your experiences in any activity in life. These questions relate to the thoughts and feelings you may experience in everyday life. There are no right or wrong answers. Think about how you feel during activities in everyday life and answer the questions using the rating scale below. Mark the number that best matches your experience from the options available.

Item	1 Never	2 Seldom	3 Sometimes	4 Often	5 Always
1. I am challenged, but I believe my skills will allow me to meet the challenge.					
2. I make the correct movements without thinking about trying to do so.					
3. I know clearly what I want to do.					
4. It is really clear to me how the activity is going.					
5. My attention is focused entirely on what I am doing.					
6. I have a sense of control over what I am doing.					
7. I am not concerned with what others may be thinking of me.					
8. Time seems to alter (either slows down or speeds up).					
9. I really enjoy the experience.					
10. My abilities match the high challenge of the situation.					
11. Things just seem to happen automatically.					
12. I have a strong sense of what I want to do.					
13. I am aware of how well I am doing.					
14. It is no effort to keep my mind on what is happening.					
15. I feel like I can control what I am doing.					
16. I am not concerned with how others may be evaluating me.					

17. The way time passes seems to be different from normal.					
18. I love the feeling and want to capture it again.					
19. I feel I am competent enough to meet the high demands of a situation.					
20. I perform automatically.					
21. I know what I want to achieve.					
22. I have a good idea about how well I am doing.					
23. I have total concentration.					
24. I have a feeling of total control.					
25. I am not concerned with how I am presenting myself.					
26. It feels like time goes by quickly.					
27. The experience leaves me feeling great.					
28. The challenge and my skills are at an equally high level.					
29. I do things spontaneously and automatically without having to think.					
30. My goals are clearly defined.					
31. I can tell by the way the activity is going how well I am doing.					
32. I am completely focused on the task at hand.					
33. I feel in total control of my body.					
34. I am not worried about what others may be thinking of me.					
35. I lose my normal awareness of time.					
36. I find the experience extremely rewarding.					

APPENDIX G

MEASURE OF PHYSICAL SAFETY ANXIETY

Instructions: At one time or another, most of us have experienced fear about becoming the victim of crime. Some crimes probably frighten you more than others. We are interested in how afraid people are in everyday life of being a victim of different kinds of crimes. Please rate your fear on a scale of 1 to 10 where 1 means you are not afraid at all and 10 means you are very afraid.

Item	1 Not afraid at all	2	3	4	5 Somewhat afraid	6	7	8	9	10 Very afraid
1. Being raped or sexually assaulted.										
2. Being attacked by someone with a weapon.										
3. Being robbed or mugged on the street.										

APPENDIX H

MEASURE OF BODY RESPONSIVENESS

Instructions: Please answer the following questions honestly about your general day-to-day experiences. There are no right or wrong answers.

Item	1 Not at all true about me	2	3	4	5	6	7 Very true about me
1. I am confident that my body will let me know what is good for me.							
2. My bodily desires lead me to do things that I end up regretting.							
3. My mind and my body often want to do different things.							
4. I suppress my bodily feelings and sensations.							
5. I “listen” to my body to advise me about what to do.							
6. It is important for me to know how my body is feeling throughout the day.							
7. When I'm not exercising enough, I question whether I am a good enough person.							

APPENDIX I

THE EATING ATTITUDES TEST

Instructions:

Please choose a response for each of the following statements.

Item	1 Never	2 Rarely	3 Sometimes	4 Often	5 Very often
1. Am terrified about being overweight					
2. Avoid eating when I am hungry					
3. Find myself preoccupied with food					
4. Have gone on eating binges where I feel that I may not be able to stop					
5. Cut my food into small pieces					
6. Aware of the calorie content of foods that I eat					
7. Particularly avoid foods with a high carbohydrate content (i.e. bread, rice, potatoes, etc.)					
8. Feel that others would prefer if I ate more					
9. Vomit after I have eaten					
10. Feel extremely guilty after eating					
11. Am preoccupied with a desire to be thinner					
12. Think about burning up calories when I exercise					
13. Other people think that I am too thin					
14. Am preoccupied with the thought of having fat on my body					
15. Take longer than others to eat my meals					
16. Avoid foods with sugar in them					
17. Eat diet foods					
18. Feel that food controls my life					
19. Display self-control around food					
20. Feel that others pressure me to eat					
21. Give too much time and thought to food					
22. Feel uncomfortable after eating sweets					

23. Engage in dieting behavior					
24. Like my stomach to be empty					
25. Enjoy trying new rich foods					
26. Have the impulse to vomit after meals					

APPENDIX J

THE CENTER FOR EPIDEMIOLOGIC STUDIES DEPRESSION SCALE-SHORT FORM

Instructions: Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past two weeks.

Item	1 Rarely or none of the time (less than 1 day)	2 Some or a little of the time (1-2 days)	3 Occasionally or a moderate amount of the time (3-4 days)	4 Most or all of the time (5-7 days)
1. I was bothered by things that usually don't bother me.				
2. I felt that I could not shake off the blues even with help from my family or friends.				
3. I felt I was just as good as other people.				
4. I had trouble keeping my mind on what I was doing.				
5. I felt that everything I did was an effort.				
6. I felt hopeful about the future.				
7. I felt like my life had been a failure.				
8. I felt fearful.				
9. I felt lonely.				
10. People were unfriendly.				

APPENDIX K

THE FEMALE SEXUAL FUNCTION INDEX

Instructions: Please choose a response for each of the following statements. Please answer honesty; there are no right or wrong answers.

"Sexual activity" can refer to any activity that you consider sexual, solo or with a partner(s), including but not limited to sexual intercourse.

1. Using this definition of sexual activity, do you consider yourself currently sexually active?
    - Yes
    - No

2. Using this definition of sexual activity, would you consider yourself sexually active at sometime in the past?
    - Yes
    - No

Please use the following scale for the next four questions:

1 = Almost never or never
2 = A few times (less than half of the time)
3 = Sometimes (about half the time)
4 = Most times (more than half the time)
5 = Almost always or always

Item	1 Almost never or never	2 A few times (less than half of the time)	3 Sometimes (about half the time)	4 Most times (more than half the time)	5 Almost always or always
3. Generally, how often do you feel sexual desire or interest?					
4. Generally, how often do you feel sexually aroused ("turned on") during sexual activity?					
5. Generally, how often are you satisfied with					

your arousal (excitement) during sexual activity?					
6. Generally, when you have sexual stimulation or activity, how often do you reach orgasm (climax)?					

Please use the following scale for the next two questions:

1 = Very high
2 = High
3 = Moderate
4 = Low
5 = Very low or none at all

Item	1 Very high	2 High	3 Moderate	4 Low	5 Very low or none at all
7. Generally, how would you rate your level (degree) of sexual desire or interest?					
8. Generally, how would you rate your level of arousal ("turn on") during sexual activity?					

9. Generally, how confident are you about becoming sexually aroused during sexual activity?
    - Very low or no confidence
    - Low confidence
    - Moderate confidence
    - High confidence
    - Very high confidence

10. Generally, when you have sexual stimulation or activity, how difficult is it for you to reach orgasm (climax)?
    - Extremely difficult or impossible
    - Very difficult
    - Difficult
    - Slightly difficult
    - Not difficult

11. Generally, how satisfied are you with your ability to reach orgasm (climax) during sexual activity?
    - Very dissatisfied
    - Moderately dissatisfied
    - About equally satisfied and dissatisfied
    - Moderately satisfied
    - Very satisfied

12. Generally, how satisfied are you with your overall sexual life?
    - Very dissatisfied
    - Moderately dissatisfied
    - About equally satisfied and dissatisfied
    - Moderately satisfied
    - Very satisfied

APPENDIX L

THE FRIEBURG MINDFULNESS INVENTORY-SHORT FORM

Instructions: Thanks very much for all your effort!

Item	1 Rarely	2 Occasionally	3 Fairly often	4 Almost always
1. I am open to the experience of the present moment.				
2. I sense my body, whether eating, cooking, cleaning, or talking.				
3. When I notice an absence of mind, I gently return to the experience of the here and now.				
4. I am able to appreciate myself.				
5. I pay attention to what's behind my actions.				
6. I see my mistakes and difficulties without judging them.				
7. I feel connected to my experience in the here-and-now.				
8. I accept unpleasant experiences.				
9. I am friendly to myself when things go wrong.				
10. I watch my feelings without getting lost in them.				
11. In difficult situations, I can pause without immediately responding.				
12. I experience moments of inner peace and ease, even when things get hectic and stressful.				
13. I am impatient with myself and with others.				
14. I am able to smile when I notice how I sometimes make life difficult.				

APPENDIX M

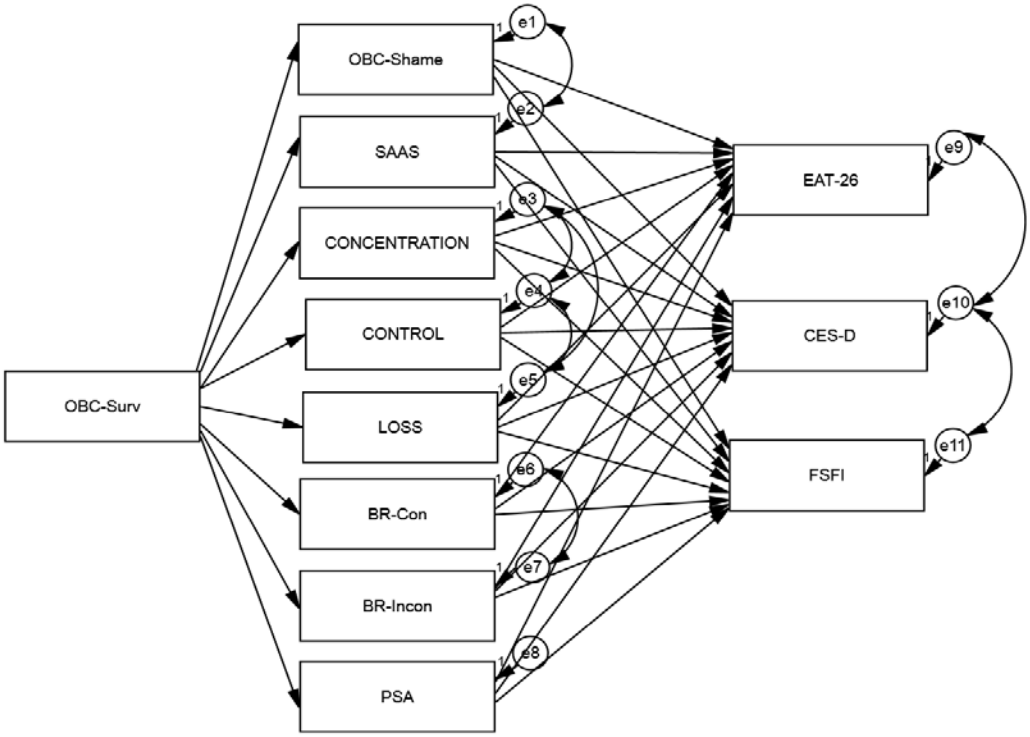
THE SELF-COMPASSION SCALE—SHORT FORM

Instructions: Please indicate how often you feel or behave in the following ways.

Item	1 Almost never	2	3 Sometimes	4	5 Almost always
1. When I fail at something important to me I become consumed by feelings of inadequacy.					
2. I try to be understanding and patient towards those aspects of my personality I don't like.					
3. When something painful happens I try to take a balanced view of the situation.					
4. When I'm feeling down I tend to feel like most other people are probably happier than I am.					
5. I try to see my failings as part of the human condition.					
6. When I'm going through a very hard time, I give myself the caring and tenderness I need.					
7. When something upsets me I try to keep my emotions in balance.					
8. When I fail at something that's important to me I tend to feel alone in my failure.					
9. When I'm feeling down I tend to obsess and fixate on everything that's wrong.					
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.					
11. I'm disapproving and judgmental about my own flaws and inadequacies.					
12. I'm intolerant and impatient towards those aspects of my personality I don't like.					

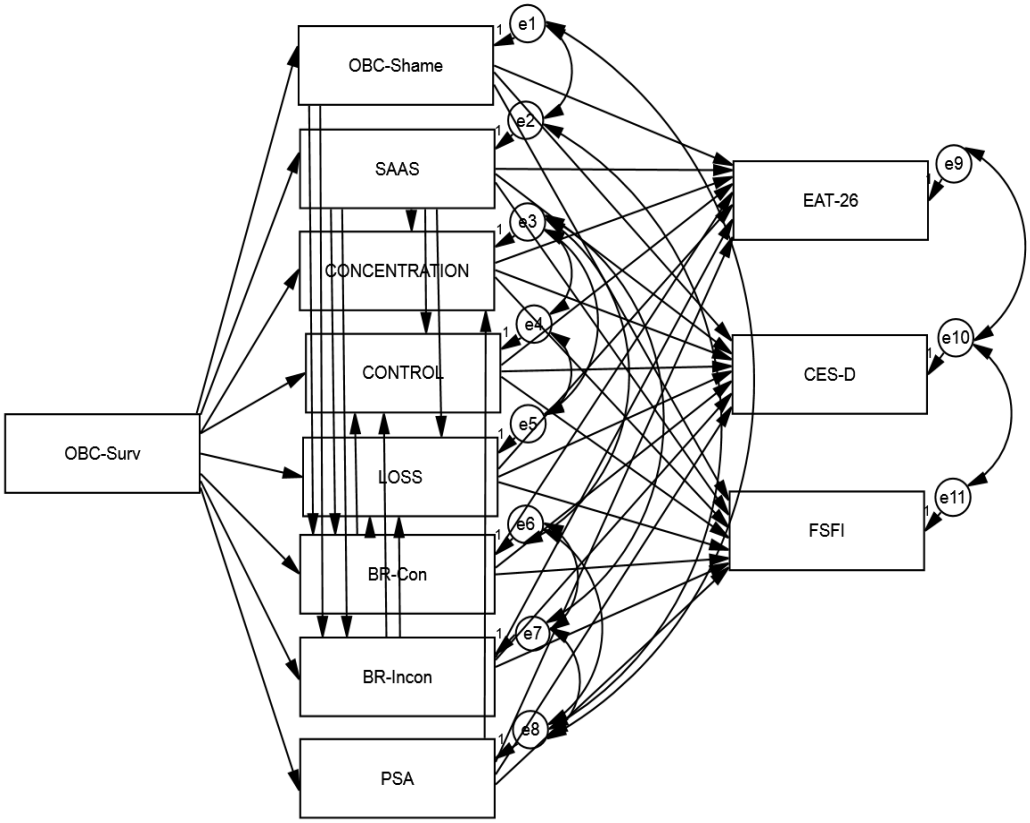
APPENDIX N

AMOS PROPOSED MODEL OF THE MEDIATING ROLE OF THE THREE DIMENSIONS OF FLOW IN OBJECTIFICATION THEORY



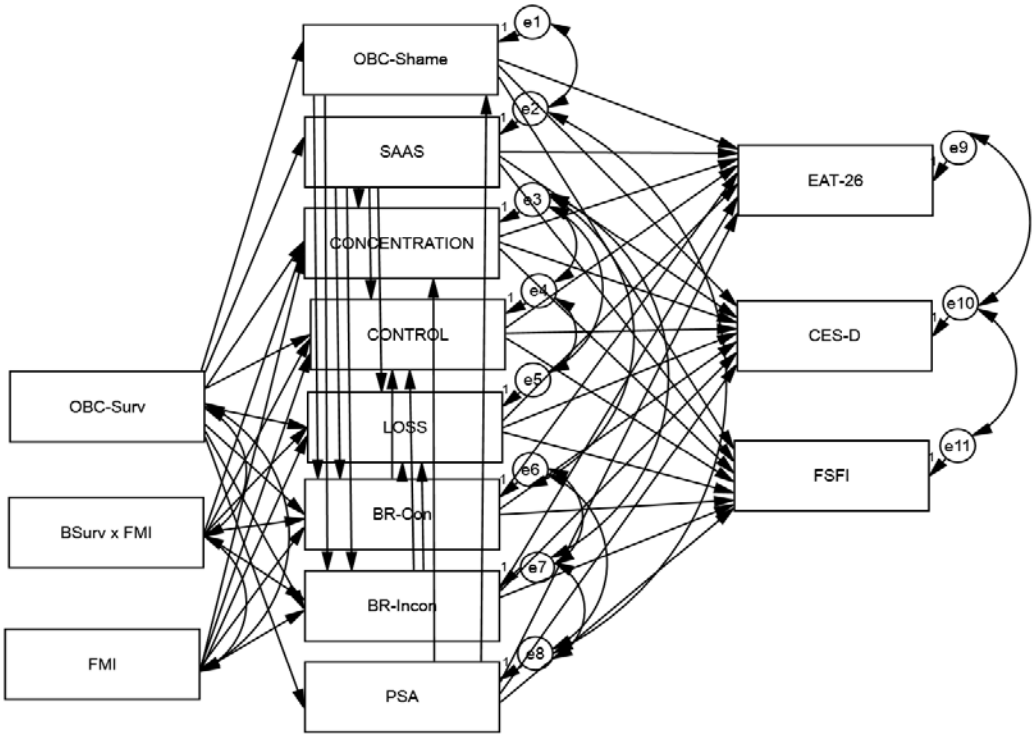
APPENDIX O

AMOS RETAINED MODEL OF THE MEDIATING ROLE OF THE THREE DIMENSIONS OF FLOW IN OBJECTIFICATION THEORY



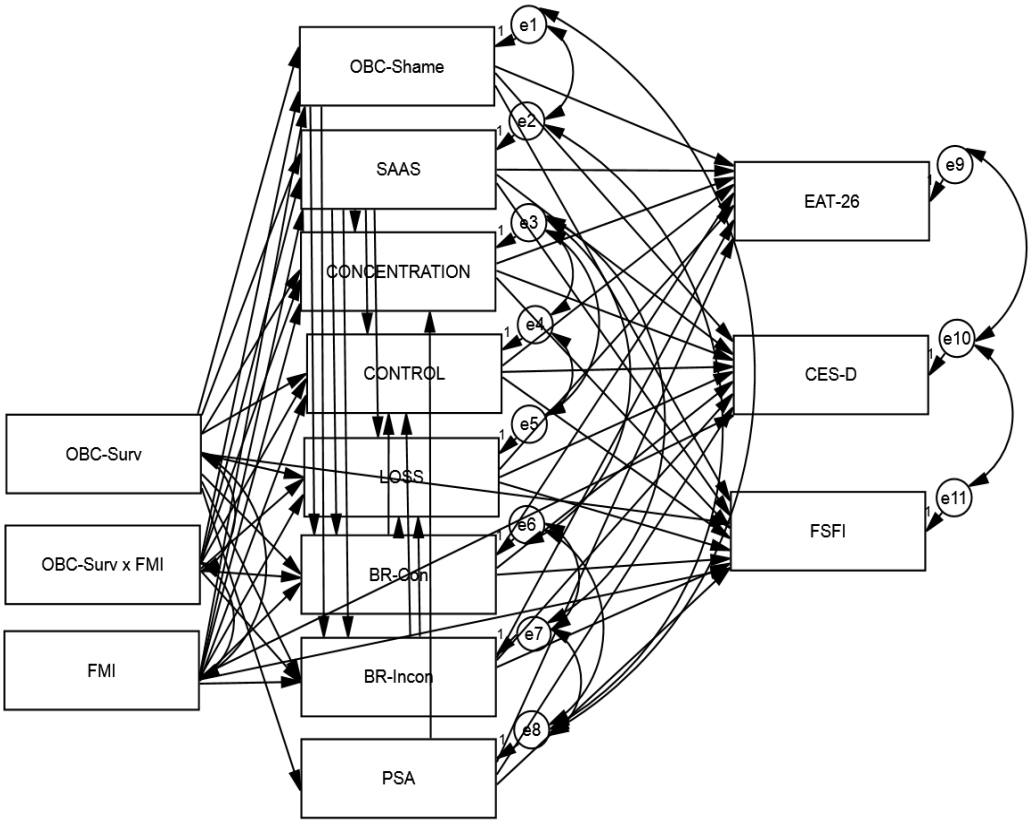
APPENDIX P

AMOS MODIFIED PROPOSED MODEL OF THE MODERATING ROLE OF DISPOSITIONAL MINDFULNESS IN OBJECTIFICATION THEORY



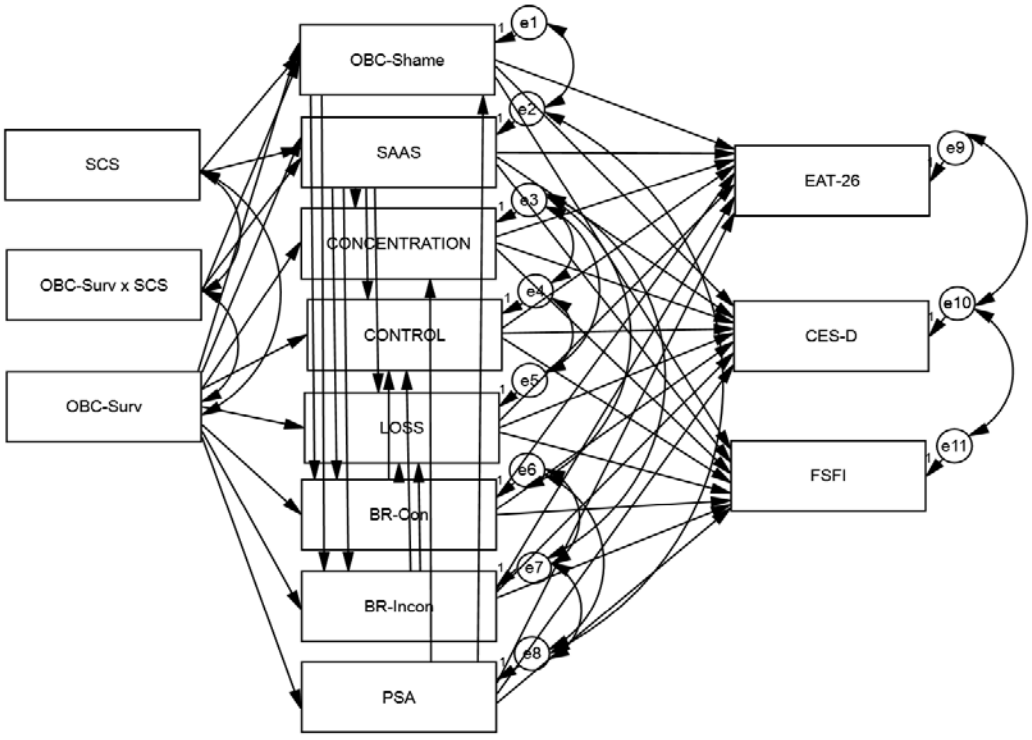
APPENDIX Q

AMOS RETAINED MODEL OF THE MODERATING ROLE OF DISPOSITIONAL MINDFULNESS IN OBJECTIFICATION THEORY



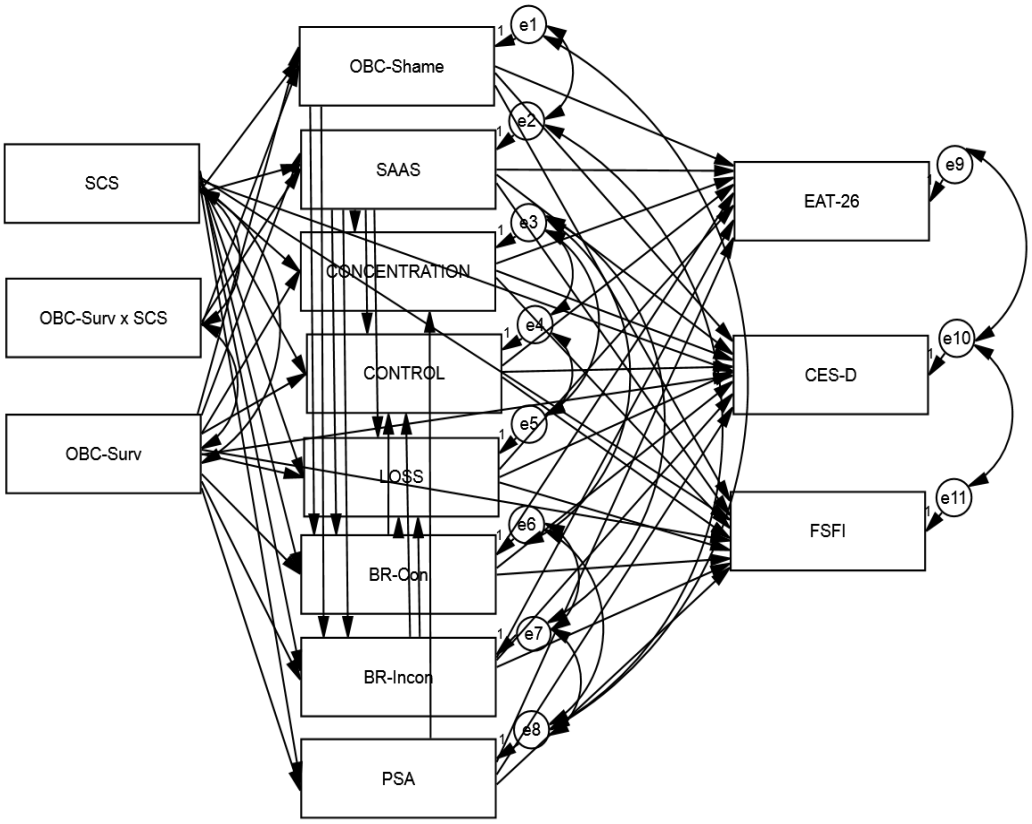
APPENDIX R

AMOS MODIFIED PROPOSED MODEL OF THE MODERATING ROLE OF SELF-COMPASSION IN OBJECTIFICATION THEORY



APPENDIX S

AMOS RETAINED MODEL OF THE MODERATING ROLE OF SELF-COMPASSION IN OBJECTIFICATION THEORY



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VITA

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