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Can Self-Esteem Protect Against Negative Ramifications of Self-Objectification in Men and Women?

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FLORIDA STATE UNIVERSITY

COLLEGE OF EDUCATION

CAN SELF-ESTEEM PROTECT AGAINST NEGATIVE RAMIFICATIONS OF
SELF-OBJECTIFICATION IN MEN AND WOMEN?

By

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ABSTRACT

The purpose of this study was to test whether or not increased level of self-esteem can protect against negative consequences of self-objectification. Specifically, an experimental design, utilizing self-esteem and self-objectification manipulation, was employed to test the extent to which increased self-esteem can serve as a buffer against negative emotions (e.g., shame), negative appearance evaluation, an appearance orientation, and decreased cognitive performance among males ($n = 138$) and females ($n = 132$). Participants ($n = 270$) were physically active individuals with a mean age of 24.22 years ($SD = 8$). State self-esteem was manipulated by providing false feedback about facial appearance and having students write a short essay about their favorite or least favorite body parts. State self-objectification was manipulated by having participants wear tight or baggy clothes, while looking at themselves in a mirror.

Findings showed main effects for *appearance evaluation* and *appearance orientation*, such that females were more satisfied with their appearance than males, and males placed more importance on their physical appearance compared to females. Although none of the interaction effects for state self-objectification were significant, some approached statistical significance. The interactions for state self-objectification included (1) gender and self-esteem manipulation, and (2) gender and self-esteem manipulation and state self-objectification manipulation. Interaction effects of state shame and appearance evaluation of gender and self-objectification were also significant. Although the findings of the present study are mixed on many accounts, they present numerous venues for future research to examine the nature of self-objectification experiences within/between males and females.

CHAPTER 1

INTRODUCTION

Most societies are characterized by interactions or patterns of daily relationships among individuals who share a distinctive culture. During everyday interactions humans experience multiple events that involve varying modes of input from the environment that require interpretation. There are many unknowns to be explored in order to fully understand the complexity and multidimensionality of human nature, and for many years, researchers have been studying these fascinating processes in humans. A range of theoretical approaches emerged to aid examining an array of constructs and related processes. In the past two decades, much research has been done on self-objectification theory, which posits that individuals become self-conscious and preoccupied with how others perceive their body while disregarding how they feel about it themselves (Fredrickson & Roberts, 1997). Psychological and health related concerns can result in this process. As such, the focus of this study is on investigating potential safeguards for negative emotional and cognitive consequences of self-objectification among physically active men and women in an induced objectified environment.

Individuals, specifically in Western society, tend to objectify others, thus treating them as if they are commodities or objects with little or no regard for their individuality. Historically, women have been looked at, evaluated, and seen as objects for sexual pleasure (i.e., sexual objectification) more often than are men (Puwar, 2004). Women are depicted as sex-objects in virtually every medium, including television programs (Aubrey, 2006), music videos (Grabe, Hyde, & Lindberg, 2007), and magazines (Krassas, Blauwkamp, & Wesselink, 2003). One might say: *So what? Everyone has seen oneself or others as an object at some point in time.* However, objectification experiences can have negative psychological ramifications including decrements

in positive emotion and (cognitive) performance, and reduced awareness of internal bodily states such as satiety, hunger, and fatigue (Fredrickson & Roberts, 1997). These negative psychological consequences can accumulate and generate mental health problems (e.g., eating disorders, depression, and sexual dysfunction) and psychological problems (e.g., shame, disgust and decrease in cognitive functioning; Roberts & Gettman, 2004).

Although the research emphasis on objectification is hardly new (Cooley, 1902; de Beauvoir, 1952), the advancement of a formal theoretical framework and related assessment tools has elicited an increase in empirical studies using objectification theory (e.g., Riva, Gaudio, & Dakanalis, 2014; Vandebosch & Eggermont, 2014) and related phenomena over the past two decades. However, much remains to be illuminated about why and how the process of self-objectification persists in some individuals; how it may be counteracted; how its negative and harmful consequences may be combated once they occur; and what its implications are among individuals and society at large as well as members therein.

Most of the studies related to objectification theory have been done on homogeneous samples such as white college, heterosexual women from Westernized societies – North America, Australia, and Britain (Thøgersen-Ntoumani, Ntoumanis, Cumming, Bartholomew, & Pearce, 2011; Tiggemann & Boundy, 2008). However, this is not to say that other populations (e.g., men, homosexual individuals, African-Americans, Muslims, etc.) do not experience sexual and self-objectification. As such, the processes of self-objectification are not completely understood among samples of various cultures, racial and ethnic identities, different sexual orientation, socioeconomic status, age, relationship status, and other background variables.

Secondly, because self-objectification is a multidimensional and complex phenomenon, it is difficult to study the mechanisms underlying its occurrence and its persistence. Attention

should be given to other constructs related to self-objectification, such as self-surveillance. To explore this issue, different psychometric analyses should be considered, including exploratory and confirmatory factor analyses (Tylka & Augustus-Horvath, 2011). Nevertheless, psychometric information is mainly limited to white heterosexual college students; therefore, measurement evaluation (e.g., reliability, validity) for other populations and individuals from diverse backgrounds is needed.

Thirdly, much survey-based empirical work (e.g., Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; Prichard & Tiggemann, 2005) and experimental work (Thøgersen-Ntoumani et al., 2011) has been conducted to examine a variety of predictors and consequences of self-objectification experience (Tiggemann & Williamson, 2000) among exercisers. Also, researchers have been interested in studying the effects of the objectifying environments on physically active individuals (Prichard & Tiggemann, 2008). Despite reported research findings in the extant literature about self-objectification, there is a dearth of empirical inquiry examining the mechanisms for preventing the self-objectification experience and predictors most relevant for various mental health conditions (e.g., body shame, anxiety, body surveillance).

Given these limitations, there is a need to consider alternative methods that might offer insights to understand idiosyncratic processes of self-objectification phenomena. Longitudinal, qualitative, experimental manipulations, and/or mixed method approaches should be considered to explore individuals' perceptions and feelings of their bodies in objectified environments, and to examine potential variables that might serve as buffers to self-objectification experiences. As such, the proposed research intended to examine physically active individuals in an induced objectified environment employing self-esteem manipulations.

Purpose of the Study

Based on the literature review, three main questions were of particular interest for investigation in the present study. The first research question was: To what extent do men and women differ on self-related constructs specifically trait self-esteem and trait self-objectification? Previous research studies suggest that women are more likely to experience lower self-esteem levels (Kling, Hyde, Showers, & Buswell, 1999) and higher self-objectification levels compared to men (Slater & Tiggemann, 2002). Most of the researchers who have investigated the self-objectification phenomenon have mainly utilized gender homogenous samples – women (Noll & Fredrickson, 2006; Tiggemann & Boundy, 2008). However, little research has examined self-esteem and self-objectification levels in gender heterogeneous sample.

Hypothesis 1: Males would report higher levels of trait self-esteem and lower levels of trait self-objectification compared to female counterparts.

A second research question was: To what extent does self-esteem serve as a buffer for negative consequences of self-objectification between males and females? Previous research has shown that women with higher levels of self-objectification experience increases in negative emotions (e.g., shame, appearance orientation; Thøgersen-Ntoumani et al., 2011). The extent to which different levels of state self-objectification lead to different negative effects between genders is less known. In this study, I attempt to examine this research question.

Hypothesis 2: Females in decreased state self-esteem group wearing tight clothes would experience increased negative emotions (i.e., shame), be more focused on their physical appearance, and be less satisfied with their physical appearance (i.e., lower appearance evaluation) compared to individuals in any other conditions.

A third research question was: Do males and females differ on cognitive performance when their levels of self-esteem and self-objectification are manipulated? Given that higher levels of self-objectification can lead to experience of negative emotions (e.g., shame), which in turn can potentially result in decreased attentional cues and a decrement in cognitive performance (Fredrickson et al., 1998; Fredrickson & Harrison, 2005; Tiggemann & Boundy, 2008).

Hypothesis 3: Females in decreased state self-esteem group wearing tight clothes would experience decrement in cognitive performance compared to individuals in any other conditions.

Key Constructs

For the purpose of this study, below I present a list of key concepts:

Objectification. Objectification is defined as treating a person as an object, a thing, or a commodity (Roberts & Fredrickson, 1997).

Self-objectification. The concept of self-objectification is defined as an individual internalization of outsiders' perspective of his/her physical self whereby becoming self-conscious with how others perceive his/her body while disregarding how a person feels about it. In other words, a person is engaging in reflected self-appraisal and sees him/herself reflected in other people's eyes (Roberts & Fredrickson, 1997).

State self-objectification. State self-objectification is defined as an experience of self-objectification or focusing on one's own physique and others' opinions of his/her physique at specific times/points that triggered this experience.

Trait self-objectification. Trait self-objectification in this study is defined as a tendency to see oneself as an object and adopt a third persons' perspective. Generally, a person worries about his/her physical appearance.

Self-esteem. A definition of self-esteem is the psychological perspective of a person's overall evaluation of his/her worth (Hewitt, 2009).

State self-esteem. State self-esteem in this study is defined as a person's overall evaluation of his/her self-worth in short-term variations.

Trait self-esteem. Trait self-esteem is conceptualized as a person's overall evaluation of his/her self-worth in regard to enduring characteristics.

Shame. Shame is defined as a negative emotion that is experienced when one fails to meet personal standards and norms regarding what is good, right, appropriate, and desirable (Lewis, 1974).

Appearance evaluation. Appearance evaluation is defined as a feeling of physical attractiveness/unattractiveness or satisfaction/dissatisfaction with one's physical appearance (Cash, 2000).

Appearance orientation. Appearance Orientation is defined as an extent of investment or importance that one places on his/her physical appearance (Cash, 2000).

CHAPTER 2

LITERATURE REVIEW

Objectification and Self-Objectification Theory

According to Fredrickson and Roberts' (1997) objectification theory, individuals can self-objectify as a consequences of internalizing outsiders' perspective of the physical self. In becoming self-conscious with how others perceive their bodies they also can start disregarding how they feel about it personally. In other words, they engage in reflected self-appraisal and they see themselves as reflected in other people's eyes something Cooley described in the early 1900s (Cooley, 1902) as, the "*looking-glass self*." Individuals high in self-objectification are usually intensely aware of their bodies, which may lead to self-surveillance or habitual monitoring of their physique (Tiggemann & Lynch, 2001). They might consciously look at themselves in the mirror and/or constantly check their body weight, which can lead to unpleasant emotional experiences if they are overly self-critical.

Internalization of an observer's perspective can have unfavorable psychological consequences including body-dissatisfaction, reduced body-esteem (McKinley, 1998; Strelan, Mehaffey, & Tiggemann 2003; Strelan & Hargreaves, 2005), shame, anxiety (Frederickson & Roberts, 1997), disrupted flow (Fredrickson et al., 1998) and interoceptive deficits (i.e., internal representation of one's own body as being in some way deficient; Pollatos et al., 2008; Quinn, Kallen, Twenge, & Fredrickson, 2006). There is also a potential for becoming less intrinsically motivated (i.e., behaviors driven by internal rewards) leading to reduced opportunities for peak motivational states (Harper & Tiggemann, 2008). The collection of these negative psychological consequences accumulates and can lead to mental health risks including eating disorders

(Calogero, 2009; Fredrickson, et al., 1998; Muehlenkamp & Saris-Baglama, 2002; Tiggemann & Kurig, 2004), sexual dysfunctions, and unipolar depression (Fredrickson & Roberts, 1997).

Idiosyncratic Differences in Self-Objectification Experience

The extent to which individuals experience self-objectification is variable and context dependent (Deaux & Major, 1987). Throughout the course of a day, human beings enter and exit multiple contexts, some that protect against unpleasant ramifications of objectification, and some that do not. The degree to which these repercussions affect individuals depends on whether they have greater tendency to self-objectify (i.e., are higher in trait self-objectification), or they experience it only in certain situations (i.e., state self-objectification). Experiencing self-objectification can be activated and exaggerated in certain situations when people are being observed or when they are imagining they are being observed by others (Fredrickson, et al., 1998). The experience of state self-objectification can vary from situation to situation. For example, Fredrickson et al. (1998) proposed that individuals are most likely to see themselves as an object in circumstances that exacerbate their awareness of observers' perspectives on their bodies.

For example, Gapinski, Brownell and LaFrance (2003) demonstrated the consequences of *fat talk* (e.g., *I'm so fat* and *No you're not*). Specifically, women in a highly self-objectified environment (e.g., wearing swimming suits) who heard peers employ fat talk about themselves experienced less negative mood compared to women who heard irrelevant talk. Others making self-disparaging body comments may redirect women's attention away from their own physique faults by transferring it to the peers' body figures, thus increasing the objectification of others while decreasing their own state self-objectification.

In *state* self-objectification, individuals focus on their own physique and others' opinions of their physique. For example, women wearing sexualized clothing reported more body-related thoughts and experienced higher self-objectification levels comparing to women wearing non-sexualized clothing (Fox, Bailenson, & Tricase, 2014). Consequently, this may lead to the disturbances in attentional focus. A person allocates part of his/her concentration and attention to viewing his/her body as an object (Quinn et al., 2006).

There are stable individual *trait* differences in self-objectification: some individuals are more likely to be worried about their appearance compared to others (Fredrickson et al., 1998). Women tend to have higher scores than men on measure of self-objectification, and show more variability as a group on trait self-objectification than men (Quinn et al., 2006). Nevertheless, the distributions of men's and women's trait self-objectification overlap noticeably, and there is much within-sex variation (Fredrickson et al., 1998). Both relatively stable individual differences as well as powerful situation-specific effects have an impact on the degree and level to which individuals experience self-objectification.

Women in Western societies tend to experience trait self-objectification more than men (Slater & Tiggemann, 2002). In particular, young women seem to be at a greater risk for negative consequences of self-objectification. Many studies show that adolescent women suffer from unhappiness with their own physique and a desire for thinness (Thompson, Covert, Richards, Johnson, & Cattarin, 1995). The majority of adolescent girls are dissatisfied with their bodies and wish to be thinner (Attie & Brooks-Gunn, 1989). Many engage in unhealthy behaviors, such as dieting, and excessive exercise as a consequence (Stice, Killen, Hayward, & Taylor, 1998).

Strelan and Hargreaves (2005) reported that men also self-objectify, albeit significantly less than women. Their results suggest that the construct of objectification may be applied to

men, and specifically to men whose motivation for their behavior is driven by self-objectification. These men may suffer consequences similar to that observed among women (e.g., shame, anxiety, and eating disorders). Wagner Oehlhof, Musher-Eizenman, Neufeld, and Hauser (2009) studied the relationship between self-objectification and ideal body shape between sexes. As hypothesized, males strived for higher body musculature than females. The results also suggested that self-objectification and sex are related to one's ideal body shape. Women who scored high on self-objectification sought a less muscular body compared to those who scored lower on self-objectification. Men who had high levels of self-objectification desired to have a more muscular body compared to their counterparts who had low levels of self-objectification. Additionally, Fredrickson and Harrison (2005) compared sex differences in wearing swimming suits. Trying on swimming suits led women towards feelings of shame and disgust, while men felt silly and shy.

Even though men may be less aware of negative impacts of objectification, they may be affected in different ways than females. Kenrick, Neuberg, Zierk, and Krones (1994) reported that men exposed to pictures of very attractive women, viewed the females with whom they were romantically involved as less attractive. They also viewed their romantic relationship as less satisfying and less committed. Rudman and Borgida (1995) compared men who were exposed to sexually objectifying ads (e.g., women as sex objects in beer, cologne, and car advertisements) to men who were exposed to non-objectifying ads. Men who were exposed to sexual ads were faster to respond to sexist words, selected more sexist questions to ask a female job candidate, and behaved in inappropriate ways compared to men who were exposed to non-sexual ads. As noted, exposure to sexual environment may influence one's behaviors and psychological states.

Contributors to Objectification

Objectification theorists do not try to explain why objectification occurs, but rather take it as “given that [individuals] exist in a culture in which their bodies are – for whatever reason – looked at, evaluated, and always potentially objectified” (Fredrickson & Roberts, 1997, p. 177). The importance that bodies or collection of body parts have are provided within social and cultural context; and consequently messages about the importance of bodies or collection of body parts are constructed through sociocultural interactions.

First, objectification can occur in interpersonal and social interactions. Individuals in these encounters may be the recipients of sexual “gazing” and/or “leering” (i.e., cultural practices of sexual objectification). Research indicates that women are more gazed at and looked at compared to their male counterparts (Hall, 1984). Men’s gaze is also more often accompanied by sexually evaluative commentary (Gardner, 1980). Research has also suggested that the gaze from a member of a different sex may have different effects on individuals compared to the gaze from a member of the same sex. Females who anticipated a male’s gaze were more negatively affected compared to women who anticipated a female’s gaze. In addition, women who anticipated a female’s gaze reported lower scores on body shame and social physique anxiety (Calogero, 2004). Women are also more likely than men to be monitored by others when looking off into a distance, daydreaming, or otherwise mentally drifting (Goffman, 1979).

Second, and probably the most harmful way that people experience objectification, is through visual media depicting bodies and body parts where sexual gazing is implicit (Mulvey, 1975). This sexual gazing is not limited only to extremes in visual media such as pornography, but also to less extreme media such as films (Kuhn, 1985; Mulvey, 1975), artwork (Berger, 1972), advertisements (Goffman, 1979), television programs (Copeland, 1989), fashion, beauty

and fitness magazines, and photography (Duncan, 1990). The mass media (e.g., television, fashion, and beauty magazines) often portray the *ideal* female body as thin and lean. As a result, many women are subjected to pressure to keep up with what society suggests – thus wanting to have an *ideal* physique. Males can also experience comparable pressure albeit it to a lesser extent. People experiencing these pressures may consider any deviation from the stereotypical ideal to be abnormal (Kilbourne, 1994). Many females and males are dissatisfied or unhappy with their bodies, especially with their weight and size, as a consequence. Mass media have been influential in exacerbating body-dissatisfaction across the population (Groesz, Levine, & Murnen, 2002), with fashion, beauty and fitness magazines (e.g., Cosmopolitan, Glamour, People, Women's Health, Man's Health, Man's Fitness, Maxim, and Esquire) acting as leading sources in the dissemination of the thin ideal for women and a lean muscular ideal for men (Silverstein, Perdue, Peterson, & Kelly, 1986).

Extant research suggests that exposure to fashion and beauty magazines is positively associated with trait self-objectification, body-dissatisfaction, and eating disorders symptomology (Harrison & Cantor, 1997; Morry & Staska, 2001; Stice & Shaw, 1994; Tiggemann & McGill, 2004). Experimental research also indicates that exposure to fashion magazines contributes to body-dissatisfaction, negative moods, and negative self-perceptions of physical attractiveness (Groesz et al., 2002). Harper and Tiggemann (2008) have reported that exposure to magazines with thin and idealized pictures of women's bodies caused participants to display greater levels of state self-objectification, physique dissatisfaction, and negative mood compared to the control group.

Likewise, Slater and Tiggemann (2006) suggested that women who watched more television, read more teen magazines, and watched more music video programs during their

childhood, also exhibited higher levels of body-image concerns during their childhood. The link between reported media exposure during childhood and adolescence and adult body image was stronger than the link between current media exposure and body image. According to this research, any type of image or picture portraying a thin, lean, muscular, and ideal body can provide an explicit experience of objectification, which may result into self-objectification (Fredrickson & Roberts, 1997).

Some contrary findings of trait self-objectification, however, have been reported. Harrison and Fredrickson (2003) reported, for example, that adolescent women reading sports magazines scored lower on trait self-objectification than those who did not read these magazines on a regular basis. These results may be explained by the use of less idealized and more realistic body types in sport-type magazines or perhaps the readers thoughts were more focused upon athletes as performers rather than objects. In general, it can be concluded that not all humans experience self-objectification in the same manner, intensity, and level. Therefore, more research is needed on how media influences human beings and to what extent it contributes to self-objectification behaviors and its consequences.

Consequences of Subjective Experience

Being preoccupied with how others view the physical manifestation (or object) of one's physique can have psychological and experiential consequences. Self-objectification can lead individuals to focus attention on their bodies' external appearance (Fredrickson et al., 1998; Fredrickson & Harrison, 2005). This can lead to a habitual monitoring or self-surveillance that possibly results in an increase in negative emotions (e.g., shame and doubt), decrease of positive emotions (e.g., enjoyment and flow), a decrement in performance and reduced awareness of internal bodily states. Accumulation of these consequences may risk mental health issues (e.g.,

eating disorders, depression, and sexual dysfunction) and psychological problems (e.g., disgust and diminished cognitive functioning; Fredrickson & Roberts, 1997; Fredrickson et al. 1998; Miner-Rubino, Twenge, & Fredrickson, 2002; Roberts & Gettman, 2004). Mental health risks and psychological issues may develop throughout the course of a lifespan whenever body changes noticeable. According to Harrison and Fredrickson (2003), these changes are typically first seen in adolescence (10-19 years), then middle-aged (38-58 years). The focus on bodily changes, however, diminishes after that point (Attie & Brooks-Gunn, 1989; Nolen-Hoeksema & Girgus, 1994). Four consequences of objectification have been proposed including: (a) shame, (b) anxiety, (c) disruption of peak motivational states, and (d) the awareness of internal bodily states (Fredrickson & Roberts, 1997).

Shame can be experienced when individuals evaluate their bodies or performances relative to their cultural ideal (Lewis, 1992). This may influence internal states, especially when people do not meet or compare favorably to that ideal (Higgins, 1987). As a consequence, they may not feel good about themselves, which may lead to feelings of shame or disgust. Individuals high in self-objectification, who feel they do not meet cultural standards may experience more shame compared to individuals low in self-objectification (Fredrickson et al., 1998; Miner-Rubino et al., 2002). In addition, shame can cause an intense desire to hide, escape, and disappear (Lewis, 1992; Lewis, Haviland-Jones, & Barrett, 2008). As such, women engage in ongoing processes of body and appearance modification including beauty products, diet, exercise, eating disorders, or even undergo cosmetic surgery (Fredrickson & Roberts, 1997).

Self-objectification is also linked to appearance anxiety and depression (Miner-Rubino et al., 2002). Appearance anxiety is evident by one's concerns for monitoring and regulating one's body appearance (Keelan, Dion, & Dion, 1992). For example, hemlines require regular body

monitoring (e.g., *Am I showing off too much skin or is this skirt too long?*). Appearance anxiety is also related to concerns about safety. For example, male rapists are of the opinion that physically attractive women are, in their view, intimidating and threatening, and as such worthy of counterattack (Beneke, 1982). Amplifying emotions such as shame or disgust, appearance anxiety may lead to the development of sexual dysfunctions. If an individual's mind is preoccupied with his/her physical appearance, he/she may be prevented from enjoying sexual acts and intimacy (Roberts & Gettman, 2004).

Self-objectification may draw ones' attention away from important cues and factors that can increase athletic performance as well. Baumeister (1984) indicated that a performer's skills are diminished when that performer's dispositional consciousness (i.e., trait self-objectification) competes with internal performance-related processes and performance-related cues. Thus self-objectification may also undermine one's cognitive performance. Quinn et al. (2006) conducted research using the Stroop test (i.e., color-naming task) as a dependent measure studying self-objectification. Consistent with the hypothesis, women in the objectified circumstances took longer to respond to all types of words in the test. In other words, feeling objectified caused women to pay attention to two things: (a) the task at hand, and (b) a secondary task related to their appearance. The reallocation of attention had a detrimental impact on the participants' performance outcome regardless of the type of word (i.e., color words, body words, or neutral words).

Self-objectification may also have an influence on individuals' experience of flow, which is a feeling of complete absorption, engagement, and fulfillment (Csíkszentmihályi, 1990) during performance. Dorland (2006) reported a negative relationship between participants' self-objectification and the experience of flow. Individuals with high self-objectification had lower

levels of flow and vice versa. Objectification theorists also proposed that self-objectification creates a form of self-consciousness wherein person's attention is divided between multiple stimuli (e.g., performance and body parts). For example, studies suggest that wearing tight-fitting clothing (i.e., self-objectified state) produces negative effects on performance and body image (Fredrickson et al., 1998; Price & Pettijohn, 2006). Due to the increased cognitive workload (e.g., attention to their performance and their bodies), individuals high in self-objectification are less likely to achieve inner states of the flow (Miner-Rubino et al., 2002).

Finally, researchers also proposed that self-objectification reduces awareness of internal bodily states (Fredrickson & Roberts, 1997). Evidence indicates that women are less accurate at sensing physiological aspects of their body, including heart rate, stomach contractions, and blood glucose levels (Blascovich et al., 1992; Harven, Katkin, & Bloch, 1993; Katkin, 1985; Katkin, Blascovich, & Goldband, 1981). There are at least a couple of possible explanations of these findings. One possibility is based on research regarding eating disorders. Dieting and restrained eating involve active suppression of hunger. This focus may lead to a generalized sensitivity to other internal bodily senses (Heatherton, Polivy, & Herman, 1989). It is also possible that women who for the most part focus on their physical appearance, have fewer perceptual resources left to attend internal bodily senses (Fredrickson & Roberts, 1997).

In conclusion, within Western cultures individuals are always looked at and constantly being evaluated, which may result in viewing themselves as objects in terms of their physical appearance. Given that some human beings have greater tendency to self-objectify whereas others experience it in only some situations, in general, women are more prone to self-objectification than men. While there are many instances where objectification gaze can potentially occur, exposure to the mass media brings the most negative consequences including

shame, anxiety, decrease in peak motivational states and internal awareness of bodily states. In the following section, the role of objectification and self-objectification in the context of exercise, motivation for exercise, and environment of exercise is explained.

Behavioral Regulations and Determinants of Exercise

Daily physical activity and exercise are known to provide a wide variety of physical (Penedo & Dahn, 2005) and psychological (King, Taylor, & Haskell, 1993) benefits. Longitudinal, cross-sectional, and experimental studies consistently show a positive relationship between physical activity and personal well-being (e.g., Biddle & Mutrie, 2008; Gauvin & Spence, 1996). Regarding physical well-being, research indicates that regular exercise increases physical and cardiorespiratory fitness, immune system function, and longevity (Biddle & Mutrie, 2008; Brannon & Feist, 1992). The evidence also suggests that exercise can have a positive influence on psychological well-being including self-esteem (e.g., Folkins & Sime, 1981; Hilyer & Mitchell, 1979), affect, mood (e.g., Biddle & Mutrie, 1991; Leith & Taylor, 1990), trait anxiety, depression, and stress (e.g., Dunn, Trivedi, & O'Neal, 2001; Stein & Boutcher, 1992). In addition, meta-analytic reviews have suggested that exercise has the capability to improve body image (Campbell & Hausenblas, 2009; Reel et al., 2007) and body satisfaction (Loland, 2000). In other words, exercise and physical activity can have a positive impact on individuals' overall well-being and health, including enhanced physical, cardiovascular, neurological, immunological, and psychological functioning.

Despite the wide range of physical and mental benefits of physical activity and exercise, millions of U.S. adults remain essentially sedentary (U.S. Department of Health and Human Services, 2007; World Health Organization, 2003). In addition, although much is known about the positive effects of exercise, these benefits are not universal. The evidence suggests that both

motivation and the exercise environment can impact whether exercise acts as a buffer for body image and eating concerns (Ackard, Brehm, & Steffen, 2002; Prichard & Tiggemann, 2008). Exercising for health, endurance, and fitness-related reasons has been associated with improved body image, body-satisfaction, and self-esteem (Strelan et al., 2003). On the other hand, exercising for appearance-related reasons (e.g., weight control, body tone, attractiveness, and cosmetic outcomes) has been linked to poor body image, disordered eating, and body-dissatisfaction (Tiggemann & Williamson, 2000).

Working to achieve and maintain an ideal body through exercise and physical activity can be seen as beneficial to one's health and psychological well-being. If self-objectification interferes with their exercise, however, these individuals may not benefit from the positive effects of physical activity (Strelan et al. 2003). In particular, young women who exercise primarily to influence their body shape and weight do not necessarily experience positive psychological benefits (Tiggemann & Williamson, 2000). Research supports the notion that individuals who exercise to address objectification concerns are more likely to exercise for appearance-related reasons (Prichard & Tiggemann, 2005; Strelan & Hargraves, 2005), reasons that have been linked to poor body image and disordered eating (Tiggemann & Williamson, 2000). In addition, exercise benefits for these individuals do not translate into increased body- and self-esteem, body-satisfaction (Strelan et al., 2003), or increased psychological well-being (Maltby & Day, 2001). On the other hand, women who do not view exercise as addressing self-objectification concerns tended to exercise more for the intrinsic value of the exercise (e.g., health benefits, fitness, and diseases reduction; Strelan et al., 2003). It could be that people who are physically active for appearance-related reasons engage in exercise as a reaction to low body-

esteem and high self-objectification. Also, it might be that people exercise in response to low body-esteem increases the chances for self-objectification (Strelan & Hargreaves, 2005).

Whether individuals experience negative exercise effects does not depend only on the motives for exercise, but also on the exercise environment (Prichard & Tiggemann, 2008). While it is acknowledged that exercise brings favorable changes to body-satisfaction and body image (Hausenblas & Fallon, 2006), exercise can increase appearance concerns for some individuals. For example, exercising in the fitness center environment is positively correlated with self-objectification concerns, disordered eating (Martin Ginis, Jung, & Gauvin, 2003), and excessive weight loss (Prichard & Tiggemann, 2008). Fitness facilities are venues where people usually engage in health-benefiting exercise behaviors. In this setting, the body is often an individual's central focus and one which lends itself to seeing the body as an object that can be trimmed, shaped, refined, and buffered via appropriate exercise protocols. Moreover, people are surrounded by mirrors in which they are likely to observe themselves and others in revealing clothing. Fitness facilities often display posters of ideal bodies and body builders, which might have an adverse impact on exercisers. This suggests that fitness center facilities may serve as an objectified environment (Prichard & Tiggemann, 2008).

Limitations, Recommendations, and Directions for the Future Research

Objectification theory has emerged as an important systematic framework for investigating the effects of sexual and self-objectification in individuals. A great deal of research has been conducted on underlying causes of self-objectification wherein the dominant theme is sexual objectification of individuals' bodies linked to one's self-objectification. There is also clear evidence that self-objectification is linked in a wide variety of negative consequences that can potentially threaten the healthy development and well-being of individuals. Even though

research grounded in objectification theory advanced and proliferated over the past decades, some areas need future attention and development.

First, objectification theory is mainly based on understanding the lived experiences of females as most of the research has been done on white college women of nonspecific sexual orientation (mainly heterosexual women). Most researchers have focused on samples derived from the Westernized societies, primarily North American, Australian, and British women. However, this does not imply that other populations (e.g., men, homosexual individuals, African-Americans, Muslims, etc.) are unable to experience self-objectification. Future research could focus on women from various cultures, racial/ethnic identities, sexual orientation, socioeconomic status, age, relationship status, and other background variables. In addition, it is also important to explore the experience, meaning and manifestations of the objectification theory construct in men.

Second, self-objectification is a multifaceted phenomenon that needs further understanding in order to advance research in this area. Specifically, conceptual and operational development is of importance, including other constructs with common characteristics that should be clarified. Further concern should be given to whether self-objectification and self-surveillance should be considered as separate constructs or subdimensions of the same construct. To explore this issue, more psychometric analyses are needed including exploratory and confirmatory factor analyses (Tylka & Augustus-Horvath, 2011). As mentioned, psychometric information is mainly limited to white heterosexual college students. Measurement evaluation (e.g., reliability, validity) for other populations and individuals from diverse backgrounds is needed.

Third, Fredrickson and Roberts (1997) proposed that individuals' experiences of self-objectification are related to greater safety anxiety. Recent research is closing this gap by examining the function of safety anxiety in objectification theory framework (Calogero & Pina, 2011). Research framed with objectification theory would progress by examining safety anxiety (e.g., physical and sexual violence) and safety behavior in the context of an individual's sexual and self-objectification. There is also lack of understanding in other constructs related to objectification theory such as racism, heterosexism, and other forms of prejudice.

Fourth, much survey-based empirical work (e.g., Fredrickson et al., 1998; Prichard & Tiggemann, 2005) and an experimental work (Thøgersen-Ntoumani et al., 2011) on the effects of objectifying environments on physically active individuals have been done. Despite evidence for self-objectification in the extant literature, there is a dearth of empirical understanding of the environmental antecedents to self-objectification. Longitudinal, qualitative and/or mixed method approach is needed to explore individuals' perceptions and feelings of their bodies in objectified environments and to examine causal root in the objectification theory framework. In order to examine situational factors leading to self-objectification experience, researchers utilized various experimental methods for inducing state and situational self-objectification.

A commonly used experimental procedure to manipulate the levels of state self-objectification is the swimsuit-sweater paradigm wherein participants are asked to try either sweater or a bathing suit and look at themselves in the mirror in a private dressing room. Another common way to induce a state self-objectification is exposure to objectified media images. Individuals are exposed to media advertisements (e.g., newspaper, magazine) featuring a thin-idealized images to produce various negative outcomes (e.g., negative mood, weight-related appearance anxiety; Harper & Tiggemann, 2008). To induce higher levels of state self-

objectification researchers also exposed participants to objectifying words (Morry & Staska, 2001), male or female gaze (Calogero, 2004), and other objectifying features potentially found in the environment on a daily basis (e.g., mirrors, scales; Fredrickson & Roberts, 1997; Tiggemann & Boundy, 2008).

Fifth, studies have examined a variety of predictors of self-objectification. Future research could focus on prevention and intervention of the most relevant predictors for various mental health conditions (e.g., body shame, anxiety, and body surveillance). Finally, evaluation of the effectiveness of such intervention programs in reducing the risk factors posited in objectification theory can guide theoretically and empirically informed practice designed to improve individuals' mental health and well-being.

Aims of the Present Study

As mentioned in the previous sections, based on the literature review and presented research gaps, I was interested to investigate three main research questions. The first research question was: To what extent do men and women differ on self-related constructs, including trait self-esteem and trait self-objectification? Previous research studies suggest that women are more likely to experience lower self-esteem levels (Kling, Hyde, Showers, & Buswell, 1999) and higher self-objectification levels compared to men (Slater & Tiggemann, 2002). Most of the researchers who have investigated the self-objectification phenomenon have mainly utilized gender homogenous samples – women (Noll & Fredrickson, 2006; Tiggemann & Boundy, 2008). However, not much research has examined self-esteem and self-objectification levels in gender heterogeneous sample.

Hypothesis 1: Males would report higher levels of trait self-esteem and lower levels of trait self-objectification compared to female counterparts.

A second research question was: To what extent does self-esteem serve as a buffer for negative consequences of self-objectification between males and females? Previous research has shown that women with higher levels of self-objectification experience increases in negative emotions (e.g., shame, appearance orientation; Thøgersen-Ntoumani et al., 2011). The extent to which different levels of state self-objectification lead to different negative effects between genders is less known. In this study, I attempt to examine this research question.

Hypothesis 2: Females in decreased state self-esteem group wearing tight clothes would experience increased negative emotions (i.e., shame), be more focused on their physical appearance, and be less satisfied with their physical appearance (i.e., lower appearance evaluation) compared to individuals in any other conditions.

A third research question was: Do males and females differ on cognitive performance when their levels of self-esteem and self-objectification are manipulated? Given that higher levels of self-objectification can lead to experience of negative emotions (e.g., shame), which in turn can potentially result in decreased attentional cues and a decrement in cognitive performance (Fredrickson et al., 1998; Fredrickson & Harrison, 2005; Tiggemann & Boundy, 2008).

Hypothesis 3: Females in decreased state self-esteem group wearing tight clothes would experience decrement in cognitive performance compared to individuals in any other conditions.

CHAPTER 3

METHOD

Power Analysis and Sampling

To determine an appropriate sample size for this study, G*Power 3.1 Software (Faul, Erdfelder, Buchner, & Lang, 2009) was used for an a priori power analysis. As Murphy, Myers, and Wolach (2009) suggested for most research designs, a power level of .80 was used, with alpha level set at .05 and an effect size of .25. Knowing that an Analysis of Variance (ANOVA) would be conducted to answer the research questions (involving between- and within-subject factors), a power analysis for ANOVA, with fixed, main, and interaction effects was conducted. A sample size with a minimum of 32 participants for each of eight conditions—self-esteem manipulation (increased/decreased), self-objectification manipulation (tight clothes/baggy clothes), and gender (male/female)—was suggested. Thus, 256 participants (2 x 2 x 2 x 32) were needed to obtain sufficient power for detecting a medium effect size for the statistical analysis.

Participants

Individuals ($n = 333$) were recruited from a large university campus and the local community (e.g., at wellness and health centers, running and biking clubs, etc.) in the US. The participants either received course credit or entered a drawing to receive one of five \$25 gift cards. To be eligible for participation, individuals had to engage in exercise on a regular basis (i.e., at least two days per week). Participants ($n = 63$) who did not follow the experimental protocol (i.e., self-esteem and/or self-objectification manipulation) were omitted. Thus, the data from 270 individuals were used in the analyses. Male ($n = 138$) and female ($n = 132$) participants were randomly assigned to one of the four experimental groups (i.e., increased self-esteem and baggy clothes, increased self-esteem and tight clothes, decreased self-esteem and baggy clothes,

decreased self-esteem and tight clothes). Table 1 presents the number of male and female participants in each experimental group.

Table 1

The Number of Male and Female Participants in Each Experimental Group

Self-esteem manipulation	Self-objectification manipulation	Males	Females	Total
		<i>n</i>	<i>n</i>	<i>n</i>
Increased SE	Tight clothes	45	39	84
	Baggy clothes	36	36	72
	Subtotal	81	75	156
Decreased SE	Tight clothes	27	29	56
	Baggy clothes	30	28	58
	Subtotal	57	57	114
Overall Total		138	132	270

Note. SE = self-esteem manipulation; *n* = number of individuals.

The age range was 18 to 62 with a mean of 24.22 years, and standard deviation (*SD*) of 8 years ($M_{males} = 24.59$, $SD = 7.89$; $M_{females} = 23.83$, $SD = 8.11$). The ethnic composition, education level, relationship status, and sexual orientation of sample are illustrated in Table 2. Before the experimental procedures, participants were asked to self-report their body weight and height (subjective assessment), which were also subsequently measured by the researcher (objective assessment) after completion of questionnaires associated with the study. Descriptive statistics (i.e., Mean scores and *SDs*) for subjective and objective body characteristics (i.e., weight, height, and BMI) are presented in Table 3.

Table 2

Participants' Demographic Characteristics

Demographic characteristics		%	<i>n</i>
Ethnicity	White	67.8	183
	African-American	13.3	36
	Hispanic	13.0	35
	Asian Pacific Islander	1.5	4
	Chinese	1.1	3
	Native American	0.4	1
	Japanese	0.4	1
	Vietnamese	0.4	1
	Other (e.g., Cuban, Multiethnic)	2.2	6
Education	High School or equivalent	11.9	32
	One or more years of college, no degree	37.4	101
	Associate degree	20.4	55
	Bachelor's degree	13.3	36
	Masters or professional degree	14.8	40
	Doctoral degree	2.2	6
	Currently married	11.9	32
Marital Status	No married, but in a committed relationship	29.3	79
	Single (dating)	25.2	68
	Single (not dating)	33.0	89
	Other	0.7	2
Sexuality	Heterosexual	93.3	252
	Homosexual	2.6	7
	Bisexual	3.0	8
	Do not wish to report	1.1	3

Note. % = percentage of individuals; *n* = number of individuals.

On average, participants indicated they exercised three days per week, between one and two hours per bout of exercise. The majority of males and females reported that they engaged in both aerobic (e.g., running, biking) and anaerobic (e.g., lifting weights) types of exercises. On the Rate of Perceived Exertion scale (ranging between 6 or 20% – *very, very light* and 20 or 100% – *exhaustion*), males ($M = 15.86$, $SD = 1.63$) reported slightly higher perceived effort in exercising

compared to females ($M = 15.02$, $SD = 1.53$). This suggests that males exercised at about 85% of their maximum perceived effort whereas females exercised at about 80% of their maximum perceived effort. Table 4 illustrates more details about participants' exercise habits.

Table 3

Mean Scores and Standard Deviations for Body Characteristics by Gender

		Male ($n = 138$)	Female ($n = 132$)	Total ($n = 270$)
Body Characteristics		$M (SD)$	$M (SD)$	$M (SD)$
Subjective Assessment	Weight (kg)	81.06 (11.62)	61.35 (10.28)	71.48 (14.76)
	Height (m)	1.77 (0.07)	1.64 (0.06)	1.71 (0.09)
	BMI	25.37 (3.44)	22.69 (3.35)	24.06 (3.64)
Objective Assessment	Weight (kg)	80.24 (11.61)	61.37 (10.62)	71.06 (14.59)
	Height (m)	1.79 (0.07)	1.64 (0.06)	1.71 (0.10)
	BMI	25.62 (3.44)	22.84 (3.89)	24.26 (3.91)

Note. kg = kilograms; m = meters; M = mean scores; SD = standard deviation; BMI = body mass index

Measures

As described below, the participants completed a demographic questionnaire, an exercise habits inventory, motives for exercise, and ratings of perceived exertion. Participants also completed questionnaires to assess their trait and state self-objectification, global and state self-esteem, social desirability inventory, feelings of shame, appearance evaluation and appearance orientation subscales, and exercise consumer behavior. In addition to self-report surveys, participants completed a cognitive performance test. Their height and weight were also measured.

Table 4

Participants' Exercise Habits Behaviors

Exercise Behavior		Male (<i>n</i> = 138)	Female (<i>n</i> = 132)	Total (<i>n</i> = 270)
Days/week		%	%	%
Frequency	1	3.6	8.3	5.9
	2	21.8	28.2	24.9
	3	22.4	26.9	24.6
	4	32.5	23.7	27.7
	Daily	20.6	12.8	16.8
Min/bout				
Length of time	< 30	3	1.9	2.5
	31 – 60	29.7	51.9	40.5
	61 – 120	58.2	42.9	50.8
	> 120	9.1	3.2	6.2
Type of exercise	Aerobic	90.9	96.9	93.8
	Anaerobic	88.5	69.2	79.1
	Stretching	6.1	25	15.3

Note. % = percentage; *n* = number of individuals; min = minutes; bout = exercise session.

Participants' Characteristics

Demographics and body composition. A self-report demographic questionnaire was used to obtain information on age, sex, sexual orientation, height, weight, marital status, and level of education. Self-reported and objective-assessment values of participants' height and weight were assessed to calculate Body Mass Index (BMI). Subjective and objective data on BMI were calculated by dividing participants' current weight (in kg) by their height squared (m²; Frankel & Staeheli, 1992; see Appendix A).

Exercise habits inventory. To obtain general information about participants' regular exercise (and to ensure that participants met the criteria for inclusion), The Exercise Habits Inventory asked participants to report the type of exercise they engage in on a regular basis as well as the frequency and length of the typical exercise bout (see Appendix B). This inventory was adopted from one used in Thøgersen-Ntoumani et al.'s (2011) study.

Ratings of perceived exertion. To obtain information about their perceptions of the exertion they extended in each exercise session, the Rating of Perceived Exertion (RPE; Borg, 1998) scale was used. This scale is a 15-point scale ranging from 6 (*no exertion at all*) to 20 (*exhaustion*). RPE was used to assess participants' perceived levels of exertion during one bout of exercise (see Appendix B). The higher the RPE score, the higher the rating of perceived exertion. Previous studies demonstrated high intra-test ($r = .93$) and re-test ($r = .93-.94$) reliability coefficients (Borg, 1982; 1998).

Motivation for exercise. The Exercise Motivations Inventory-2 (EMI-2) (Markland & Ingledew, 1997) was used to assess participants' reasons for exercising (see Appendix C). It assesses a broad range of exercise participation motives among adult males and females, and it has been found to be applicable to both exercisers and non-exercisers. The EMI-2 is a 51-item self-report instrument with 14 subscales. For the purpose of this study, the following subscales were used: Stress Management (e.g., "To give me space to think", "To release tension"), Social Recognition (e.g., "To show my worth to others", "To accomplish things that others are incapable of"), Ill-Health Avoidance (e.g., "To prevent health problems", "To avoid heart disease"), Weight Management (e.g., "To lose weight", "To help control my weight") and Appearance (e.g., "To have a good body", "To look younger"). Participants respond to each item on a 6-point Likert scale ranging from 0 (*not at all true for me*) to 5 (*very true for me*). The EMI-

2 has satisfactory psychometric properties with support for the internal consistency of the scale with alpha coefficients ranging from .68 to .95 and the factorial validity and invariance of the factor structure across gender (Markland & Ingledew, 1997). The internal consistency reliability in this study for Stress Management, Social Recognition, Ill-Health Avoidance, Weight Management, and Appearance subscales were .88, .83, .81, .86, and .70, respectively.

Exercise attire. Participants were asked to provide information on the type of clothing they usually wear during their exercise on the Exercise Attire measure adopted from Thøgersen-Ntoumani et al.'s (2011) study (see Appendix D). Participants were presented with four pictures of exercise attire. The exercise clothing varied in the degree to which the exerciser's body is revealed. The participants were asked to select the picture that most resembled the workout attire they normally wear while exercising. The pictures ranged from short, tight-fitting clothing (*assigned a score of 4*) to a baggy long sleeve shirt and pants (*assigned a score of 1*). The order of pictures was counterbalanced to manage any potential order effects.

Trait Self-Related Constructs

Trait self-objectification. The Self-Objectification Questionnaire (SOQ; Noll & Fredrickson, 1998) was used to quantify individual differences in trait self-objectification (see Appendix E). Participants rank-ordered 12 different body attributes (e.g., physical coordination, weight, etc.) from the most important to the least important to their physical self-concept. Six out of 12 attributes are based on appearance (i.e., weight, sex appeal, physical attractiveness, firmed/sculpted body, body measurements, and coloring) and the other six are based on non-appearance attributes (i.e., physical condition, health, muscular strength, physical energy level, physical fitness level, and stamina).

The purpose of the scale is to determine the extent to which participants tend to use appearance or non-appearance attributes when thinking about their physical self-concept. Each “ranking” was considered to be a “score” for appearance and non-appearance items. Non-appearance items were reverse-scored, then all items were summed for each individual. This provided a single continuum-score with negative numbers indicating a tendency to use non-appearance attributes and positive numbers indicating a tendency to use appearance attributes when thinking about physical self-concept. Potential scores could range from -36 (if all non-appearance items received the highest ranks) to +36 (if all appearance items received the highest ranks). Higher and positive scores indicate a greater focus on appearance, which is interpreted as greater self-objectification (Noll & Fredrickson, 1998). Convergent and divergent validity were established by positive correlations with appearance-anxiety, $r = .56$, and body size dissatisfaction, $r = .33$. Trait body shame and self-objectification were found to be positively correlated, $r = .54$ (Noll, 1996) as well. The internal consistency reliability has been supported in previous studies with Cronbach’s alpha coefficients ranging from .87 to .97 (e.g., Miner-Rubino et al., 2002; Noll, 1996; Noll & Fredrickson, 1998). In this study, Cronbach’s alpha was .73.

Global self-esteem. Rosenberg’s Self-Esteem (RSE) scale (1965; 1979) was used as an indicator of global (trait) self-esteem (see Appendix F). It is a 10-item Likert-scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The examples of the RSE item are “I feel that I am a person of worth, at least on an equal plane with others,” and “On the whole, I am satisfied with myself.” The RSE demonstrated satisfactory psychometric properties with support for the internal consistency reliability with alpha level of .92, and test-retest reliability over a period of two weeks ranging from .85 to .88 (Rosenberg, 1979). The internal consistency reliability for this study was .88.

Social desirability. To assess the extent to which individuals generally respond in culturally- and socially-perceived appropriate and acceptable ways, the short version of Marlowe-Crowne Social Desirability Scale (Form X1; Strahan & Gerbasi, 1972) was used (see Appendix G). The scale consists of 10 items with a dichotomous forced-choice response (i.e., *true-false* options). An example statement is “I’m always willing to admit it when I make a mistake.” Previous studies (Fischer & Fick, 1993; Fraboni & Cooper, 1989; Thompson & Phua, 2005) that used the X1 form have shown internal consistency reliability of Cronbach’s alpha between .42 and .88, and a high correlation with the original scale ($r = .96$; Fischer & Fick, 1993). Fraboni and Cooper (1989) also suggest that of the short forms (i.e., A, B, C, X2, and XX), the X1 form is the least influenced by age and socioeconomic status. The internal consistency reliability for this study was .57.

State Self-Esteem and State Self-Objectification

State self-esteem. The State Self-Esteem Scale (SS-ES; Heatherton & Polivy, 1991) served as a manipulation check to assess whether the participants in the decreased self-esteem condition experienced lower state self-esteem compared to the participants in the increased state self-esteem condition (see Appendix H). The SS-ES is a 20-item self-report scale consisting of Performance (7 items), Social (7 items), and Appearance Self-Esteem (6 items) subscales (Bagozzi & Heatherton, 1994). Participants were asked to rate the extent to which each statement was true for them, at that moment, using a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*extremely*) in response to statements, such as “I feel satisfied with the way my body looks right now.” The SS-ES has demonstrated an overall internal consistency of .92 and moderate 2-week test-retest reliability with $r = .70$ (Heatherton & Polivy, 1991). The Performance, Social, and Appearance subscales have also demonstrated satisfactory Cronbach’s alpha coefficients of .79,

.90, and .87, respectively (Lee & Robbins, 1998). In this study, the internal consistency reliability for the Performance, Social, and Appearance subscales were .79, .83, and .83, respectively.

State self-objectification. The Twenty Statements Test (TST), developed by Fredrickson et al. (1998), served as a manipulation check to assess whether participants wearing tight clothing experienced heightened body awareness as compared to participants wearing baggy clothing (see Appendix I). Participants were asked to think about how wearing the exercise clothing made them feel about their identity and themselves. Then, they were asked to write about themselves by completing twenty statements beginning with “I am....” The coding system by Fredrickson et al. (1998) was adopted and slightly modified for the purpose of this study (see the Results section for more detail).

Emotions, Physical Appearance, and Cognitive Performance

State shame. State shame was assessed with the Experiential Shame Scale (ESS; Turner, 1998; 2014; see Appendix J). The participants were asked to indicate how they felt at the moment using a 7-point semantic differential scale when comparing two opposite word-states on Physical phenomena (e.g., Very Warm – Very Cold), Emotional phenomena (e.g., Comfortable – Distressed), and Social phenomena (e.g., Talking – Being Quite). Satisfactory psychometric properties have been observed in previous studies with internal consistency reliability of .81 and .76 (Turner, 2014). In this study, the internal consistency reliability was .67.

Appearance measures. To assess participants’ feelings of attractiveness or unattractiveness and satisfaction with their looks, the Appearance Evaluation (AE) and Appearance Orientation (AO) subscales from the Multidimensional Body-Self Relations Questionnaire (Cash, 2000) were used (see Appendix K). The Appearance Evaluation subscale

consists of seven items (e.g., “I am always trying to improve my physical appearance.”), while the Appearance Orientation subscale consists of 12 items (e.g., “Before going out in public, I always notice how I look.”). The items are anchored on a 5-point Likert scale ranging from 1 (*definitely disagree*) to 5 (*definitely agree*). Some of the items are reverse-scored. Higher scores on the AE subscale indicate that individuals mostly feel positive and satisfied with their physical appearance. Individuals scoring high on the AO subscale place more importance on their looks and appearance than on their health. The internal consistency reliability of the AE and AO have been supported in previous studies with Cronbach’s alpha coefficients ranging between .71 and .88 for AE (e.g., Cash, Winstead, & Janda, 1985; Cash, Winstead, & Janda, 1986; Thøgersen-Ntoumani et al., 2011), and .85 and .88, for AO (Cash et al., 1985, 1986). The internal consistency reliability for this study for AE was .83 and for AO was .84.

Cognitive performance test. Cognitive performance was assessed by a spatial orientation task. This type of task was previously used by other researchers investigating self-related constructs (Gapinski et al., 2003; Tiggemann & Boundy, 2008) in relation to cognitive performance. The spatial orientation task was adopted from the Kit of Factor-Referenced Cognitive Tasks (Ekstrom, French, Harman, & Derman, 1976) and was chosen based on the previous studies that assessed self-consciousness and compromised attention, which is hypothesized to accompany the experience(s) of self-objectification (Quinn et al., 2006).

Participants’ cognitive performance was assessed with the 21-item Cube Comparison Test (CCT; see Appendix L). They were tested on their perception of spatial patterns and their orientation in regard to objects in space. Test items consist of pairs of cubes drawn on a paper with letters and symbols on each face of the cube. Participants were asked whether an illustration corresponded to a different or same view as the cube. They received 1 point for every correct

item and -1 point for every incorrect item. Higher and positive scores signified better cognitive performance, specifically, spatial orientation ability. The internal consistency reliability for this study was .90.

Cover Story Questionnaires

Magazine, nutrition bar, sports drink, and clothing evaluation forms. Magazine, Nutrition Bar, Sports Drink, and Clothing Evaluation Forms were adopted from the study by Thøgersen-Ntoumani et al. (2011; see Appendix M). These evaluation forms were used to gather participants' opinions on magazines (e.g., appeal, interest in buying, etc.), a nutrition bar (e.g., taste, appearance, color, texture, interest in buying, etc.), a sports drink (e.g., taste, color), and clothing (e.g., comfort, design, quality, interest in buying, etc.) to bolster the cover story. None of the above mentioned surveys were included in the data analyses.

Self-Esteem and Self-Objectification Manipulations

Due to the nature of the study, self-esteem and self-objectification manipulations were necessary to be able to investigate the main research question (To what extent the levels of self-esteem alter selected potential negative consequences [i.e., increased shame, decreased cognitive performance] of self-objectification?) The use of deceptive disclosure about the purpose of the study was considered to be essential to avoiding response bias among participants by alerting them to the specific topic of interest. Deceiving the participants on the specific purpose of the study diverted their attention from the actual aim of the study. After the participants' state self-esteem levels were manipulated, which was done by focusing on their body/body parts and facial appearance, they were then asked to try exercise clothing. Asking the participants to try on the exercise clothing and to look at themselves in the mirror served two purposes. First, it was a part

of the cover story, and second, it was used to artificially create the objectified/non-objectified environment to induce the levels of state self-objectification.

Self-Esteem Manipulation and State Self-Esteem Manipulation Check

Participants were randomly assigned to increased or decreased self-esteem conditions. Two types of self-esteem manipulations were involved in this study. During the first self-esteem manipulation, participants were provided feedback on their facial appearance (i.e., their ‘beauty level’). The researcher took a photo of participants’ faces with an iPad. They were told that their face would be assessed for attractiveness with a reliable application on the iPad. Once a participant’s photo was assessed, the iPad application generated each participant’s “facial appearance number.” The researcher wrote participants’ “facial appearance number” on a note card and handed it to them. They were informed that they would be prompted to select the number on the note card at some point during the study. The generated “facial appearance number” was based on participants’ random group assignment. If participants were in the increased self-esteem condition, they were told the following:

So, I have calculated your ‘beauty level.’ This number is derived from the equation that is based on the value of eight geometric proportions of human face, which translates those values into a percentage index for easier understanding. The number of the beauty level can range from 0 (0% of beauty level) to 100 (100% of beauty level). According to the scientific beauty equation your overall beauty level is above 90%.

If they were in the decreased self-esteem condition, they were told the following:

So, I have calculated your ‘beauty level.’ This number is derived from the equation that is based on the value of eight geometric proportions of human face, which translates those values into a percentage index for easier understanding. The number of the beauty level can range from 0 (0% of beauty level) to 100 (100% of beauty level). According to the scientific beauty equation your overall beauty level is below 40%.

The second self-esteem manipulation followed immediately after participants received feedback on their facial appearance. During the second self-esteem manipulation, participants

were asked to generate a short essay response. This manipulation was utilized in previous studies adopted from Park and Maner (2009). Participants who had been randomly assigned to the increased self-esteem condition were instructed to complete the following:

We all have parts of our body or physical appearance that we are very satisfied with or feel confident about. Please take a moment to think about one or more aspects of your physical appearance/body/face that you really like about yourself and write a brief essay about it/them in the space provided below.

Participants who had been randomly assigned to the decreased self-esteem condition were prompted to complete the following:

We all have parts of our body or physical appearance that we are dissatisfied with or feel insecure about. Please take a moment to think about one or more aspects of your physical appearance/body/face that you do not like about yourself and write a brief essay about it/them in the space provided below.

After the self-esteem manipulations (i.e., facial appearance feedback and short essay response), they were asked to complete the State Self-Esteem Scale to assess whether participants in increased self-esteem condition experienced higher state self-esteem compared to participants in decreased self-esteem condition.

Self-Objectification Manipulation and State Self-Objectification Manipulation Check

Following the self-esteem manipulations, participants were prompted to try on the exercise attire that the researcher handed to them. Trying on the exercise clothing served two purposes. First, it was a self-objectification manipulation that was adopted from Fredrickson et al. (1998), and second, it bolstered the cover story for the study (i.e., providing feedback on exercise consumer products). The self-objectification manipulation was slightly modified for the purpose of this study. Participants were randomly assigned to wear tight clothes (e.g., shorts and a sports bra for female participants, and shorts and tank top for male participants) or baggy clothes (i.e., loose-

fitting pants and matching baggy top for female and male participants). Once they changed into the assigned clothing, they were asked to look at themselves in the full-length mirror for one minute, which was timed via a timer on the mirror next to them.

After one minute of observing themselves in the mirror, they were instructed to sit in front of the computer to complete the Twenty Statement Test (see description above) which served as a self-objectification manipulation check. Consistent with the cover story, participants were presented with the following script: “Clothing and style of dress can often have an impact on people’s views of themselves. Please take a moment to think about how wearing this particular item of clothing makes you feel about your identity and yourself.” Participants were then asked to complete the Twenty Statement Test. The directions read: “In the twenty blanks below, please make as many different statements as you can about yourself and your identity that complete the sentence “I am ...” Complete the statements as if you were describing yourself to yourself, not to somebody else. It was expected that individuals wearing tight clothes would describe themselves using more statements related to their body, shape, and size (i.e., higher state self-objectification) compared to those wearing baggy clothes (i.e., lower state self-objectification). The coding protocol was adopted from Fredrickson et al. (1998) and for the purpose of this study it was slightly modified wherein two coders independently rated the statements either as *body-focused* or *other*. The complete description about the manipulation check and coding is described in the next section.

Procedure

Permission to conduct the study was acquired from the Institutional Review Board (IRB) at Florida State University. Individuals responding to recruitment efforts who chose to take a part

in this study signed up for specific time-slots. Individuals were contacted to confirm their participation and were provided a brief narrative about the research project with a cover story of examining exercise consumer behaviors and emotions. They were invited to the laboratory for a one-time visit and were asked to allocate between 45 and 90 minutes for their participation. The day before participants' appointment, the participants were sent a reminder email.

The laboratory was equipped with a couple of mirrors, a book shelf, two chairs, and a computer. When participants arrived in the laboratory, they were seated in front of the computer. The researcher explained the general purpose of the study (i.e., "We are interested in exercise and consumer behaviors") and the details about the experimental protocol. A visual time line of the procedures is provided in Figure 1 and the procedures are explained below.

First, participants were told that by completing a few questionnaires via the computer, they would be providing feedback on exercise consumer products, including magazines, a sports drink, a nutrition bar, and exercise attire. In addition to exercise consumer products, participants were told that there was also an interest in assessing self-related characteristics, such as feelings about their body, the clothing they wore, and their facial appearance.

Once the procedures and the experimental protocol were explained, participants signed a consent form, any questions were answered, and clarification of experimental procedures were provided before the participants continued with the study. At this point, the researcher took a photo of their face, and handed them a note card with their "facial appearance number" that had been "generated via the application" on the iPad. The researcher then left the laboratory and the participants completed a randomly-ordered packet of questionnaires including: Demographic Questionnaire and Exercise Habits Inventory, the Exercise Motivations Inventory-2 (EMI-2),

Ratings of Perceived Exertion (RPE), the trait Self-Objectification Questionnaire (SOQ), and the Social Desirability Scale.

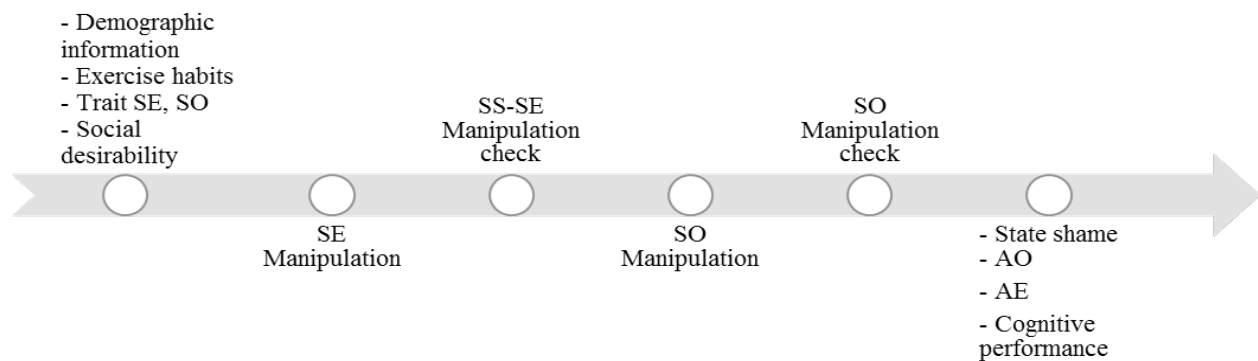


Figure 1. Outline of the experimental procedures involved in the study, including the questionnaires and manipulations.

Note. SO = self-objectification, SE = self-esteem; SS-SE = state self-esteem; AO = appearance orientation; AE = appearance evaluation.

Upon completion of these surveys, participants were presented with four photographs of typical exercise clothing and were asked to select the attire that most closely represented theirs while exercising (i.e., the Exercise Attire measure). They were also asked to look at the front cover of two magazines (about fitness and sports equipment) and provided their opinions by completing the Magazine Evaluation Form to bolster the cover story/purpose of this study.

Afterwards, the computer prompted participants to select the number that was provided to them on a note card in order to receive a feedback on their ‘facial appearance’ and write a short essay response based on a prompt, which was the second self-esteem manipulation. Participants were asked to think about their body parts they like (i.e., increased state self-esteem condition) or their body parts they did not like (i.e., decreased state self-esteem condition) and write a short essay. They then completed the State Self-Esteem Survey, which assessed whether the state self-esteem manipulations were successful.

Next, participants went through the self-objectification manipulation in which they were prompted to try on the exercise attire that was provided to them. They were told to look themselves in the full-length mirror for one minute. After one minute of observing themselves in the mirror, they were instructed to complete the following questionnaires: Twenty Statement Test, which served as the self-objectification manipulation check, the Appearance Evaluation and Appearance Orientation inventory, the Experiential Shame Scale, the Cube Comparison Test, and the Clothing Evaluation Form to bolster the cover story. The order of these questionnaires was counterbalanced to avoid order effect.

After completing the questionnaires, they were prompted to change back into their own clothes. Once they changed into their clothes, they were instructed to open the door to signal they had completed the experiment. The researcher entered the laboratory and the participants were handed the nutrition bar and sport-drink to bolster the cover story. After participants sampled the nutrition bar and sport-drink, they completed the Nutrition Bar and Sport-Drink Evaluation Form, respectively, to evaluate the taste and appearance of both. Upon completion, they were asked to signal that they had completed the surveys. The researcher then entered the laboratory and took participants' weight and height measurements.

Immediately after the participants completed all of the activities involved in the experiment, they were debriefed about the nature of the study. Specifically, the researcher verbally explained the true purpose of the study and reasons for deception that occurred during the process of data gathering. In addition to verbal explanation, the participants received a copy of a debrief form that were asked to sign. They were also offered the choice of withholding their data from the analyses of the study. None of the participants decided to withhold their data.

Finally, the contact information of the primary researcher was provided should they wish to attend the follow up meeting to learn about the results of the study.

CHAPTER 4

RESULTS

Preliminary Analyses

Before the experimental procedures were conducted, participants were assessed on global (trait) self-esteem, trait self-objectification, and social desirability. Participants were also asked to provide information on their motivation for exercise and the exercise attire they typically wear during the exercise. Mean scores and *SDs* for global (trait) self-esteem, trait self-objectification, social desirability, and motivation for exercise (i.e., Stress Management, Social Recognition, Ill-Health Avoidance, Appearance, and Weight Management) are presented in Table 5.

Global Self-Esteem, Trait Self-Objectification, and Social Desirability

A one-way ANOVA was performed to test the differences between genders on global (trait) self-esteem, trait self-objectification, and social desirability. Errors on self-related constructs were independent and normally distributed. A non-significant Levene's Test for global (trait) self-esteem, $F(1, 268) = .11, p = .745$, trait self-objectification, $F(1, 268) = 2.54, p = .112$, and social desirability, $F(1, 268) = .55, p = .461$, suggested that the equal variances assumption hypothesis was not violated.

There was a significant effect for gender on global (trait) self-esteem, $F(1, 268) = 6.89, p = .009, d = 0.32$. Males scored higher ($M = 23.89$) than females ($M = 22.39$) on global (trait) self-esteem. There was also a significant effect for gender on trait self-objectification, $F(1, 268) = 8.50, p = .004, d = 0.35$, where males ($M = 14.75$) scored higher than females ($M = 8.67$) on trait self-objectification. Males and females did not significantly differ on social desirability scale.

Motivation for Exercise

A one-way ANOVA was conducted to test the differences between genders on motivation for exercise subscales, including Stress Management, Social Recognition, Ill-Health Avoidance, Appearance, and Weight Management. Weight Management for females was non-normally distributed with skewness of -1.15 ($SE = .21$) and kurtosis of 1.18 ($SE = .41$). A myriad of studies suggest that ANOVA is robust to violation of the normality assumption (Schmider et al., 2010), as such no transformation or parametric test were utilized. Data for Social Recognition, Ill-Health Avoidance, and Appearance were independent and normally distributed. The equal variances assumption hypothesis was met as suggested by a non-significant Levene's Test for Stress Management, $F(1, 268) = .05, p = .822$, Social Recognition, $F(1, 268) = .06, p = .815$, Ill-Health Avoidance, $F(1, 268) = .39, p = .532$, Appearance, $F(1, 268) = .03, p = .865$, and Weight Management, $F(1, 268) = .50, p = .479$.

There was a significant effect of gender on Stress Management, $F(1, 268) = 5.14, p = .024, d = 0.28$, where females scored higher ($M = 19.41$) on motivation to exercise for Stress Management subscale than males ($M = 18.30$). There was also a significant effect of gender on Social Recognition, $F(1, 268) = 6.11, p = .014, d = 0.39$, where males ($M = 13.56$) scored higher than females ($M = 12.09$) on Social Recognition subscale for exercise motivation. Another significant effect for gender was on Weight Management subscale, $F(1, 268) = 19.82, p < .01, d = 0.17$. Females ($M = 18.98$) indicated they exercise more for Weight Management compared to males ($M = 16.49$). No gender differences were found on subscales assessing motivation for exercise for Ill-Health Avoidance and Appearance.

Exercise Attire

Prior to the manipulations of self-esteem and self-objectification, the participants were also asked to report on the usual exercise attire they wear during physical activity. Both females ($n = 67$) and males ($n = 67$) indicated they normally wear t-shirt and shorts. About the same number of females ($n = 50$) and males ($n = 55$) also wore t-shirt and pants. However, more males ($n = 12$) wore long sleeve tops and pants than females ($n = 3$), and more females ($n = 12$) wore short top and shorts than males ($n = 4$). A Chi-Square Test of Independence was performed to examine the relationship between gender and exercise attire. It showed a significant difference on usual exercise attire between males and females, $\chi^2(3, N = 270) = 9.51, p = .023$.

Manipulation Checks, Data Processing, and Inter- and Intra-Rater Reliability

Manipulation Check for State Self-Esteem

After self-esteem manipulation, responses on the State Self-Esteem Scale served as a manipulation check. Descriptive statistics (i.e., Mean scores and *SDs*) are presented in Table 6. A one-way ANOVA was performed to determine whether the individuals in increased and decreased self-esteem conditions differed on the Performance, Social, and Appearance State Self-Esteem subscales. Performance State Self-Esteem for individuals in increased self-esteem group was non-normally distributed with skewness of -1.04 ($SE = .21$) and kurtosis of 1.19 ($SE = .39$). Data for Social and Appearance State Self-Esteem subscales were independent and normally distributed. The Levene's test for Performance, $F(1, 268) = .25, p = .616$, Social, $F(1, 268) = 1.12, p = .290$, and Appearance, $F(1, 268) = 1.15, p = .285$, State Self-Esteem subscales, suggested that a homogeneity of variance assumption was not violated.

Table 5

Pearson Correlations among Main Outcome Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Global Self-Esteem														
2 Trait Self-objectification	.17**													
3 Social Desirability	.18**	.23**												
4 EMI: Stress Management	-.01	.21**	.04											
5 EMI: Social Recognition	.00	-.04	-.10	.20**										
6 EMI: Ill-Health Avoidance	.06	.30**	.12*	.31**	.13*									
7 EMI: Appearance	-.11	-.36**	-.15*	.13*	.42**	.17**								
8 EMI: Weight Management	-.21**	-.30**	-.10	.16*	.06	.19**	.40**							
9 State Self-Esteem: Performance	.54**	.21**	.14*	-.01	-.05	.12*	-.18**	-.16*						
10 State Self-Esteem: Social	.53**	.25**	.24**	.02	-.14*	.09	-.24**	-.22**	.61**					
11 State Self-Esteem: Appearance	.57**	.22**	.11	.00	.06	-.01	-.14*	-.39**	.52**	.52**				
12 State Shame	-.42**	-.20**	-.09	.05	.11	-.08	.14*	.08	-.40**	-.38**	-.37**			
13 Appearance Evaluation	-.57**	-.15*	-.05	-.02	-.17*	-.08	.07	.36**	-.43**	-.42**	-.78**	.34**		
14 Appearance Orientation	.11	.41**	.14*	.00	-.21**	.03	-.44**	-.23**	.18**	.26**	.18**	-.11	-.07	
15 Cube Task	.03	.06	.04	.01	-.04	.04	-.08	-.01	.10	.04	.06	-.03	-.04	.05

Note. EMI = Exercise Motivation Inventory; * Pearson Correlation significant at the .05 level; ** Pearson Correlation significant at the .01 level

Table 6

Mean Scores and Standard Deviations for Trait Self-Esteem and Trait Self-Objectification, Social Desirability, and Motivation for Exercise Subscales by Gender

	Males (<i>n</i> = 138)	Females (<i>n</i> = 132)	Total (<i>n</i> = 270)
Variables	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
Trait Self-Esteem	23.89 (4.51)	22.39 (4.73)	23.14 (4.67)**
Trait Self-Objectification	14.75 (15.84)	8.67 (18.42)	11.78 (17.39)**
Social Desirability	2.77 (1.67)	2.83 (1.69)	2.80 (1.68)
Stress Management	18.30 (4.12)	19.41 (3.87)	18.84 (4.03)*
Social Recognition	13.56 (4.87)	12.09 (4.87)	12.84 (4.92)*
Ill-Health Avoidance	13.97 (3.41)	13.37 (3.59)	13.47 (3.49)
Appearance	17.81 (3.39)	18.05 (3.21)	17.93 (3.31)
Weight Management	16.49 (4.67)	18.98 (4.48)	17.71 (4.74)**

Note. *M* = mean score, *SD* = standard deviation.

** Significant at the .01 level; * Significant at the .05 level.

The results indicated that the self-esteem manipulation was successful, with a significant effect for Performance, $F(1, 268) = 5.18, p = .024, \eta_p^2 = .019, d = 0.40$, Social, $F(1, 268) = 4.96, p = .027, \eta_p^2 = .018, d = 0.27$, and Appearance, $F(1, 268) = 9.14, p = .003, \eta_p^2 = .033, d = 0.37$, State Self-Esteem subscales.

State Self-Objectification Data Processing

To check whether self-objectification manipulation was successful, the Twenty Statement Test was utilized. The protocol for coding was adopted from Fredrickson et al. (1998). For the purpose of the study, this coding protocol was slightly modified. Specifically, statements were classified into one of the two categories – *body focused* or *other*. Examples of coding statements are provided in Table 8.

Table 7

Mean Scores and Standard Deviations for State Self-Esteem Subscales by Gender

		Increased SE (<i>n</i> = 156)	Decreased SE (<i>n</i> = 114)	Total (<i>n</i> = 270)
Variable		<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
State Self-Esteem	Performance	28.93 (4.10)	27.29 (4.01)	28.45 (4.09)*
	Social	27.16 (5.05)	25.74 (5.36)	26.56 (5.22)*
	Appearance	21.79 (4.40)	20.21 (3.99)	21.12 (4.30)**

Note. SE = self-esteem manipulation; *n* = number of individuals; *n* = number of individuals; *M* = mean score, *SD* = standard deviation. * Significant at the .05 level; ** Significant at the .01 level

The categorization of the statements was done using a deductive approach. Statements describing feelings and emotions related to one's body, shape, size, and physical appearance were coded as *body focused*. Statements signifying competencies of one's body, general feelings and emotional states, personality traits, and any other characteristics not related to one's body, shape, and physical appearance were coded as *other*. To facilitate categorizing the statements (i.e., meaning units), the coders referred to the following question "how does wearing these clothes makes you feel about yourself?"

Inter- and Intra-Coder Agreements

The reliability of the Twenty Statement Test data was established by determining inter- and intra-rater agreements, measured by percent of agreement and Cohen's kappa (*k*). Coding was done independently by two raters who were trained to use the coding scheme that was adopted from Fredrickson et al. (1998) and slightly modified for the purpose of this study. The raters coded the statements into either *body-focused* or *others* category. The inter-rater agreement, measured by percent of agreement, was 74.5% with reliability $k = .710$, $p < .001$. The

disagreements between the raters were in depth discussed at the regular meetings and reasons for the categorization were conversed.

Table 8

Examples of State Self-Esteem Manipulation Statement Coding

Participant	Self-Objectification manipulation	Coding Categories	
		Body-related	Other
26	Baggy clothes	Skinny	Comfortable
		In shape	Overdressed
			Ready to go
			Hot
175	Baggy clothes	Overweight	
		Beautiful	Smart
			Healthy
			Happy
318	Tight clothes	Out of shape	Special
			Tired
			Satisfied
			Energetic
333	Tight clothes	Tall	Athletic
			Healthy
			Relaxed
			Calm
333	Tight clothes	Attractive	Comfortable
		Sexy	
333	Tight clothes	Handsome	Fine

Note. Body-related = body-related statements; Other = non body-related statements

The coding for intra-rater agreement was done by a single rater on two occasions, separated by three weeks. The intra-rater agreement, measured by percent of agreement, was 78% with reliability $k = .749$, $p < .001$. According to Landis and Koch (1977), these kappa

values indicate a substantial agreement (i.e., between .61 and .80) for the inter- and intra-rater reliability.

Manipulation Check for State Self-Objectification

An independent-samples T-test was conducted to examine whether the self-objectification manipulation was successful on the Twenty Statement Test. The Levene's Test suggested that the equal variances assumption hypothesis was not violated, $F(268) = .66, p = .418$. Participants wearing tight clothes ($M = 4.64, SD = 2.95$) reported more body-related statements compared to those wearing baggy clothes ($M = 3.35, SD = 2.65$), $t(268) = 3.79, p < .001$. This indicates that the self-objectification manipulation was successful and that individuals who wore tight clothes experienced greater self-objectification compared to individuals who wore baggy clothes.

Main Analyses

After the self-esteem and self-objectification manipulations, participants completed Experiential Shame Scale, Appearance Evaluation and Appearance Orientation subscales, and the Cube Comparison Test to assess their cognitive performance. Given that the correlations among the above mentioned variables were generally weak by ranging between $-.07$ and $.34$ (see Table 5), separate 2-self-esteem manipulation (increased and decreased self-esteem) x 2-self-objectification manipulation (baggy and tight clothes) x 2-gender (males and females) ANOVAs were preferred over MANOVA (Tabachnick & Fidell, 2012). Descriptive statistics (i.e., Mean scores and *SDs*) are presented in Table 9.

State Shame

Data for state shame were independent and normally distributed. The equal variances assumption hypothesis was met as suggested by a non-significant Levene's Test, $F(7, 262) =$

1.57, $p = .142$. The main effects suggested no significant difference of gender, $F(1, 262) = .78$, $p = .379$, $\eta_p^2 = .003$, self-esteem manipulation, $F(1, 262) = 2.21$, $p = .138$, $\eta_p^2 = .008$, and self-objectification manipulation, $F(1, 262) = .003$, $p = .956$, $\eta_p^2 = .001$, on their Experiential State Shame ratings.

Interaction effects were found for ratings of state shame and gender within the self-objectification manipulation, $F(1, 262) = 5.08$, $p = .025$, $\eta_p^2 = .019$. Significant simple main effects were found for ratings of state shame between males and females in baggy clothes, $F(1, 266) = 4.03$, $p = .046$, but not in tight clothes, $F(1, 266) = .69$, $p = .406$. Specifically, females ($M = 36.14$) wearing baggy clothes experienced higher state shame than males ($M = 33.53$; $d = 0.41$). Interaction effects were not significant for state shame ratings by (1) gender and self-esteem manipulation, (2) self-esteem manipulation by self-objectification manipulation, and (3) gender and self-esteem manipulation and self-objectification manipulation.

Appearance Evaluation

During the initial data screening, six outliers were detected. The data were independent and normally distributed, but the homogeneity of variance assumption was violated with significant Levene's Test, $F(7, 256) = 2.42$, $p = .02$. After omitting these six outliers, the data met all ANOVA assumptions including the equal variance assumption as demonstrated by non-significant Levene's Test, $F(7, 256) = 1.69$, $p = .112$. The ANOVAs performed with and without six outliers did not yield different outcomes. The analysis revealed a significant main effect of gender on appearance evaluation, $F(1, 256) = 13.44$, $p < .01$, $\eta_p^2 = .050$. Females ($M = 2.53$) scored higher on appearance evaluation compared to males ($M = 2.27$; $d = 0.16$). The main effects of self-objectification and self-esteem manipulations on appearance evaluation were not significant.

The interaction effect of gender and self-objectification manipulation on appearance evaluation was significant, $F(1, 256) = 6.63, p = .011, \eta_p^2 = .025$. Significant simple effects were found for gender in baggy clothes, $F(1, 260) = 19.76, p < .001$, but not in tight clothes, $F(1, 260) = .65, p = .419$. Females who wore baggy clothes ($M = 2.65$) reported higher scores on appearance evaluation compared to males ($M = 2.21; d = 0.78$) wearing tight clothes.

Analysis of simple main effects also showed a significant difference on appearance evaluation for females in baggy clothes and tight clothes, $F(1, 260) = 5.29, p = .022$, but these differences were not detected in males, $F(1, 260) = 1.93, p = .166$. Females who wore baggy clothes scored higher on appearance orientation ($M = 2.64$) than those wearing tight clothes ($M = 2.41; d = 0.41$). Interaction effects were not significant for (1) gender and self-esteem manipulation, (2) self-esteem manipulation and self-objectification manipulation, and (3) gender and self-esteem manipulation and self-objectification manipulation.

Appearance Orientation

The data were shown to be independent and normally distributed. The equal variances assumption hypothesis was met as demonstrated by non-significant Levene's Test, $F(7, 262) = .45, p = .872$. Analysis revealed a significant main effect of gender on appearance orientation, $F(1, 262) = 10.03, p = .002, \eta_p^2 = .037$, where males ($M = 2.72$) scored higher on appearance orientation than females ($M = 2.49; d = 0.41$). The main effects of self-objectification and self-esteem manipulations on appearance orientation were not statistically significant. Interaction effects were not significant for (1) gender and self-esteem manipulation, (2) gender and self-objectification manipulation, (3) self-esteem manipulation and self-objectification manipulation, and (4) gender and self-esteem manipulation and self-objectification manipulation.

Table 9

Mean Scores and Standard Deviations for Variables Assessed after Self-Esteem and Self-Objectification Manipulation

Variables	Males				Females			
	Increased SE		Decreased SE		Increased SE		Decreased SE	
	Tight (<i>n</i> = 45)	Baggy (<i>n</i> = 36)	Tight (<i>n</i> = 27)	Baggy (<i>n</i> = 30)	Tight (<i>n</i> = 39)	Baggy (<i>n</i> = 36)	Tight (<i>n</i> = 29)	Baggy (<i>n</i> = 28)
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
State Shame	34.33 (8.51)	34.17 (6.49)	36.81 (7.10)	32.77 (6.24)	33.64 (9.11)	34.83 (6.47)	35.00 (7.44)	37.82 (6.21)
Appearance Evaluation	2.33 (0.64)	2.12 (0.57)	2.35 (0.57)	2.29 (0.40)	2.41 (0.62)	2.58 (0.62)	2.42 (0.46)	2.72 (0.61)
Appearance Orientation	2.79 (0.55)	2.68 (0.62)	2.68 (0.64)	2.74 (0.63)	2.46 (0.55)	2.47 (0.60)	2.57 (0.61)	2.47 (0.49)
Cube Comparison Test	6.09 (5.29)	6.33 (4.79)	4.26 (5.23)	4.27 (4.36)	5.28 (5.33)	6.81 (5.13)	4.28 (5.19)	4.61 (3.38)

Note. SE = self-esteem manipulation; Tight, Baggy clothes = self-objectification manipulation; *n* = number of individuals; *M* = mean score; *SD* = standard deviation.

Cognitive Performance

Data for cognitive performance were shown to be independent and normally distributed. The Levene's Test, $F(7, 262) = .99, p = .439$ was not significant, which suggested that the equal variances assumption hypothesis was not violated. A significant main effect of self-esteem manipulation on cognitive performance was detected, $F(1, 262) = 8.36, p = .004, \eta_p^2 = .031$, where individuals in the increased self-esteem condition ($M = 6.11$) scored higher on cognitive performance than individuals in the decreased self-esteem condition ($M = 4.35; d = 0.36$). The main effects for gender, and self-objectification manipulation on cognitive performance were not significant. None of the interaction effects on cognitive performance (1) gender and self-esteem manipulation, (2) gender and self-objectification manipulation, (3) self-esteem manipulation and self-objectification manipulation, and (4) gender and self-esteem manipulation and self-objectification manipulation were significant.

CHAPTER 5

DISCUSSION

The purpose of the present study was to examine potential safeguards for negative emotional and cognitive consequences of self-objectification. Specifically, the interest was to investigate the extent to which increased self-esteem can protect against harmful consequences (e.g., shame, appearance evaluation, decrease in cognitive performance) of an objectified environment (in this study created by wearing tight clothes) as opposed to non-objectified environment (i.e., wearing baggy clothes) by employing self-esteem manipulations (i.e., increased and decreased self-esteem condition).

While the main focus of self-objectification research has been on females, there is evidence that males also engage in self-objectification (Hebl, King, & Lin, 2004), and suffer similar although perhaps less severe and/or different negative consequences (e.g., shame, anxiety, want to increase muscle mass; Strelan & Hargreaves, 2005). Researchers argue that self-objectification can be used to explain the development and consequences of psychological and health concerns (e.g., eating disorders) among women (Calogero, Davis, & Thompson, 2005). Similarly, some studies have found that self-objectification can also be used to explain the drive for muscularity and other body image concerns among men (Daniel & Bridges, 2010; Morrison, Morrison, & Hopkins, 2003). In contrast, this relationship was not observed in other studies (Daniel & Bridges, 2010; Martins, Tiggemann, & Kirkbride, 2007). Given these mixed results, both men and women were recruited for this study to explore the extent of preventive mechanism of self-objectification consequences between genders.

The role of self-objectification among physically active individuals is important, as one might expect exercisers would be affected differently by objectified environment than non-

exercisers. On the one hand, it can be argued that exercisers are accustomed to displaying their body and being surrounded by individuals whose bodies are more exposed (e.g., wearing shorts, sports bra), thus may be less susceptible to negative effects of self-objectification (e.g., Dobersek, Eklund, & Jeffery, in preparation; Lox et al., 2010). On the other hand, certain exercise venues (e.g., gyms, fitness centers) have been found to be positively associated with concerns for self-objectification (Slater & Tiggemann, 2011). As such, it is imperative to provide additional evidence for preventive mechanisms of self-objectification among individuals who are physically active and exercise on a regular basis.

The first hypothesis for this study was that males would report higher levels of trait self-esteem and lower levels of trait self-objectification compared to females. Consistent with the previous literature (Kling et al., 1999), males scored significantly higher on global (trait) self-esteem than females. Males also reported higher levels of trait self-objectification than females. This finding did not support the research hypothesis, nor does it support some of the previous research (Fredrickson et al., 1998; Hebl et al., 2004). Even though it is theoretically plausible to explain body image concerns among men using self-objectification theory, perhaps the self-objectification assessments did not capture a complete picture of ‘male self-objectification experiences’ (Cafri & Thompson, 2004; Daniel, Bridges, & Martens, 2014). The Self-Objectification Questionnaire used in this study was developed by Noll and Fredrickson (1998) by using samples of undergraduate women only. Daniel et al. (2014) recently developed The Male Assessment of Self-Objectification (MASO), which demonstrated adequate validity and reliability for assessing self-objectification in men. As such, they have suggested researchers use the MASO for examining self-objectification among men in future studies.

The second hypothesis was that females in the decreased self-esteem condition, while wearing tight clothes would: a) experience more negative emotions (i.e., higher state shame), b) place more importance on their appearance (i.e., higher appearance orientation), and c) be less satisfied with their physical appearance (i.e., lower appearance evaluation) compared to individuals in any other conditions. None of the three-way interactions were significant. As such, the second hypothesis was not supported. Nevertheless, there were some main effects and two-way interaction effects that were significant and they are discussed below.

Females experienced higher state shame when wearing baggy clothes than males wearing baggy clothes. Perhaps females' expectations of cultural body ideal, or as applicable in this case – ideal clothing, did not meet their expectations (Lewis, 1992). State shame was moderately and positively correlated with appearance evaluation (i.e., dissatisfied with their physical appearance) and it is possible that shame was triggered by females' interpretation of the *clothes* they were wearing, rather than their *body*. The findings with respect to appearance evaluation supported this notion; females had a more positive outlook and were more satisfied with their body than males. Furthermore, females who were wearing baggy clothes scored higher on their appearance evaluation than females wearing tight clothes. Thus, wearing baggy clothes may have made the females feel uncomfortable with how they looked, although they were not dissatisfied with their bodies. The results also showed a main effect for gender on appearance orientation with males scoring higher than females. These results suggest, that the males placed more importance on their physical appearance and looks (rather than on health and competence) than women.

The third hypothesis was that females in the decreased state self-esteem group wearing tight clothes would demonstrate lower cognitive performance compared to individuals in any other conditions. None of the two- or three-way interaction effects were statistically significant.

Even though the third hypothesis was not supported, a significant main effect was found of self-esteem manipulation. Specifically, individuals in the increased self-esteem condition performed better on the cognitive task than individuals in the decreased self-esteem condition. The results of previous studies focusing on whether or not self-esteem is positively related with behavioral outcomes have been controversial. Some researchers (Baumeister, Campbell, Krueger, & Vohs, 2003; Krueger, Vohs, & Baumeister, 2008) found small association between self-esteem and behavior/performance. Others, on the other hand, have found self-esteem to be positively associated with academic performance (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995), physical activity and exercise (Kristjánsson, Sigfúsdóttir, & Allegrante, 2010; Spence, McGannon, & Poon, 2005), and happiness and life satisfaction (Diener & Diener, 1995).

There were various other findings unrelated to the hypotheses that are worth mentioning. On average, males reported they exercised more frequently than females. They also spent more time per exercise session than females. Furthermore, more females engaged in aerobic type of exercise (e.g., running, biking) than males, while more males engaged in anaerobic type of exercises (e.g., weight lifting). These observations are consistent with a previous cross-sectional study that examined exercise behaviors and motivation for exercise (Duncan, Hall, Wilson, & Jenny, 2010). Based on the analysis of motivation for exercise, females exercised more for stress and weight management reasons than males. Males, on the other hand, exercised more for social recognition than females.

In the current study, there is some support for self-esteem acting as a buffer towards an induced objectified environment and its negative consequences, especially among women. Nevertheless, there is some contrary evidence that individuals in the non-objectified environment (i.e., baggy clothes) experienced more negative emotions (i.e., shame) than in the objectified

environment (i.e., tight clothes). The results of the present study are mixed on many accounts, and some of them are not aligned with the previous research. However, they present a myriad of venues for future studies to explore the nature of self-objectification experiences especially within/between males and females.

Limitations and Future Research Directions

The results of the current study suggests that experiences of self-objectification are complex phenomena. As such the findings need to be interpreted in the context of a number of limitations, which also suggest future research directions. First, the participants were White, college-aged, healthy individuals who exercised on a regular basis, which limits generalization to other groups. Future research attention could be focused on different populations, particularly those considered to be more prone to negative psychological and health consequences (e.g., adolescents), individuals at risk for health problems due to physical inactivity, or people with disabilities. Future research should also focus on individuals from various cultures, racial/ethnic identities, and other background variables. Second, the objectified environment was induced in a controlled laboratory setting, which may not reflect a natural environment where individuals are objectified by others and ways this relates to self-objectification. Consequently, ecological validity of the study can questioned.

Third, both males and females were presented with the same type of exercise attire for baggy clothes (i.e., non-objectified environment), but different for tight clothes (i.e., objectified environment). Specifically, when wearing tight clothes, females' bodies (i.e., sports bra and shorts) were more exposed than males' bodies (i.e., tank top and shorts). Many studies have adopted established protocols for inducing objectified environment. However, these protocols have not been tested and compared to one another to determine their effectiveness. Future studies

should examine different types of manipulations to induce an objectified environment. Based on these findings, perhaps males and females are affected differently within the induction of the objectified environment. Additionally, males might experience self-objectification differently than females, which could lead different negative consequences that were not assessed in this study.

Fourth, the coding scheme that was utilized for the Twenty Statement Test might have presented a challenge that needs to be addressed in future research. Specifically, any positive or negative statement that was associated to one's body, shape, size, or even emotions about one's body was categorized as *body focused*. The main purpose of the manipulation was to have participants focus on their body and physical appearance rather than to physical competencies. As such, the coding scheme was consistent with the aim of the self-objectification manipulation. To my knowledge, past researchers have used the Twenty Statement Test to capture state self-objectification because no other assessment has been available to measure this phenomenon. Recently, Daniel et al. (2014) argued that the Twenty Statement Test might not fully capture the body image concerns in males. As such, they developed the Males Assessment of Self-Objectification (MASO) for measuring self-objectification in men. Future studies should develop additional assessments for capturing trait and state self-objectification and use valid and reliable measures for the appropriate samples used within the studies.

Finally, self-objectification may not necessarily lead to negative experiences. Frequent attention to one's body or body parts does not mean that a person dislikes his/her body. Perhaps women and/or men who spend great attention to their bodies exercise frequently, and thus they may like their appearance. They could feel proud that their efforts have paid off and believe they look good. Looking good is part of their self-esteem, which could be an important value for

them. If so, not looking good in baggy clothes could trigger distress for them. Consequently, they would like their appearance less when they are in baggy clothes than in tight clothes. For these individuals, self-objectification would not induce negative effects, such as shame and low cognitive functioning.

The intent of this study was to provide further understanding of self-objectification experience and its consequences among women and men. Specifically, the focus was on potential preventive mechanisms (i.e., increased self-esteem levels) of the negative ramifications that women and men can experience in an induced objectified environment. The findings of this study provide additional support for numerous challenges that many researchers face when conducting studies associated with self-related constructs.

APPENDIX A
DEMOGRAPHIC QUESTIONNAIRE

1. Age: _____
2. Gender (please circle):
- Male Female
3. What is your weight? (kg OR lb) _____
4. What is your height (cm OR inch)? _____
5. What is your sexuality?
- ___ Gay/Lesbian/Homosexual
- ___ Bisexual
- ___ Heterosexual
- ___ Do not wish to report
- ___ Other _____
6. What is your marital status?
- ___ Currently married
- ___ Not married, but in a committed relationship
- ___ Single (or divorced/widowed) but (casually) dating
- ___ Single (or divorced/widowed) and not currently dating anyone
- ___ Other _____
7. What is your race?
- ___ White
- ___ African-American
- ___ Native-American
- ___ Hispanic
- ___ Asian Pacific Islander
- ___ American Indian
- ___ Chinese
- ___ Filipino
- ___ Japanese
- ___ Korean
- ___ Vietnamese
- ___ Other _____

8. What is the highest level of education you have completed?

- ☐ High school or equivalent
- ☐ One or more years of college, no degree
- ☐ Associate degree
- ☐ Bachelor's degree
- ☐ Masters or professional degree
- ☐ Doctorate degree
- ☐ Other _____

9. What is your weight? (kg OR lb) _____

10. What is your height (cm OR inch)? _____

APPENDIX B

EXERCISE HABITS INVENTORY AND RATE OF PERCEIVED EXERTION

1. What type exercise and/or physical activity(ies) are you attending on a regular basis?

2. How *often* do you engage in exercise and physical activity?

- ___ 1 x week
- ___ 2-3 x week
- ___ 4-5 x week
- ___ Everyday

3. How *long* does your one time engagement of your exercise and/ physical activity last?

- ___ less than 30 minutes
- ___ 30 minutes to 1 hour
- ___ 1 – 2 hours
- ___ more than 2 hours
- ___ other: _____

4. On a scale below, please rate perceived exertion of your exercise/physical activity:

	Example
___ None 6	Reading a book, watching television
___ Very, very light 7 to 8	Tying shoes
___ Very light 9 to 10	Chores like folding clothes that seem to take little effort
___ Fairly light 11 to 12	Walking through the grocery store or other activities that require some effort but not enough to speed up your breathing
___ Somewhat hard 13 to 14	Brisk walking or other activities that require moderate effort and speed your heart rate and breathing but don't make you out of breath
___ Hard 15 to 16	Bicycling, swimming, or other activities that take vigorous effort and get the heart pounding and make breathing very fast
___ Very hard 17 to 18	The highest level of activity you can sustain
___ Very, very hard 19 to 20	A finishing kick in a race or other burst of activity that you can't maintain for long

APPENDIX C

THE EXERCISE MOTIVATION INVENTORY-2

On the following pages are a number of statements concerning the reasons people often give when asked why they exercise. *Whether you currently exercise regularly or not*, please read each statement carefully and indicate, by circling the appropriate number, whether or not each statement *is true* for you personally, *or would be true* for you personally if you did exercise.

If you do not consider a statement to be true for you at all, circle the '0'. If you think that a statement is very true for you indeed, circle the '5'. If you think that a statement is partly true for you, then circle the '1', '2', '3' or '4', according to how strongly you feel that it reflects why you exercise or might exercise.

Remember, we want to know why *you personally* choose to exercise or might choose to exercise, not whether you think the statements are good reasons for *anybody* to exercise.

It helps us to have basic personal information about those who complete this questionnaire. I would be grateful for the following information:

		Not at all true for me					Very true for me				
Personally, I exercise (or might exercise)											
1	To stay slim	0	1	2	3	4	5				
2	To avoid ill-health	0	1	2	3	4	5				
3	Because it makes me feel good	0	1	2	3	4	5				
4	To help me look younger	0	1	2	3	4	5				
5	To show my worth to others	0	1	2	3	4	5				
6	To give me space to think	0	1	2	3	4	5				
7	To have a healthy body	0	1	2	3	4	5				
8	To build up my strength	0	1	2	3	4	5				
9	Because I enjoy the feeling of exerting myself	0	1	2	3	4	5				
10	To spend time with friends	0	1	2	3	4	5				
11	Because my doctor advised me to exercise	0	1	2	3	4	5				
12	Because I like trying to win in physical activities	0	1	2	3	4	5				
13	To stay/become more agile	0	1	2	3	4	5				

Please turn over

Personally, I exercise (or might exercise).....		Not at all true for me				Very true for me	
14	To give me goals to work towards	0	1	2	3	4	5
15	To lose weight	0	1	2	3	4	5
16	To prevent health problems	0	1	2	3	4	5
17	Because I find exercise invigorating	0	1	2	3	4	5
18	To have a good body	0	1	2	3	4	5
19	To compare my abilities with other peoples'	0	1	2	3	4	5
20	Because it helps to reduce tension	0	1	2	3	4	5
21	Because I want to maintain good health	0	1	2	3	4	5
22	To increase my endurance	0	1	2	3	4	5
23	Because I find exercising satisfying in and of itself	0	1	2	3	4	5
24	To enjoy the social aspects of exercising	0	1	2	3	4	5
25	To help prevent an illness that runs in my family	0	1	2	3	4	5
26	Because I enjoy competing	0	1	2	3	4	5
27	To maintain flexibility	0	1	2	3	4	5
28	To give me personal challenges to face	0	1	2	3	4	5
29	To help control my weight	0	1	2	3	4	5
30	To avoid heart disease	0	1	2	3	4	5
31	To recharge my batteries	0	1	2	3	4	5
32	To improve my appearance	0	1	2	3	4	5
33	To gain recognition for my accomplishments	0	1	2	3	4	5
34	To help manage stress	0	1	2	3	4	5
35	To feel more healthy	0	1	2	3	4	5

Please turn over

		Not at all true for me					Very true for me				
Personally, I exercise (I might exercise)....											
36	To get stronger	0	1	2	3	4	5				
37	For enjoyment of the experience of exercising	0	1	2	3	4	5				
38	To have fun being active with other people	0	1	2	3	4	5				
39	To help recover from an illness/injury	0	1	2	3	4	5				
40	Because I enjoy physical competition	0	1	2	3	4	5				
41	To stay/become flexible	0	1	2	3	4	5				
42	To develop personal skills	0	1	2	3	4	5				
43	Because exercise helps me to burn calories	0	1	2	3	4	5				
44	To look more attractive	0	1	2	3	4	5				
45	To accomplish things that others are incapable of	0	1	2	3	4	5				
46	To release tension	0	1	2	3	4	5				
47	To develop my muscles	0	1	2	3	4	5				
48	Because I feel at my best when exercising	0	1	2	3	4	5				
49	To make new friends	0	1	2	3	4	5				
50	Because I find physical activities fun, especially when competition is involved	0	1	2	3	4	5				
51	To measure myself against personal standards	0	1	2	3	4	5				

APPENDIX D

THE EXERCISE ATTIRE

A



B



C



D



A



B



C



D



APPENDIX E

THE SELF-OBJECTIFICATION QUESTIONNAIRE

We are interested in how people think about their bodies. The questions below identify 12 different body attributes.

Note: It does not matter *how* you describe yourself in terms of each attribute. For example, fitness level can have a great impact on your self-concept regardless of whether you consider yourself to be physically fit, not physically fit, or any level in between.

Please consider all 12 attributes simultaneously. Then, rank them by writing the letter of the attribute in the appropriate place on the scale, from **most important (12)** to your physical self-concept, on down to the **least important (1)**.

IMPORTANT: Do Not Assign The Same Rank To More Than One Attribute!

When considering your *physical self-concept*...

A. physical coordination	B. physical energy level
C. health	D. firm/sculpted muscles
E. weight	F. physical fitness level
G. muscular strength	H. measurements (e.g., chest, waist, hips)
I. sex appeal	J. coloring (e.g., skin tone, eye & hair color)
K. physical attractiveness	L. stamina

Scale: 12 = most important to 1 = least important

LETTER OF ATTRIBUTE

MOST important
SECOND most important
THIRD most important
FOURTH most important
FIFTH most important
SIXTH most important

SEVENTH most important
EIGHTH most important
NINTH most important
TENTH most important
ELEVENTH most important
LEAST important

APPENDIX F

ROSENBERG'S SELF-ESTEEM SCALE

Below is a list of statements dealing with your general feelings about yourself.

If you strongly agree, circle **SA**.

If you agree with the statement, circle **A**.

If you disagree, circle **D**.

If you strongly disagree, circle **SD**.

- | | | | | |
|---|----|---|---|----|
| 1. On the whole, I am satisfied with myself. | SA | A | D | SD |
| 2. At times, I think I am no good at all. | SA | A | D | SD |
| 3. I feel that I have a number of good qualities. | SA | A | D | SD |
| 4. I am able to do things as well as most other people. | SA | A | D | SD |
| 5. I feel I do not have much to be proud of. | SA | A | D | SD |
| 6. I certainly feel useless at times. | SA | A | D | SD |
| 7. I feel that I'm a person of worth, at least on an equal plane with others. | SA | A | D | SD |
| 8. I wish I could have more respect for myself. | SA | A | D | SD |
| 9. All in all, I am inclined to feel that I am a failure. | SA | A | D | SD |
| 10. I take a positive attitude toward myself. | SA | A | D | SD |

APPENDIX G

MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE - FORM X1

Listed below are a number of statements concerning personal attitudes and traits.
Read each item and decide whether the statement is *true* or *false* as pertains to you personally.

- | | | |
|--|---|---|
| 1. I like to gossip at times. | T | F |
| 2. There have been occasions when I took advantage of someone. | T | F |
| 3. I'm always willing to admit it when I make a mistake. | T | F |
| 4. I sometimes try to get even rather than forgive and forget. | T | F |
| 5. At times I have really insisted on having things my own way. | T | F |
| 6. I have never been irked when people expressed ideas very different from my own. | T | F |
| 7. I have never deliberately said something that hurt someone's feelings. | T | F |

APPENDIX H

THE STATE SELF-ESTEEM SCALE

This is a questionnaire designed to measure what you are thinking at this moment. There is, of course, no right answer for any statement. The best answer is what you feel is true of yourself at this moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you **RIGHT NOW**. Using the following scale, place a number in the box to the right of the statement that indicates what is true for you at this moment:

1 = Not at all
2 = A little bit
3 = Somewhat
4 = Very much
5 = Extremely

1. I feel confident about my abilities.
2. I am worried about whether I am regarded as a success or failure.
3. I feel satisfied with the way my body looks right now.
4. I feel frustrated or rattled about my performance.
5. I feel that I am having trouble understanding things that I read.
6. I feel that others respect and admire me.
7. I am dissatisfied with my weight.
8. I feel self-conscious.
9. I feel as smart as others.
10. I feel displeased with myself.
11. I feel good about myself.
12. I am pleased with my appearance right now.
13. I am worried about what other people think of me.
14. I feel confident that I understand things.
15. I feel inferior to others at this moment.
16. I feel unattractive.
17. I feel concerned about the impression I am making.
18. I feel that I have less scholastic ability right now than others.
19. I feel like I'm not doing well.
20. I am worried about looking foolish.

APPENDIX I

THE TWENTY STATEMENT TEST

Clothing and style of dress can often have an impact on people's views of themselves. Please take a moment to think about how wearing this particular item of clothing makes you feel about yourself and your identity. In the twenty blanks below, please make as many different statements as you can about yourself and your identity that complete the sentence "I am ..."

Complete the statements as if you were describing yourself to yourself, not to somebody else.

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

I am _____

APPENDIX J

THE EXPERIENTIAL SHAME SCALE

Please indicate the number that best describes how you feel RIGHT NOW when comparing the two opposite word-states. For example, if you are feeling very warm (compared to very cool), place the slider on mark 1. However, if you are feeling very cool (compared to very warm), place the slider on mark 7. If you are feeling in-between the two states, find the number between 1 and 7 that best describes how you feel right now.

Physically, I feel:

1. Very Warm	1	2	3	4	5	6	7	Very Cool
2. Normal Heartbeat	1	2	3	4	5	6	7	Rapid Heartbeat
3. Pale	1	2	3	4	5	6	7	Flushed

Emotionally, I feel:

4. Good	1	2	3	4	5	6	7	Bad
5. Clear	1	2	3	4	5	6	7	Confused
6. Comfortable	1	2	3	4	5	6	7	Distressed
7. Calm	1	2	3	4	5	6	7	Highly Agitated/Aroused

Socially, I feel like:

8. Hiding	1	2	3	4	5	6	7	Being Sociable
9. Talking	1	2	3	4	5	6	7	Being Quiet
10. No one sees me	1	2	3	4	5	6	7	People are looking at me
11. I <i>AM</i> willing to talk about my <u>appearance</u> with an acquaintance right now.	1	2	3	4	5	6	7	I <i>AM NOT</i> willing to talk about my <u>appearance</u> with anyone right now.

APPENDIX K

THE APPEARANCE EVALUATION AND ORIENTATION SUBSCALES

Using a scale like the one below, indicate your answer by entering it to the left of the number of the statement. There are no right or wrong answers. Just give the answer that is most accurate for you. Remember, your responses are confidential, so please be completely honest and answer all items.

1	2	3	4	5
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

- _____ 1. Before going out in public, I always notice how I look.
- _____ 2. I am careful to buy clothes that will make me look my best.
- _____ 3. My body is sexually appealing.
- _____ 4. I like my looks just the way they are.
- _____ 5. I check my appearance in a mirror whenever I can.
- _____ 6. Before going out, I usually spend a lot of time getting ready.
- _____ 7. Most people would consider me good-looking.
- _____ 8. It is important that I always look good.
- _____ 9. I use very few grooming products.
- _____ 10. I like the way I look without my clothes on.
- _____ 11. I am self-conscious if my grooming isn't right.
- _____ 12. I usually wear whatever is handy without caring how it looks.
- _____ 13. I like the way my clothes fit me.
- _____ 14. I don't care what people think about my appearance.
- _____ 15. I take special care with my hair grooming.
- _____ 16. I dislike my physique.
- _____ 17. I am physically unattractive.
- _____ 18. I never think about my appearance.
- _____ 19. I am always trying to improve my physical appearance.

APPENDIX L

THE CUBE COMPARISON TEST

CUBE COMPARISONS TEST -- S-2 (Rev.)

Wooden blocks such as children play with are often cubical with a different letter, number, or symbol on each of the six faces (top, bottom, four sides). Each problem in this test consists of drawings of pairs of cubes or blocks of this kind. Remember, there is a different design, number, or letter on each face of a given cube or block. Compare the two cubes in each pair below.

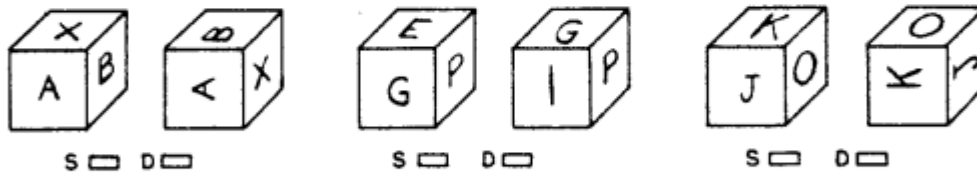


The first pair is marked D because they must be drawings of different cubes. If the left cube is turned so that the A is upright and facing you, the N would be to the left of the A and hidden, not to the right of the A as is shown on the right hand member of the pair. Thus, the drawings must be of different cubes.

The second pair is marked S because they could be drawings of the same cube. That is, if the A is turned on its side the X becomes hidden, the B is now on top, and the C (which was hidden) now appears. Thus the two drawings could be of the same cube.

Note: No letters, numbers, or symbols appear on more than one face of a given cube. Except for that, any letter, number or symbol can be on the hidden faces of a cube.

Work the three examples below.



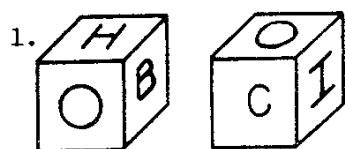
The first pair immediately above should be marked D because the X cannot be at the peak of the A on the left hand drawing and at the base of the A on the right hand drawing. The second pair is "different" because P has its side next to G on the left hand cube but its top next to G on the right hand cube. The blocks in the third pair are the same, the J and K are just turned on their side, moving the O to the top.

Your score on this test will be the number marked correctly minus the number marked incorrectly. Therefore, it will not be to your advantage to guess unless you have some idea which choice is correct. Work as quickly as you can without sacrificing accuracy.

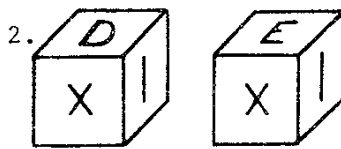
You will have 3 minutes for each of the two parts of this test. Each part has one page. When you have finished Part 1, STOP.

DO NOT TURN THE PAGE UNTIL YOU ARE ASKED TO DO SO.

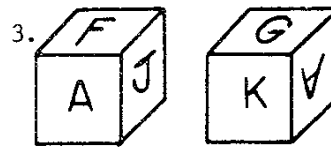
Part 1 (3 minutes)



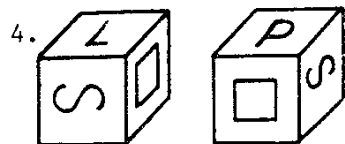
S ☐ D ☐



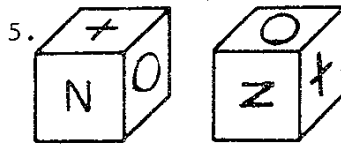
S ☐ D ☐



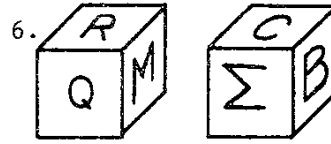
S ☐ D ☐



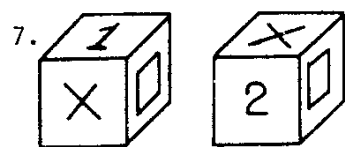
S ☐ D ☐



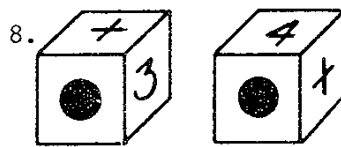
S ☐ D ☐



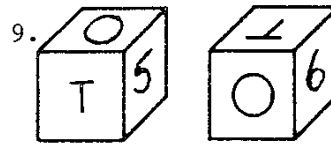
S ☐ D ☐



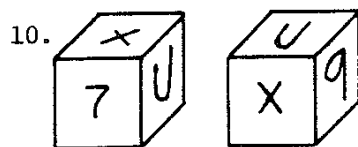
S ☐ D ☐



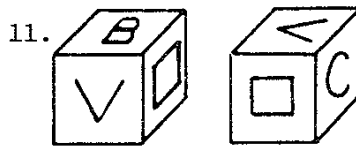
S ☐ D ☐



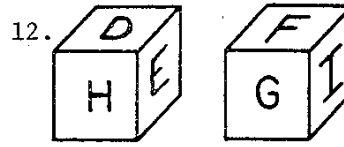
S ☐ D ☐



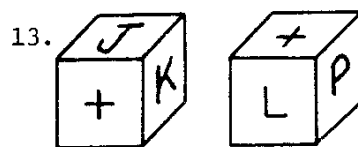
S ☐ D ☐



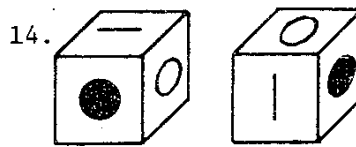
S ☐ D ☐



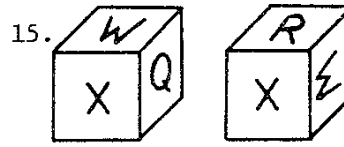
S ☐ D ☐



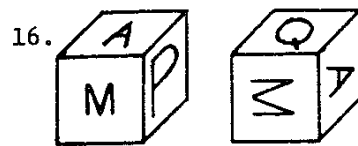
S ☐ D ☐



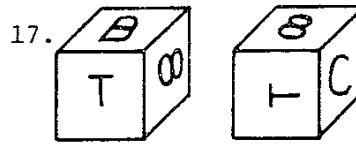
S ☐ D ☐



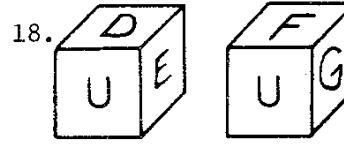
S ☐ D ☐



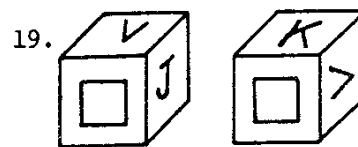
S ☐ D ☐



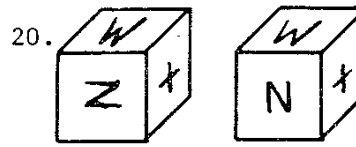
S ☐ D ☐



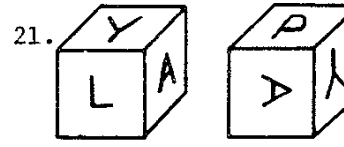
S ☐ D ☐



S ☐ D ☐



S ☐ D ☐



S ☐ D ☐

DO NOT GO ON TO THE NEXT PAGE UNTIL ASKED TO DO SO.

STOP.

APPENDIX M

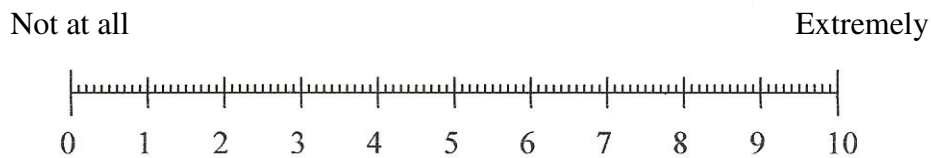
COVER STORY QUESTIONNAIRES

a) The Magazine Evaluation Form

Please look at the **front cover only** of each magazine and answer the following questions:

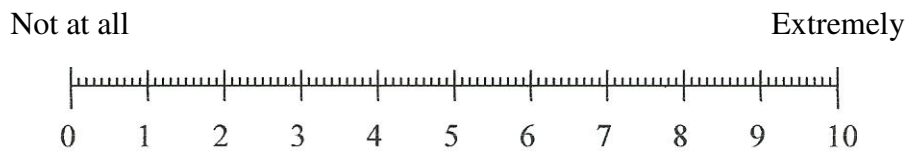
1. How appealing does each magazine look to you?

Magazine A:



On the scale above please rate how appealing the magazine looks, by circling any of the lines along the scale.

Magazine B:



Please circle any of the lines along the scale.

2. Which magazine do you think would be more eye-catching to a consumer if it were on the shelf in a shop? (Please circle your choice)

A

B

3. Have you ever seen either of these magazines advertised or in a shop?

Magazine A: **Yes** **No**

Magazine B: **Yes** **No**

If you answered yes, please state where:

Magazine A.....

Magazine B.....

4. Do you think that you would be interested in buying of either of these magazines?

Yes

No

If you answered yes, please state which magazine you think you would buy

A

B

A and B

5. Do you know anyone that you think would be interested in either of these magazines?

Yes

No

If yes, which magazine/s do you think they may be interested in, and which sports do they play (if any)?

b) Nutrition Bar Evaluation Form

Using the rating scale indicated below, please rate the degree to which you agree with the following statements re: object 1 (exercise clothing), 2 (magazine), and 3 (sports drink):

1 = Strongly Agree (SA); 2 = Agree (A); 3 = Uncertain (U); 4 = Disagree (D); 5 = Strongly Disagree (SD)

	SA	A	U	D	SD
I would pay to acquire this product	1	2	3	4	5
I would use this product regularly	1	2	3	4	5
I find this product tasty	1	2	3	4	5
This product makes me feel more like 'an exerciser'	1	2	3	4	5
There is nothing I would change about this product	1	2	3	4	5

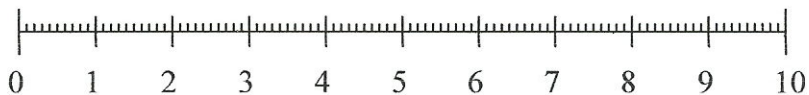
Please use 3 words to describe the taste of the nutrition bar

.....

Taste:

Poor

Excellent

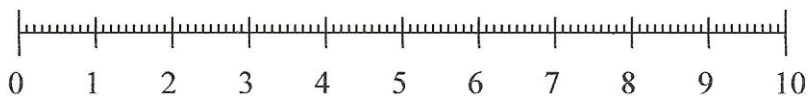


On the scale above please rate taste, by circling any of the lines along the scale.

Appearance:

Poor

Excellent



On the scale above please rate the appearance of the bar, by circling any of the lines along the scale.

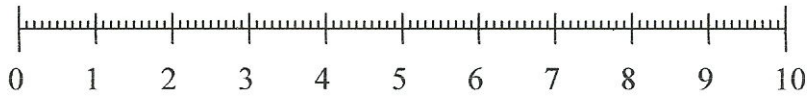
Also could you describe the appearance of the bar in your own words?

.....

Color:

Poor

Excellent

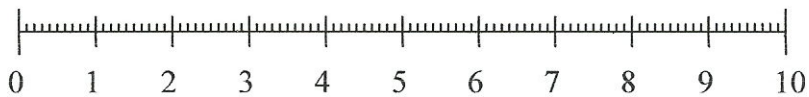


On the scale above please rate the color of the bar, by circling any of the lines along the scale.

Texture:

Poor

Excellent



On the scale above please rate the texture of the bar, by circling any of the lines along the scale.

Would you prefer a branded item compared to this item?

(If so please state the preferred brand)

.....
.....
.....

Would you prefer this nutrition bar in a different flavor?

(If yes please specify a specific flavor you would prefer)

.....
.....
.....

If you did buy this product when would you consume it?

(E.g. after a meal, before training, when needing a snack etc.)

.....
.....
.....

If you were to improve the nutrition bar, what things would you change?

.....
.....
.....
.....

c) Sports Drink Evaluation Form

Using the rating scale indicated below, please rate the degree to which you agree with the following statements.

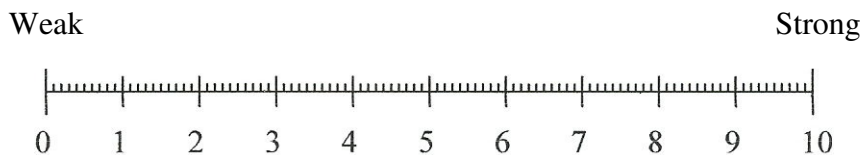
1 = Strongly Agree (SA); 2 = Agree (A); 3 = Uncertain (U); 4 = Disagree (D); 5 = Strongly Disagree (SD)

	SA	A	U	D	SD
I would pay to acquire this product	1	2	3	4	5
I would use this product regularly	1	2	3	4	5
I find this product tasty	1	2	3	4	5
This product makes me feel more like 'an exerciser'	1	2	3	4	5
There is nothing I would change about this product	1	2	3	4	5

Please use 3 words to describe the taste of the drink

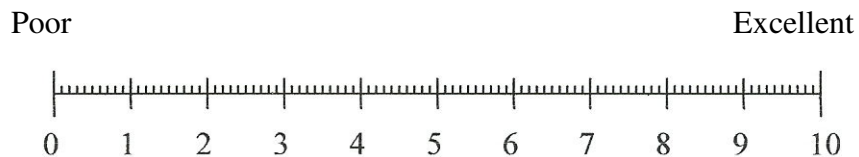
.....

Strength:



On the scale above please rate how strong tasting the drink was, by circling any of the lines along the scale.

Appearance/ Colour:



On the scale above please rate the appearance of the drink, by circling any of the lines along the scale.

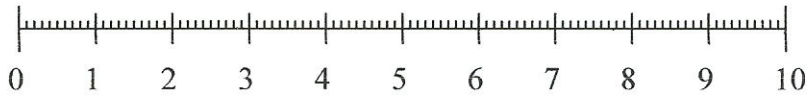
Also could you describe the appearance of the drink in your own words?

.....

Texture:

Poor

Excellent



On the scale above please rate the texture of the drink, by circling any of the lines along the scale.

Would you prefer a branded item compared to this item?

(If so please state the preferred brand)

.....
.....
.....

Would you prefer this sports drink in a different flavor?

(If yes please specify a specific flavor you would prefer)

.....
.....
.....

If you did buy this product when would you consume it?

(E.g. with a meal, after training, when thirsty etc.)

.....
.....
.....

If you were to improve the drink, what things would you change?

.....
.....
.....
.....

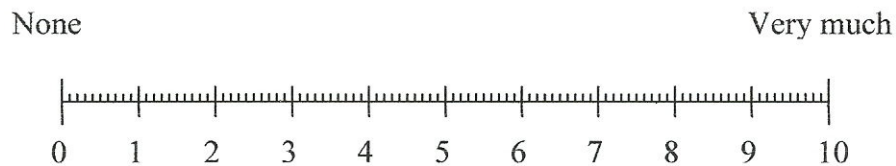
d) Clothing Evaluation Form

Using the rating scale indicated below, please rate the degree to which you agree with the following statements.

1 = Strongly Agree (SA); 2 = Agree (A); 3 = Uncertain (U); 4 = Disagree (D); 5 = Strongly Disagree (SD)

	SA	A	U	D	SD
I would pay to acquire this product	1	2	3	4	5
I would use this product regularly	1	2	3	4	5
I find this product visually appealing	1	2	3	4	5
This product makes me feel more like 'an exerciser'	1	2	3	4	5
There is nothing I would change about this product	1	2	3	4	5

Comfort:



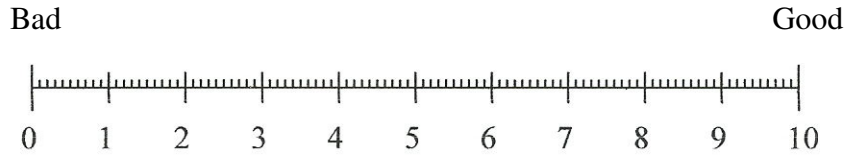
On the scale above please rate how comfortable the clothes were, by circling any of the lines along the scale.

Quality:



On the scale above please rate the quality of the clothes, by circling any of the lines along the scale.

Design:



On the scale above please rate the quality of the clothes, by circling any of the lines along the scale.

**Would you prefer a branded item compared to this item?
(If so please state the preferred brand)**

.....
.....

**If you did own this clothing when would you wear it particularly?
(E.g. to work out, holiday, around house etc.)**

.....
.....
.

If you could change any part of the clothing what would it be and why?

.....
.....

APPENDIX N

IRB APPROVAL MEMORANDUM



Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 01/23/2013

To: Urska Dobersek [REDACTED]

Address: 1114 W. Call Street, Tallahassee, FL

Dept.: EDUCATIONAL PSYCHOLOGY AND LEARNING SYSTEMS

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
Can Self-Esteem Protect Against Negative Ramifications of Self-Objectification in Men and Women Equally Well?

The application that you submitted to this office in regard to the use of human subjects in the research proposal referenced above has been reviewed by the Human Subjects Committee at its meeting on 01/09/2013. Your project was approved by the Committee.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 01/08/2014 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing, any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.



Office of the Vice President For Research
Human Subjects Committee
P. O. Box 3062742
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

RE-APPROVAL MEMORANDUM

Date: 12/18/2013

To: Urska Dobersek [REDACTED]

Address: 1114 W. Call Street, Tallahassee, FL

Dept.: EDUCATIONAL PSYCHOLOGY AND LEARNING SYSTEMS

From: Thomas L. Jacobson, Chair

Re: Re-approval of Use of Human subjects in Research:

Can Self-Esteem Protect Against Negative Ramifications of Self-Objectification in Men and Women Equally Well?

Your request to continue the research project listed above involving human subjects has been approved by the Human Subjects Committee. If your project has not been completed by 12/10/2014, you are must request renewed approval by the Committee.

If you submitted a proposed consent form with your renewal request, the approved stamped consent form is attached to this re-approval notice. Only the stamped version of the consent form may be used in recruiting of research subjects. You are reminded that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report in writing, any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chairman of your department and/or your major professor are reminded of their responsibility for being informed concerning research projects involving human subjects in their department. They are advised to review the protocols as often as necessary to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc:

HSC No. 2013.11692

APPENDIX O

INFORMED CONSENT

PARTICIPANT CONSENT FORM

Principal Investigator: Urska Dobersek

Florida State University

Faculty Supervisor: Dr. Robert Eklund

Educational Psychology & Learning Systems, Florida State University

I, _____, freely and voluntarily consent to be a participant in a study to explore exercise consumer behaviors and emotions. This project is being conducted by Urska Dobersek, a sport psychology doctoral candidate in the Department of Educational Psychology and Learning Systems at Florida State University under the supervision of Dr. Robert Eklund.

I understand my participation in this study will take about 60 minutes. I will be asked to fill out a demographic survey and respond to questionnaires measuring reasons for exercise, exercise habits and attire, magazine evaluation, and self-related constructs. I understand that picture of my face will be taken and then destroyed upon completion of my participation in this study. In addition, I will be asked to evaluate various exercise consumer items, including exercise attire, sport drink, and nutrition bar. I have been informed that I will be completing some other self-report questionnaires.

I understand my participation is completely voluntary and I may withdraw at any time. All my responses to the demographic survey and other questionnaires will be kept confidential to the extent allowed by law and identified by a coding system.

I understand there is a possibility of a minimal level of risk involved if I agree to participate in this study. I understand that the unlikely event of accidental identification carries the potential of embarrassment. The risk associated with trying on the clothing is no greater than a typical fitting room at a retailer. If I have any medical reasons (e.g., diabetes mellitus) that would prevent me to consume things, such as sport drink or nutrition bar, I can still participate in the study, but I will not be able to eat sport drink or nutrition bar.

I understand there are benefits for participating in this study. The results of this study can be applicable to the mental health care professionals, consultants, personal trainers, and other individuals who are physically active. A two-hour credit will be provided to the students in the Educational Psychology and Learning System subject pool and all participants will enter the raffle for five \$20 gift certificates.

I understand that this consent may be withdrawn at any time without prejudice, penalty or loss of benefits to which I am otherwise entitled. I completely understand that my participation is voluntarily and if I decide not to consent to participate in this study or to withdraw from the study later, I will not be penalized in any way. That is, my participation is completely voluntary and if I decided not to participate this will not result any negative consequences for me. I have been given the right to ask and have answered any inquiry concerning the study. Questions, if any, have been answered to my satisfaction.

I understand that general questions about the study can be directed to Urska Dobersek, Florida State University by email at _____ or Dr. Robert Eklund, Educational Psychology, Florida State University by email at _____. I am informed that I will receive a copy of my signed consent form if I accepted to participate. Results will also be sent to me upon my request. If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the FSU IRB at 850-644-8633, or by email at humansubjects@magnet.fsu.edu.

I HAVE HAD THE OPPORTUNITY TO READ THIS CONSENT FORM AND ASK QUESTIONS ABOUT THE STUDY. I CONSENT TO PARTICIPATE IN THIS STUDY ENTITLED: "Exercise consumer behaviors and emotions"

Participant's Signature

Date

FSU Human Subjects Committee Approved on 1/19/2013. Void after 1/08/2014. HSC # 2012.9456

REFERENCES

- Ackard, D. M., Brehm, B. J., & Steffen, J. J. (2002). Exercise and eating disorders in college-aged women: Profiling excessive exercisers. *Eating Disorders, 10*, 31-47. doi: 10.1080/106402602753573540
- Attie, I., & Brooks-Gunn, J. (1989). Development of eating problems in adolescent girls: A longitudinal study. *Developmental Psychology, 25*, 70-79. doi: 10.1037/0012-1649.25.1.70
- Aubrey, J. (2006). Exposure to sexually objectifying media and body self-perceptions among college women: An examination of the selective exposure hypothesis and the role of moderating variables. *Sex Roles, 55*(3), 159-172. doi: 10.1007/s11199-006-9070-7
- Bagozzi, R. P., & Heatherton, T. F. (1994). A general approach to representing multifaceted personality constructs: Application to self-esteem. *Structural Equation Modeling, 1*, 35-67. doi: 10.1080/10705519409539961
- Baumeister, R. F. (1984). Choking under pressure: Self-consciousness and paradoxical effects of incentives on skillful performance. *Journal of Personality and Social Psychology, 46*, 610-620. doi: 10.1037/0022-3514.46.3.610
- Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest, 4*, 1-44.
- Beneke, T. (1982). *Men on rape*. New York, NY: St. Martin's Press.
- Berger, J. (1972). *Ways of seeing*. London, UK: Penguin.
- Biddle, S. J. H., & Mutrie, N. (1991). *Psychology of physical activity and exercise: A health-related perspective*. London: Springer-Verlag.
- Biddle, S. J. H., & Mutrie, N. (2008). *Psychology of physical activity: Determinants, well-being and interventions* (2nd Ed.). New York, NY: Routledge.
- Blascovich, J., Brennan, K., Tomaka, J., Kelsey, R. M., Hughes, P., Coad, M. L., & Adlin, R. (1992). Affect intensity and cardiac arousal. *Journal of Personality and Social Psychology, 63*, 164-174. doi: 10.1037/0022-3514.63.1.164
- Borg, G. (1982). Psychophysical bases of perceived exertion. *Medicine and Science in Sport and Exercise, 14*, 377-381. <http://www.acsm.org/access-public-information/acsm-journals/medicine-science-in-sports-exercise>
- Borg, G. (1998). *Borg's perceived exertion and pain scales*. Champaign, IL: Human Kinetics.

- Brannon, L., & Feist, J. (Eds.). (1992). *Health psychology: An introduction to behavior and health*. Belmont, CA: Wadsworth Publishing Company.
- Cafri, G., & Thompson, J. K. (2004). Measuring male body image: A review of the current methodology. *Psychology of Men & Masculinity*, 5(1), 18-29. doi: 10.1037/1524-9220.5.1.18
- Calogero, R. M. (2004). A test of objectification theory: The effect of the male gaze on appearance concerns in college women. *Psychology of Women Quarterly*, 28(1), 16-21. doi: 10.1111/j.1471-6402.2004.00118.x
- Calogero, R. M. (2009). Objectification processes and disordered eating in British women and men. *Journal of Health Psychology*, 14, 394-402. doi: 10.1177/1359105309102192
- Calogero, R. M., & Pina, A. (2011). Body guilt: Preliminary evidence for a further subjective experience of self-objectification. *Psychology of Women Quarterly*, 35, 428-440. doi:10.1177/0361684311408564
- Calogero, R. M., Davis, W. N., & Thompson, J. K. (2005). The role of self-objectification in the experience of women with eating disorders. *Sex Roles*, 52(1-2), 43-50. doi: 10.1007/s11199-005-1192-9
- Campbell, A., & Hausenblas, H. A. (2009). The role of exercise dependence for the relationship between exercise behavior and eating pathology: Mediator or moderator? *Journal of Health Psychology*, 13, 495-502. doi: 10.1002/erv.1111
- Cash, T. F. (2000). The Multidimensional Body-Self Relations Questionnaire user's manual (3rd Ed.). Unpublished manuscript.
- Cash, T. F., Winstead, B. A., & Janda, L. H. (1985). Your body, yourself: A Psychology Today reader survey. *Psychology Today*, 19(7), 22-26. <http://www.psychologytoday.com/>
- Cash, T. F., Winstead, B. W., & Janda, L. H. (1986). The great American shape-up: Body image survey report. *Psychology Today*, 20(4), 30-37. <http://www.psychologytoday.com/>
- Cooley, C. H. (1902). *Two major works: Social organization. Human nature and the social order. With an introduction by Robert Cooley Angell*. Glencoe, IL: The Free Press.
- Copeland, G. A. (1989). Face-ism and primetime television. *Journal of Broadcasting and Electronic Media*, 33, 209-214. doi: 10.1080/08838158909364075
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper and Row.
- Daniel, S., & Bridges, S. K. (2010). The drive for muscularity in men: Media influences and objectification theory. *Body Image*, 7(1), 32-38. doi: 10.1016/j.bodyim.2009.08.003

- Daniel, S., Bridges, S. K., & Martens, M. P. (2014). The development and validation of the Male Assessment of Self-Objectification (MASO). *Psychology of Men & Masculinity*, 15(1), 78-89. doi: 10.1037/a0031518
- Deaux, K., & Major, B. (1987). Putting gender into context: An interactive model of gender-related behavior. *Psychological Review*, 94, 369-389. doi: 10.1037/0033-295X.94.3.369
- de Beauvoir, S. (1952). *The second sex* (H. M. Parshley, Trans.). New York, NY: Vintage Books.
- Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology*, 68, 653–663.
- Dobersek, U., Eklund, R. C., & Jeffery, K. (in preparation). Alterations in body image in a fitness center environment: Mixed-method approach.
- Dorland, J. M. (2006). *Objectification theory: Examining the relation between self-objectification and flow for college-aged women athletes*. (Doctoral Dissertation, The University of Akron). Retrieved from <http://etd.ohiolink.edu/send-pdf.cgi/Dorland%20Jeanne%20Marie.pdf?akron1163634310>
- Duncan, M. C. (1990). Sports photographs and sexual differences: Images of women and men in the 1984 and 1988 Olympic Games. *Sociology of Sport Journal*, 7, 22-43. <http://journals.humankinetics.com/ssj>
- Duncan, L., Hall, C., Wilson, P., & Jenny, O. (2010). Exercise motivation: A cross-sectional analysis examining its relationships with frequency, intensity, and duration of exercise. *International Journal of Behavioral Nutrition and Physical Activity*, 7(1), 7. doi: 10.1186/1479-5868-7-7
- Dunn, A. L., Trivedi, M. H., & O'Neal, H. A. (2001). Physical activity dose-response effects on outcomes of depression and anxiety. *Medicine Science in Sports and Exercise*, 33, S587-S597. doi: 10.1097/00005768-200106001-00027
- Ekstrom, R. B., French, J. W., & Harman, H. H., & Dermen, D. (1976). *Kit of factor-referenced cognitive tests*. Princeton, NJ: Educational Testing Service.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160. doi: 10.3758/BRM.41.4.1149
- Fischer, D. G., & Fick, C. (1993). Measuring social desirability: Short forms of the Marlowe-Crowne Social Desirability Scale. *Educational and Psychological Measurement*, 53(2), 417-424. doi: 10.1177/0013164493053002011

- Folkins, C. H., & Sime, W. E. (1981). Physical fitness training and mental health. *American Psychologist*, 36, 373-389. doi: 10.1037/0003-066X.36.4.373
- Fox, J., Bailenson, J. N., & Tricase, L. (2014). The embodiment of sexualized virtual selves: The Proteus effect and experiences of self-objectification via avatars. *Computers in Human Behavior*, 29(3), 930-938. doi: 10.1016/j.chb.2012.12.027
- Fraboni, M., & Cooper, D. (1989). Further validation of three short forms of the Marlowe-Crowne Scale of Social Desirability. *Psychological Reports*, 65(2), 595-600. doi: 10.2466/pr0.1989.65.2.595
- Frankel, H. M., & Staeheli, J. C. (1992). Calculating body mass index. *Annals of Internal Medicine*, 117(8), 698-699. <http://www.acponline.org.proxy.lib.fsu.edu/journals/>
- Fredrickson, B. L., & Harrison, K. (2005). Throwing like a girl: Self-objectification predicts adolescent girls' motor performance. *Journal of Sport & Social Issues*, 29, 79-101. doi: 10.1177/0193723504269878
- Fredrickson, B. L., & Roberts, T. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly*, 21, 173-206. doi: 10.1111/j.1471-6402.1997.tb00108.x
- Fredrickson, B. L., Roberts, T., Noll, S. M., Quinn, D. M., & Twenge, J. M. (1998). That swimsuit becomes you: Sex differences in self-objectification, restrained eating, and math performance. *Journal of Personality and Social Psychology*, 75, 269-284. doi: 10.1037/0022-3514.75.1.269
- Gapinski, K. D., Brownell, K. D., & LaFrance, M. (2003). Body objectification and "fat talk": Effects on emotion, motivation, and cognitive performance. *Sex Roles*, 48, 377-388. doi: 10.1023/A:1023516209973
- Gardner, C. B. (1980). Passing by: Street remarks, address rights, and the urban female. *Sociological Inquiry*, 50, 328-356. doi: 10.1111/j.1475-682X.1980.tb00026.x
- Gauvin, L., & Spence, J. C. (1996). Physical activity and psychological well-being: Knowledge base, current issues, and caveats. *Nutrition Reviews*, 54, S53-65. doi: 10.1111/j.1753-4887.1996.tb03899.x
- Goffman, E. (1979). *Gender advertisements*. Cambridge, MA: Harvard University Press.
- Grabe, S., Hyde, J. S., & Lindberg, S. M. (2007). Body objectification and depression in adolescents: The role of gender, shame, and rumination. *Psychology of Women Quarterly*, 31(2), 164-175. doi: 10.1111/j.1471-6402.2007.00350.x

- Groesz, L. M., Levine, M. P., & Murnen, S. K. (2002). The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *International Journal of Eating Disorders*, 31(1), 1-16. doi: 10.1002/eat.10005
- Hall, J. A. (1984). *Nonverbal sex differences: Communication and accuracy and expressive style*. Baltimore, MD: Johns Hopkins University Press.
- Harper, B., & Tiggemann, M. (2008). The effect of thin ideal media images on women's self-objectification, mood, and body image. *Sex Roles*, 58, 649-657. doi: 10.1007/s11199-007-9379-x
- Harrison, K., & Cantor, J. (1997). The relationship between media consumption and eating disorder. *Journal of Communication*, 47, 40-67. doi: 10.1111/j.1460-2466.1997.tb02692.x
- Harrison, K., & Fredrickson, B. L. (2003). Women's sports media, self-objectification, and mental health in black and white adolescent females. *Journal of Communication*, 53, 216-232. doi: 10.1111/j.1460-2466.2003.tb02587.x
- Harven, A., Katkin, E. S., & Bloch, E. (1993). Signal-detection outcomes on heartbeat respiratory resistance detection tasks in male and female subjects. *Psychophysiology*, 30, 223-230. doi: 10.1111/j.1469-8986.1993.tb03347.x
- Hausenblas, H. A., & Fallon, E. A. (2006). Exercise and body-image: A meta-analysis. *Psychology and Health*, 21(1), 33-47. doi: 10.1080/14768320500105270
- Heatherton, T. F. & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology*, 60, 895-910. doi: 10.1037/0022-3514.60.6.895
- Heatherton, T. F., Polivy, J., & Herman, C. P. (1989). Restraint and internal responsiveness: Effects of placebo manipulations of hunger state on eating. *Journal of Abnormal Psychology*, 98, 89-92. doi: 10.1037/0021-843X.98.1.89
- Hebl, M. R., King, E. B., & Lin, J. (2004). The swimsuit becomes us all: Ethnicity, gender, and vulnerability to self-objectification. *Personality and Social Psychology Bulletin*, 30(10), 1322-1331. doi: 10.1177/0146167204264052
- Hewitt, J. P. (2009). *Oxford handbook of positive psychology*. Oxford, UK: Oxford University Press.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94, 319-340. doi: 10.1037/0033-295X.94.3.319

- Hilyer, J. C., & Mitchell, W. (1979). Effects of systematic physical fitness training combined with counseling on the self-concept of college students. *Journal of Counseling Psychology*, 26, 427-436. doi: 10.1037/0022-0167.26.5.427
- Katkin, E. S. (1985). Blood, sweat, and tears: Individual differences in autonomic self-perception. *Psychophysiology*, 22, 125-137. doi: 10.1111/j.1469-8986.1985.tb01573.x
- Katkin, E. S., Blascovich, J., & Goldband, S. (1981). Empirical assessment of visceral self-perception: Individual and sex differences in the acquisition of heartbeat discrimination. *Journal of Personality and Social Psychology*, 40, 1095-1101. doi: 10.1037/0022-3514.40.6.1095
- Kenrick, D. T., Neuberg, S. L., Zierk, K. L., & Krones, J. M. (1994). Evolution and social cognition: Contrast effects as a function of sex, dominance, and physical attractiveness. *Personality and Social Psychology Bulletin*, 20, 210-217. doi: 10.1177/0146167294202008a
- Keelan, J. P., Dion, K. K., & Dion, K. L. (1992). Correlates of appearance anxiety in late adolescence and early childhood among young women. *Journal of Adolescence*, 15, 193-205. doi: 10.1016/0140-1971(92)90047-9
- Kilbourne, J. (1994). Still killing us softly: Advertising and the obsession with thinness. In P. Fallon, M. A., Katzman, & S. C. Wooley, (Eds.), *Feminist perspective on eating disorders* (pp. 395-437). New York, NY: The Guilford Press.
- King, A. C., Taylor, C. B., & Haskell, W. L. (1993). Effects of differing intensities and formats of 12 months of exercise training on psychological outcomes in older adults. *Health Psychology*, 12, 292-300. doi: 10.1037/0278-6133.12.4.292
- Kling, K. C., Hyde, J. S., Showers, C. J., & Buswell, B. N. (1999). Gender differences in self-esteem: A meta-analysis. *Psychological Bulletin*, 125(4), 470-500. doi: 10.1037/0033-2909.125.4.470
- Krassas, N. R., Blauwkamp, J. M., & Wesselink, P. (2003). "Master your Johnson": Sexual rhetoric in axim and stuff magazine. *Sexuality & Culture*, 7(3), 98-119. doi: 10.1007/s12119-003-1005-7
- Kristjánsson, A. L., Sigfúsdóttir, I. O., & Allegrante, J. P. (2010). Health behavior and academic achievement among adolescents: The relative contribution of dietary habits, physical activity, body mass Index, and self-esteem. *Health Education Behavior*, 37(1), 51-64. doi: 10.1177/1090198107313481
- Krueger, J. I., Vohs, K. D., & Baumeister, R. F. (2008). Is the allure of self-esteem a mirage after all? *American Psychologist*, 63, 64-65

- Kuhn, A. (1985). *The power of the image: Essays on representation and sexuality*. London, UK: Routledge & Kegan Paul.
- Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33, 159-174.
- Lee, R., & Robbins, S. S. (1998). The relationship between social connectedness and anxiety, self-esteem, and social identity. *Journal of Counseling Psychology*, 45(3), 338-345. doi: 10.1037/0022-0167.45.3.338
- Leith, L. M., & Taylor, A. H. (1990). Psychological aspects of exercise: A decade of literature review. *Journal of Sport Behavior*, 13, 219-239.
<http://www.southalabama.edu/psychology/journal.html>
- Lewis, M. (1974). *Shame and guilt in neurosis*. Oxford, UK: International Universities Press.
- Lewis, M. (1992). *Shame: The exposed self*. New York, NY: Free Press.
- Lewis, M., Haviland-Jones, J. M., & Barrett, L. F. (Eds.). (2008). *Handbook of emotions* (3rd Ed.) New York, NY: The Guilford Press.
- Loland, N. W. (2000). The aging body: Attitudes toward bodily appearance among physically active and inactive women and men of different ages. *Journal of Aging and Physical Activity*, 8, 197-213. <http://journals.humankinetics.com/japa>
- Lox, C. L., Martin Ginis, K. A., & Petruzzello, S. J. (2010). Health-related quality of life and exercise. In *The psychology of exercise: Integrating theory and practice* (pp. 400–423). Scottsdale, Arizona: Holcomb Hathaway.
- Maltby, J., & Day, L. (2001). The relationship between exercise motives and psychological well-being. *The Journal of Psychology*, 135, 651 -660. doi: 10.1080/00223980109603726
- Markland, D., & Ingledew, D. K. (1997). The measurement of exercise motives: Factorial validity and invariance across gender of a revised Exercise Motivations Inventory. *British Journal of Health Psychology*, 2, 361-376.
<http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%292044-8287>
- Martin Ginis, K. A., Jung, M. E., & Gauvin, L. (2003). To see or not to see: Effects of exercising in mirrored environments on sedentary women's feeling states and self-efficacy. *Health Psychology*, 22, 354-361. doi: 10.1037/0278-6133.22.4.354
- Martins, Y., Tiggemann, M., & Kirkbride, A. (2007). Those speedos become them: The role of self-objectification in gay and heterosexual men's body image. *Personality and Social Psychology Bulletin*, 33(5), 634-647. doi: 10.1177/0146167206297403

- McKinley, N. M. (1998). Gender differences in undergraduates' body esteem: The mediating effect of objectified body consciousness and actual/ideal weight discrepancy. *Sex Role*, 39, 113-123. doi: 10.1023/A:1018834001203
- Miner-Rubino, K., Twenge, J. M., & Fredrickson, B. L. (2002). Trait self-objectification in women: Attractive and personality correlates. *Journal of Research in Personality*, 36(1), 147-172. doi: 10.1006/jrpe.2001.2343
- Morrison, T. G., Morrison, M. A., & Hopkins, C. (2003). Striving for bodily perfection? An exploration of the drive for muscularity in Canadian men. *Psychology of Men & Masculinity*, 4, 111-120. doi:10.1037/1524-9220.4.2.111
- Morry M. M., & Staska, S. L. (2001). Magazine exposure: Internalization, self-objectification, eating attitudes, and body satisfaction in male and female university students. *Canadian Journal of Behavioural Science*, 33, 269-279. doi: 10.1037/h0087148
- Muehlenkamp, J. J., & Saris-Baglama, R. N. (2002). Self-objectification and its psychological outcomes for college women. *Psychology of Women Quarterly*, 25, 371-379. doi: 10.1111/1471-6402.t01-1-00076
- Mulvey, L. (1975). Visual pleasure and narrative cinema. *Screen*, 16, 6-18.
- Murphy, K., Myers, B., & Wolach, A. (2009). *Statistical power analysis: A simple and general model for traditional and modern hypothesis tests* (3rd Ed.). Mahwah, NJ: Erlbaum.
- Nolen-Hoeksema, S., & Girgus, J. S. (1994). The emergence of gender differences in depression during adolescence. *Psychological Bulletin*, 115, 424-443. doi: 10.1037/0033-2909.115.3.424
- Noll, S. (1996). *The relationship between sexual objectification and disordered eating: Correlational and experimental tests of body shame as a mediator* (Unpublished doctoral dissertation). Duke University, Durham, NC.
- Noll, S. M., & Fredrickson, B. L. (1998). A mediation model linking self-objectification, body shame, and disorder eating. *Psychology of Women Quarterly*, 22, 623-636. doi: 10.1111/j.1471-6402.1998.tb00181.x
- Noll, S. M., & Fredrickson, B. L. (2006). A mediational model linking self-objectification, body shame, and disordered eating. *Psychology of Women Quarterly*, 22(4), 623-636. doi: 10.1111/j.1471-6402.1998.tb00181.x
- Park, L. E., & Maner, J. K. (2009). Does self-threat promote social connection? The role of self-esteem and contingencies of self-worth. *Journal of Personality and Social Psychology*, 96(1), 203-217. doi: 10.1037/a0013933

- Penedo, F. J., & Dahn, J. R. (2005). Exercise and well-being: A review of mental and physical health benefits associated with physical activity. *Current Opinion in Psychiatry*, 18, 189-193. <http://journals.lww.com/co-psychiatry/toc/2005/09000>
- Pollatos, O., Kurz, A. L., Albrecht, J., Schreder, T., Kleemann, A. M., Schöpf, V., Kopietz, R., Wiesmann, M., & Schandry, R. (2008). Reduced perception of bodily signals in anorexia nervosa. *Eating Behaviors*, 9(4), 381-388. doi: 10.1016/j.eatbeh.2008.02.001
- Price, B. R., & Pettijohn II, T. R. (2006). The effect of ballet dance attire on body and self-perceptions of female dancers. *Social Behavior and Personality*, 34, 991-998. doi: 10.2224/sbp.2006.34.8.991
- Prichard, I., & Tiggemann, M. (2005). Objectification in fitness centers: Self-objectification, body dissatisfaction, and disordered eating in aerobics instructors and aerobic participants. *Sex Roles*, 53, 19-28. doi: 10.1007/s11199-005-4270-0
- Prichard, I., & Tiggemann, M. (2008). Relations among exercise type, self-objectification, and body image in the fitness centre environment: The role of reasons for exercise. *Psychology of Sport and Exercise*, 9, 855-866. doi: 10.1016/j.psychsport.2007.10.005
- Puwar, N. (2004). Thinking about making a difference. *The British Journal of Politics & International Relations*, 6(1), 65–80. doi: 10.1111/j.1467-856X.2004.00127.x
- Quinn, D. M., Kallen, R. W., Twenge, J. M., & Fredrickson, B. L. (2006). The disruptive effect of self-objectification on performance. *Psychology of Women Quarterly*, 30, 59-64. doi: 10.1111/j.1471-6402.2006.00262.x
- Reel, J. J., Greenleaf, C., Baker, W. L., Aragon, S., Bishop, D., Cachaper, C., Handwerk, P., Locicero, J., Rathburn, L., Reid, W. K., & Hattie, J. (2007). Relations of body concern and exercise behavior: A meta-analysis. *Psychological Reports*, 101, 927-942. doi: 10.2466/pr0.101.3.927-942
- Riva, G., Gaudio, S., & Dakanalis, A. (2014). The neuropsychology of self-objectification. *European Psychologist*, 1-10. doi: 10.1027/1016-9040/a000190
- Roberts, T., & Gettman, J. Y. (2004). Mere exposure: Gender differences in the negative effects of priming a state of self-objectification. *Sex Roles*, 51, 17-27. doi: 10.1023/B:SERS.0000032306.20462.22
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Rosenberg, M. (1979). *Conceiving the self*. New York, NY: Basic Books.

- Rudman, L. A., & Bordiga, E. (1995). The afterglow of construct accessibility: The behavioral consequences of priming men to view women as sexual objects. *Journal of Experimental Social Psychology*, 31, 493-517. doi: 10.1006/jesp.1995.1022
- Schmider, E., Ziegler, M., Danay, E., Beyer, L., & Bühner, M. (2010). Is it really robust? Reinvestigating the robustness of ANOVA against violations of the normal distribution assumption. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences* 6(4), 147–151. doi: 10.1027/1614-2241/a000016
- Slater, A., & Tiggemann, M. (2002). A test of objectification theory in adolescent girls. *Sex Roles*, 46, 343-349. doi: 10.1023/A:1020232714705
- Slater, A., & Tiggemann, M. (2006). The contribution of physical activity and media use during childhood and adolescent to adult women's body image. *Journal of Health Psychology*, 11, 553-565. doi: 10.1177/1359105306065016
- Silverstein, B., Perdue, L., Peterson, B., & Kelly, E. (1986). The role of the mass media in promoting a thin standard of bodily attractiveness for women. *Sex Roles*, 14, 519-532. doi: 10.1007/BF00287452
- Spence, J. C., McGannon, K. R., & Poon, P. (2005). The effects of exercise on global self-esteem: A quantitative review. *Journal of Sport & Exercise Psychology*, 27, 311–334.
- Stein, P. K., & Boutcher, S. H. (1992). The effect of participation in an exercise training program on cardiovascular reactivity in sedentary middle-aged males. *International Journal of Psychophysiology*, 13, 215-223. doi: 10.1016/0167-8760(92)90071-1
- Stice, E., Killen, J. D., Hayward, C., & Taylor, B. (1998). Age onset for binge eating and purging during late adolescent: A 4-year survival analysis. *Journal of Abnormal Psychology*, 107, 671-675. doi: 10.1037/0021-843X.107.4.671
- Stice, E., & Shaw, H. E. (1994). Adverse effects of the media portrayed thin-ideal on women and linkages to bulimic symptomatology [Abstract]. *Journal of Social & Clinical Psychology*, 13, 288-308. doi: 10.1521/jscp.1994.13.3.288
- Strahan, R., & Gerbasi, K. C. (1972). Short, homogeneous versions of the Marlow-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, 28(2), 191-193. doi: 10.1002/1097-4679(197204)28:2<191::AID-JCLP2270280220>3.0.CO;2-G
- Strelan, P., & Hargreaves, D. (2005). Reasons for exercise and body esteem: Men's responses to self-objectification. *Sex Roles*, 53, 495-503. doi: 10.1007/s11199-005-7137-5
- Strelan, P., Mehaffey, S. J., & Tiggemann, M. (2003). Brief report: Self-objectification and esteem in young women: The mediating role of reasons for exercise. *Sex Roles*, 48, 89-95. doi: 10.1023/A:1022300930307

- Tabachnick, B. G., & Fidell, L. S. (2012). *Using Multivariate Statistics* (6th Ed). Boston, MA: Pearson.
- Thøgersen-Ntoumani, C., Ntoumanis, N., Cumming, J., Bartholomew, K. J., & Pearce, G. (2011). Can self-esteem protect against the deleterious consequences of self-objectification for mood and body satisfaction in physically active female university students? *Journal of Sport and Exercise Psychology*, 33, 289-307. <http://journals.humankinetics.com/jsep>
- Thompson, J. K., Coovert, M. D., Richards, K. J., Johnson, S., & Cattarin, J. (1995). Development of body image, eating disturbance, and general psychological functioning in female adolescents: Covariance structure modeling and longitudinal investigation. *International Journal of Eating Disorders*, 18, 221-236. doi: 10.1002/1098-108X(199511)18:3<221::AID-EAT2260180304>3.0.CO;2-D
- Thompson, E. R., & Phua, F. T. T. (2005). Reliability among senior managers of the Marlowe–Crowne Short-Form Social Desirability Scale. *Journal of Business and Psychology*, 19(4) doi: 10.1007/s10869-005-4524-4
- Tiggemann, M., & Boundy, M. (2008). Effect of environment and appearance compliment on college women's self-objectification, mood, body shame, and cognitive performance. *Psychology of Women Quarterly*, 32(4), 399-405. doi: 10.1111/j.1471-6402.2008.00453.x
- Tiggemann, M., & Kurig, J. K. (2004). The role of body objectification in disordered eating and depressed mood. *British Journal of Clinical Psychology*, 43, 299-311. doi: 10.1348/0144665031752925
- Tiggemann, M., & Lynch, J. (2001). Body image across the life span in adult women: The role of self-objectification. *Developmental Psychology*, 37, 243-253. doi: 10.1037/0012-1649.37.2.243
- Tiggemann, M., & McGill, B. (2004). The role of social comparison in the effect of magazine advertisements on women's mood and body dissatisfaction. *Journal of Social and Clinical Psychology*, 23, 23-44. doi: 10.1521/jscp.23.1.23.26991
- Tiggemann, M., & Williamson, S. (2000). The effect of exercise on body satisfaction and self-esteem as a function of gender and age. *Sex Roles*, 43, 119-127. doi: 10.1023/A:1007095830095
- Turner, J. E. (1998). *An investigation of shame reactions, motivation, and achievement in a difficult college course* (Doctoral dissertation). Dissertation Abstracts International Section A: Humanities and Social Sciences. (59, 6-A, 1911)

- Turner, J. E. (2014). Researching state shame with the Experiential Shame Scale. *The Journal of Psychology: Interdisciplinary and Applied*, 148(5), 577-601. doi: 10.1080/00223980.2013.818927
- Tylka, T. L., & Augustus-Horvath, C. L. (2011). Fighting self-objectification in prevention and intervention contexts. In R. M. Calogero, S. Tantleff-Dunn, & J. K. Thompson (Eds.), *Self-objectification in women: Causes, consequences, and counteractions* (pp. 187-214). Washington, DC: American Psychological Association.
- U.S. Department of Health and Human Services. (2007). Prevalence of regular physical activity among adults - United States, 2001 and 2005. *Morbidity & Mortality Weekly Report*, 56, 1209-1212.
- Vandenbosch, L., & Eggermont, S. (2014). The three-step process of self-objectification: Potential implications for adolescents' body consciousness during sexual activity. *Body Image*, 11(1), 77-80. doi: 10.1016/j.bodyim.2013.10.005
- Wagner Oehlhof, M. E., Musher-Eizenman, D. R., Neufeld, J. M., & Hauser, J. C. (2009). Self-objectification and ideal body shape for men and women. *Body Image*, 6, 308-310. doi: 10.1016/j.bodyim.2009.05.002
- World Health Organization. (2003). Global strategy on diet, physical activity and health. Retrieved May 12, 2011, from <http://www.who.int/dietphysicalactivity/media/en/gsf Obesity.pdf>.

BIOGRAPHICAL SKETCH

Urska Dobersek was born November 14th 1982 in Maribor, Slovenia. Urska graduated from McNeese State University in 2006 with her Bachelor of Arts degree in Psychology. She was a varsity tennis player and earned many prestigious honors, including Southland Conference Academic Honor Recognition Award and Coach's Award among many others. In 2009, Urska earned her Master of Arts degree in General/Experimental Psychology from McNeese State University. She worked as a graduate assistant for McNeese Women's tennis team. While pursuing her doctoral degree at the Florida State University in Educational Psychology with specialization in Sport Psychology, Urska was involved in many academic venues. She was nominated for an Outstanding Teaching Assistant Award multiple times, but was ineligible for an award due to serving as a Program for Instructional Excellence Associate for the Educational Psychology and Learning Systems department assisting graduate teaching instructors. In addition to teaching, Urska was a leader in multiple organizations at the university and at the national level, including Association for Applied Sport Psychology. She also gained experiences working with varsity and junior tennis players in Tallahassee community and Panama City as a sport psychology consultant. She has published several articles in peer-reviewed journals on various topics and wrote a couple of chapters on body image and self-objectification as well as given numerous scholarly presentations at regional and national level conferences. Urska will continue her professional career as an Assistant Professor at the University of Indianapolis starting in August 2014.