OBJECTIFICATION THEORY: EXAMINING THE RELATION BETWEEN SELF-OBJECTIFICATION AND FLOW FOR COLLEGE-AGED WOMEN ATHLETES

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OBJECTIFICATION THEORY: EXAMINING THE RELATION BETWEEN
SELF-OBJECTIFICATION AND FLOW
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Dissertation

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ABSTRACT

This study examined the theoretical relation of self-objectification and flow. Objectification theory (Fredrickson & Roberts, 1997) posits that the experience of self-objectification is related to less experiences of flow, a peak motivational state. One-hundred forty-three women student athletes participating in fourteen sports, from two universities participated in the study. Sport type with relation to appearance focus rating (Parsons & Betz, 2001) was examined as a possible risk factor for increased experience of self-objectification and decreased experience of flow. A focus of this study was accurate assessment of the self-objectification and flow variables. Self-objectification was assessed using two measures the Objective Body Consciousness Surveillance subscale (McKinley & Hyde, 1996) and the Self-Objectification Questionnaire (Noll & Fredrickson, 1998). A multidimensional scale, the Dispositional Flow Scale (DFS-2; Jackson & Eklund, 2002) was used to tap the nine individual dimensions of flow and a global flow dimension. Appearance focus rating of sport type was tested as a moderator in the relation between self-objectification and flow. Trait anxiety measured by the STAI (Spielberger, 1983) was explored as a covariate in the relation between self-objectification and flow. Support was found for the hypothesized relation between self-objectification and flow. The hypothesis was tested by a series of Pearson Product Moment correlations. Self-objectification as measured by OBCS Surveillance subscale related negatively and significantly to all but two of the DFS-2 scores. The pattern of results related to the examination of the SOQ and flow reflected the predicted negative relation, but only one correlation was significant. Correlations between trait anxiety and both self-objectification and flow were significant. When anxiety was controlled, many of the previously significant relations between flow and self-objectification were reduced to non-significance. The appearance focus sport type rating was not a significant predictor. Increased appearance focus of a sport did not relate positively to increased self-objectification or to decreased experience of flow. The exploratory examination of the relation between the internalization of beauty standards as measured by the SATAQ (Heinberg, Thompson, & Stormer, 1995) and both measures of self-objectification were supported. The importance of this preliminary and focused examination of self-objectification is discussed.
DEDICATION

This dissertation is dedicated to my mother, Lillian Surman Highwood, who taught me by her example, that learning is a life-long process and who lovingly supported me in my pursuit of higher education.

Lillian Surman Highwood

1920 – 2006
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CHAPTER I

STATEMENT OF THE PROBLEM

The study of women’s mental health and well-being is relevant and essential for counseling psychologists. Gilbert’s (1992) hallmark chapter in the second edition of the *Handbook of Counseling Psychology* simultaneously broadened the lens by which gender and sex were viewed and sharpened the focus by calling for the inclusion of women’s mental health issues to the mainstream of the discipline. In her chapter “Sex Matters” (1997), Fassinger observed that sex is an organizing principle of experience particularly critical in a society that imbues greater value to one sex (male) over another (female). Feminist theorists suggest these gendered differences in cultural experience may affect well-being and be a contributing factor to the manifestation of psychological distress (Bordo, 1995; Kaschak, 1992). Therefore, research that enhances the understanding of women’s experience in our culture and how that experience may contribute to negative mental health outcomes is a valuable endeavor.

Research has shown that the distribution of certain mental health diagnoses is skewed. Depression, eating disorders, and anxiety disorders have been shown to be diagnosed more frequently in women than in men. Rates of unipolar depression in women have been documented at approximately two to three times that of men (e.g., Kessler, et al., 1994; Klerman & Weissman, 1989; Nolen-Hoeksema, 1987; Wetzel,
Women have been shown to experience all of the anxiety disorders with the exception of social phobia at a two-fold rate compared to men (e.g., Kessler et al., 1994). Additionally women have been found to be at higher risk of adverse outcomes related to the aftermath of posttraumatic stress disorder than men (Holbrook, Hoyt, Stein, & Sieber, 2002). Lifetime prevalence rates of eating disorders reflect significantly higher incidences for girls and women. A recent European study found that adolescent girls were three times more likely than their male peers to meet the criteria for an eating disorder (Kjelsas, Bjornstorm, & Gotestam, 2004). In the United States, it is estimated that the prevalence rates of eating disordered behaviors in women and girls exceed their male counterparts by a 5- to 10-fold differential (National Eating Disorders Association, 2002).

Theorists and researchers have been active in seeking possible explanations for the differences in the prevalence of some psychological disorders between women and men. Gilbert’s (1992) review of gender and counseling psychology implicated cultural norms and beliefs about appearance to be related to chronic stress, damage to self-concept, depression, and eating disordered behaviors. Theorists have proposed that women are aware of cultural ideals related to appearance at an early age and learn to assume the observer’s vantage with themselves (Cash, 1990; Fredrickson & Roberts, 1997; Kaschak, 1992; Noll & Fredrickson, 1998; Wolf, 1991).

Objectification Theory

The search to understand the differences in observed pathology for women in Western cultures has prompted some theorists to examine closely the experience of “being a female” in a culture that objectifies women. Objectification theory (Fredrickson & Roberts, 1997) proposes that sexual objectification “is the experience of being treated
as a body (or collection of body parts) valued predominantly for its use to (or consumption by) others” (p. 174). The authors theorized that sexual objectification is associated with mental health risks for girls and women.

Fredrickson and Roberts (1997) developed a model that delineates the processes and projected outcomes that are associated with objectification (see Figure 1). These authors proposed that a key operational feature of cultural sexual objectification is the process of self-objectification wherein women may adopt the observer’s perspective and see themselves as an object for visual consumption (see Figure 1, Path A). The self-objectification process involves pervasive self-monitoring, leading to increased feelings of shame and anxiety, less frequent “flow” or peak motivational states and increased risk of anxiety, mood disorders, and disordered eating (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; McKinley & Hyde, 1996; Noll & Fredrickson, 1998). Further, it is posited that self-objectification and chronic appearance vigilance associated with self-objectification may compromise the individual’s capacity for happiness, self-fulfillment, and freedom (Roberts, 2002).

Empirical Research on Objectification Theory

Research has provided some support for the postulates of objectification theory. Early research focused primarily on disordered eating behaviors and body shame (Fredrickson et al., 1998; Noll & Fredrickson, 1998). Recently, efforts have begun to explore other tenets of the theory focusing on the psychological consequences of the objectification process including anxiety (Gapinski, Brownell, & La France, 2003), depression (Tiggemann & Kuring, 2004), decreased peak motivational states or flow (Greenleaf, 2001; Tiggemann & Slater, 2001), and decreased awareness of bodily states
(Muehlenkamp & Saris-Baglama, 2002). Additionally, researchers have focused attention on individual difference and demographic variables (Brownlow, 1998; Hebl, King, & Lin, 2004; Hill, 2003) to further refine the understanding and application of objectification theory.

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**Figure 1** Antecedents and consequences of self-objectification
(as adapted from: Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998)
Overall, empirical studies have shown support for a basic tenet of objectification theory, the proposed relation between cultural sexual objectification and self-objectification (see Figure 1, Path A). Studies have begun to investigate the degree to which the process of self-objectification for women generalizes to women of varying ages, ethnicity, and sexual orientation. In a study by Hill (2003), cultural sexual objectification was found to be related to self-objectification for women of diverse sexual orientation and age groups. The results of studies that have examined ethnicity as a variable, however, have been mixed. In a qualitative study, Brownlow (1998) found that frequency of objectifying experiences and level of self-objectification contributed to body image disturbances differentially based on SES, race and level of acculturation.

Preliminary support has been found to extend objectification theory to adolescents (Harrison & Fredrickson, 2003; Slater & Tiggemann, 2002). Harrison and Fredrickson (2003) explored the effects of sports magazine reading on adolescents and their data supported the positive relation between self-objectification and mental health risks of body shame, disordered eating, and depression for adolescent-aged women. Likewise, a study that explored the effect of classical ballet training for adolescent women, found that self-objectification, not ballet training, was a predictor of body shame and disordered eating (Slater & Tiggemann, 2002).

A key postulate of self-objectification theory that has been explored minimally to date is the theorized reduction of peak motivational states, particularly flow. Flow is a peak motivational state described by Csikszentmihalyi and Rathunde (1993) as an intrinsically rewarding experience that includes clear goals, a balance of challenge and skill, a focus of action and awareness, unfettered concentration, a sense of control, a loss
of self-consciousness, a sense of time altered, and that becomes autotelic (i.e., its own
reward). Motivation and goal-directed activities have been theorized as important to
personal well-being (see Lent, 2004) and quality of life (Deci & Ryan, 2000).
Consequently, it is suggested that limiting flow experiences may reduce the quality of an
individual’s life (Fredrickson & Roberts, 1998).

Flow researchers have found that the state of flow can be promoted as well as
inhibited (Jackson & Roberts, 1992; Stein, Kimiecik, Daniels, & Jackson, 1995). Fredrickson and Roberts (1998) theorized that the experience of cultural objectification
of the female body can interrupt or prevent peak motivational states (i.e., flow). These
theorists suggested that the primary form of interruption occurs when observers focus and
draw attention to the appearance or functions of a woman’s body and thereby cause a
disruption of her activity. This redirection of attention creates a disconnect in the focus
and absorption essential for a flow experience. A second obstacle for flow occurs during
the self-objectification process, when the woman assumes the observer’s perspective (see
Figure 1) resulting in heightened self-consciousness (Fredrickson & Roberts, 1998). Self-
consciousness has been identified as incongruous with the state of flow
(Csikszentmihalyi & Rathunde, 1993; Jackson, 1995; Jackson, Thomas, Marsh, &
Smethurst, 2001).

The scant studies that have examined self-objectification and flow show promise.
For example, results have shown that self-objectification led to self-surveillance, which
in turn was related negatively to flow for a group of former dancers (Tiggemann &
Kuring, 2004). Greenleaf’s (2001) study that employed structural equation modeling
(SEM), however, reported equivocal results. Congruent with her hypothesis, she found a
negative path from self-objectification to flow suggesting that women who self-objectify tend to experience fewer flow experiences, but contrary to her prediction, there was a positive relationship between flow and disordered eating (Greenleaf, 2001). These initial efforts underscore the need for additional and focused research on the theorized effects of self-objectification on the experience of flow.

*Female Collegiate Athletes, Flow, and Self-Objectification*

Women’s competitive sports at the university level present an optimal setting to examine self-objectification and flow. First, much of the most recent flow research has focused on athletes (see Jackson & Csikszentmihalyi, 1999). Indeed, flow researchers and theorists Jackson and Csikszentmihalyi (1999) offered that “sport presents a special opportunity for flow to occur (p. 6).” Several of the fundamental dimensions of flow described above including challenge-skills balance, merging of action and awareness, clear goals, unambiguous feedback, concentration on task, sense of control, and autotelic experience (Jackson & Csikszentmihalyi, 1999) are present in sports activities. Thus, a focus on college-aged women offers a prime opportunity to extend the extant literature on flow by examining self-objectification as a variable that may impact a female athlete’s experience of flow.

In addition, theoretical and empirical exploration of female athletes’ experiences has provided a mixed picture that may be clarified by incorporating constructs of gender role, sport type, and self-objectification in the study of women’s sports. Athletic participation has been suggested by some as promoting well-being for athletes in general and as providing a venue for the development of personal empowerment for women athletes (Blinde, Taub, & Han, 2001). Further, Gill (1994) suggested that sport and
exercise may enhance physical and psychological well-being and that it may facilitate higher levels of self-esteem and physical competence for women. Some empirical support for this postulate was reflected in the results of a small-scale qualitative study that found bodily competence, perceptions of a competent self, and a proactive approach to life as the three main outcomes of sport participation for the women who responded to the survey (Blinde, Taub, & Han, 1993).

Other studies, however, have identified risk factors for women athletes. A study of adolescent athletes found that gender role related to levels of perceived athletic competence and global self-worth, specifically, those individuals who scored higher on an assessment of femininity reported lower levels of perceived athletic competence and global self-worth (Bowker, Gadbois, & Cornock, 2003). There is also support in the literature for an association between participation in gender-typed sports or sports that focus on appearance and leanness, and body shame (Parsons & Betz, 2001) or eating problems (Smolak, Murnen, & Ruble, 2000). Exploring self-objectification and flow among women athletes in varied sport types, then, may offer an opportunity to clarify and to extend our understanding of women athletes’ experiences and outcomes.

Further, recent refinement of eating disorder research has provided clarity regarding the relative prevalence of eating disorders for athletes and has helped to identify risk factors for the development of eating disorders and disordered eating behaviors for this group. A meta-analysis that examined data from 34 studies found elite athletes (i.e., national, international, or professional competitors) and those who participated in sports that emphasized leanness to be at the greatest level of risk for eating disorders (Smolak, Murnen, & Ruble, 2000). Smolak and her colleagues’ study reflected
a consistent pattern of differential effects of sport participation for women based on sport type, specifically targeting lean sports as a risk factor. In their comprehensive examination of the literature of eating disorders in athletes, Byrne and McLean (2001) suggested that the high level of pressure to conform to an ideal body shape is a key risk factor for sports participants, especially for those participating in lean sports.

Indeed, participation in appearance-focused, lean sports (e.g., ballet dance, aerobics instruction, and cheerleading) has emerged as a predictor variable for body shame (Parsons & Betz, 2001), body dissatisfaction (Reinking & Alexander, 2005); higher drive for thinness (Engel, et al., 2003), and eating disorders and disordered eating behaviors (Black, Larkin, Coster, Leverenz, & Abood, 2003; Reinking & Alexander, 2005; Smolak, Murnen, & Ruble, 1999). The risk factors associated with sports that have a focus on appearance and leanness also have been extended to relate to intrinsic motivation. In a study that compared former dancers and non-dancers, support was found for a link between self-objectification and body shame and appearance anxiety for both groups, but decreased flow was noted as well for the former dancers (Tiggemann & Slater, 2001). The results of this preliminary study that examined self-objectification and flow support that sport type may be related to flow, a peak motivational state. In sum, exploration of the relation between level of self-objectification and the experience of flow in elite Division I women athletes, with attention to sport type as a grouping variable, presents an opportunity to extend our understanding of the relation of self-objectification to the peak motivational state of flow.
The Current Research

The present study is designed to examine the theorized link between self-objectification and flow. Few studies to date have included flow as a subject of focus. Thus, this study represents a concerted effort to refine the empirical examination of flow and objectification theory. Sport provides a conceptual framework that has been found to be conducive to the study of flow. Additionally, considering the data that suggest appearance-focused, lean sports and elite competition level to be risk factors for the collegiate athlete, there is sound rationale for a study that focuses on a range of Division I, collegiate women athletes to examine flow through the lens of objectification theory. Therefore, the purpose of the present study is to explore the relation between self-objectification and the experience of flow and, secondly to examine whether choice of sport is related to level of self-objectification and subsequently to frequency and intensity of flow experiences.
CHAPTER II
REVIEW OF THE LITERATURE

This study examines a tenet of objectification theory, the relation between self-objectification and flow. Specifically, it focuses on to what extent the experience of cultural objectification and subsequent self-objectification interrupts or derails the experience of flow, a peak motivational state, in a group of Division I collegiate women athletes. The subsequent literature summarizes and critiques selected studies that are relevant to objectification theory, flow, and women’s athletics.

This review is organized in four main sections. The first section provides a summary of objectification theory, integrating the relevant research germane to the present study. The second section provides a brief historical overview of flow with attention to measurement issues and a presentation of the rationale for including female athletes as the population of interest. The third section focuses on the experience of women athletes and how athletic participation may create a context conducive to heightened body consciousness and disordered eating behaviors for some women athletes. The last section integrates these elements and offers a rationale for the current study.

Objectification Theory

Objectification theory is grounded in feminist theory and incorporates the premise that the experience of cultural sexual objectification contributes to specific health risks.
for women (Fredrickson & Roberts, 1997). Sexual objectification is a multifaceted form of gender oppression that often includes an evaluative or consumptive focus on the physical features of girls and women (see Berger, 1972). Kaschak (1992) stated that women are always evaluated for their appearance and physical attributes, primarily by men or within a masculinist context.

Numerous theorists from the psychological and sociological disciplines have theorized that women in western cultures are sexually objectified (e.g., Bordo, 1995; Freedman, 1990; Franzoi, 1995) and that the experience of objectification has negative consequences for women (Henley, 1986; Kaschak, 1992; Roberts, 2002; Spitzack, 1990). Although, sexual objectification does not occur exclusively to women, Fredrickson and Roberts (1997) posited that the effects of sexual objectification are heightened for women and are pervasive and harmful.

The process of sexual objectification is a cornerstone of objectification theory. Roberts (2002) sequenced five steps of sexual objectification adapted from Henley’s (1977) discussion of sexual privilege and power. These five steps encompass the range of objectifying experiences and reflect a progression from least to greatest level of invasiveness. In Roberts’ (2002) discussion of sexual objectification she offered the following steps or levels:

1. Environmental messages that convey the feminine ideal (e.g., gender socialization processes, media, and advertising).
2. Non-verbal messages such as gaze, leering, and ogling,
3. Verbal communication including cat-calls, unsolicited and evaluative commentary about appearance,
4. Physical gestures or harassment including unwanted touching,

5. Rape is the most extreme form of sexual objectification.

In particular, Fredrickson and Roberts (1997) depicted gaze as a sexually objectifying form of visual evaluation that is ubiquitous in this culture. Gaze is stated to occur in interpersonal encounters wherein women are more likely to be the target of evaluative gaze (Henley, 1977). Media replicate the gendered skew observed in actual encounters, notably with portrayals of women as the object of sexual gaze by men more often than portrayals of women directing sexual gaze at men (Berger, 1972). Finally, objectification occurs in the media wherein women are depicted in an overtly sexualized manner or portrayed with an emphasis on body parts or as objects rather than presenting the person as an integrated whole (Bartky, 1990; Berger, 1972; Kilbourne, 1999).

Kaschak (1992) used the term “divided by the sexist gaze” (p. 113) to characterize the objectifying phenomenon and heightened focus on to body parts that occurs to women by the sexually objectifying gaze.

**Self-Objectification**

Self-objectification is defined as a process or state in which women who experience objectification subsequently adopt the observer’s perspective of themselves, that is, “to treat *themselves* as objects to be looked and evaluated” (Fredrickson & Roberts, 1997, p 177). Fredrickson and Roberts (1997) stated that self-objectification is marked by self-surveillance, habitual self-monitoring, and increased concern with appearance (see Fig. 1). They suggested that taking the observer’s vantage with oneself becomes an anticipatory strategy for women to determine how one will be perceived and subsequently treated by others. Finally, the theorists posited that there are individual
differences in the degree to which girls and women self-objectify, both in terms of relatively stable trait-like differences and environmentally-cued state effects of self-objectification.

In a related program of research, McKinley and Hyde (1996) developed the Objectified Body Consciousness Scale (OBC). These researchers theorized that women become observers of themselves in response to the press to meet cultural standards, a process that parallels self-objectification in many respects. They developed and validated a measure that taps surveillance, body shame, and appearance control beliefs, three dimensions theorized to represent the physical and cognitive experience of the body as an object. Surveillance and body shame have been identified as elemental features in objectification theory (see Fig. 1). A high score on the OBC Surveillance Scale reflects that the individual would self-monitor frequently and focus on her appearance rather than on her sensation. A high score on the Body Shame Scale taps a woman’s beliefs that she is a bad person if she does not meet cultural appearance ideals. The Control Beliefs Scale measures the extent to which a woman believes that she can control and change the appearance of her body. Additionally, surveillance and body shame scores were found to be related to risk of eating disorders. The results of their validation study (McKinley & Hyde, 1996) provided strong support for the dimensions of the OBC. This scale, which has been found to have acceptable construct validity and reliability for young and middle-aged women, has been used extensively in objectification theory research.

*Psychological Consequences of Self-Objectification*

Theorists suggest that habitual self-assessment and constant self-monitoring associated with self-objectification results in feelings of physical imperfection and
insecurity (Bordo, 1995), a sense of powerlessness (Kaschak, 1992; Roberts, 2002); and a pervasive experience of shame (Bartky, 1988). Objectification theory postulates that habitual self-monitoring results in the disruption of conscious attention and contributes to a specific set of psychological consequences. These subjective experiences are theorized to include negative emotions of anxiety and shame, diminished peak motivational or flow states, and decreased awareness of internal bodily states (Fredrickson & Roberts, 1997).

In addition to these psychological risks, objectification theory posits other more specific mental health risks for women. Theorists have identified disordered eating, depression, and sexual dysfunction as negative outcomes associated with cultural sexual objectification (Fredrickson & Roberts, 1997). For example, objectification theory presents an explanatory model that may increase understanding of and explain the observed gender differences in the prevalence of depressive symptoms. Specifically, Fredrickson and Roberts (1997) reflected that habitual self-focus, shame, and anxiety, lead to worry, rumination, and increased depression. These authors also suggested that pervasive cultural ideals related to body image and subsequent self-scrutiny and concern with appearance constitute contextual risk factors and contribute to body shame and the development of eating disorders.

Objectification Theory Research

The initial empirical study of Objectification Theory tested the effects of self-objectification on body shame, restrained eating, and math performance for a group of undergraduate participants (Fredrickson, et al., 1998). Additionally, gender differences in the emotional and behavioral consequences of self-objectification were explored.
The two-part experimental study featured a cover story about consumer opinions and included a manipulation of state self-objectification by having the participants wear either a sweater or a bathing suit while they responded to measures that tapped trait self-objectification, body shame and dietary restraint. In part two of the study, dependent variables of math performance and restrained eating, as measured by amount of cookies eaten, were included.

Overall, results provided support for the constructs of trait and state self-objectification and further, for the premise that state self-objectification could be primed and manipulated. Data also supported the proposed link between self-objectification and body shame and the predicted link between body shame and restrained eating for the women in the study. Results did not support the hypothesis that body shame served as a mediator in the relation between self-objectification and restrained eating. Decreased math performance for some women was observed, however, with the women in the swimsuit condition (high objectification) performing significantly worse than the women in the sweater condition (low objectification).

Although the results of this preliminary study offered a sound first step in the research on Objectification Theory, some of the design choices may have contributed to inconclusive results and unsupported hypotheses related to the role of body shame as a mediator variable. The most prominent deficit in this study may be the manner in which restrained eating was operationalized. Using a taste test ruse, offering only one kind of food, and not considering level of hunger may have produced inadequate measurement of restrained eating and in turn a lack of evidence to support the link between self-objectification and restrained eating.
Empirical support was found for the theorized mediational model linking self-objectification, body shame, and disordered eating in a subsequent study of Objectification Theory (Noll & Fredrickson, 1998). Researchers tested hypotheses that body shame partially mediated the relationship between self-objectification and disordered eating behaviors with two samples of undergraduate participants. Additionally, based on anticipated body shame, it was hypothesized that there may be an additional direct path between self-objectification and disordered eating. The design of this study was correlational and the constructs of eating disordered behavior were measured by existing self-report assessments. The Self-Objectification Questionnaire (SOQ; Noll & Fredrickson, 1998) was used to assess the self-objectification construct.

Results from the study reflected positive correlations between self-objectification and body shame, bulimic symptoms, and anorexic symptoms, as predicted. The role of body shame in mediating the relation between self-objectification and disordered eating was also demonstrated. Thirty-five percent of the variance in bulimic symptoms and 27% of the variance in anorexic symptoms were accounted for in the mediational model, and self-objectification explained a small, but significant amount of variance in bulimic symptoms above and beyond the mediational relation. The results from the second sample replicated the findings of the first sample and additionally provided data from a dietary restraint measure. In similar fashion, body shame mediated the relation from self-objectification and dietary restraint and explained 47% of dietary restraint symptoms for the participants in the second sample.

Replications of the Fredrickson et al. (1998) experimental study also have provided support for the conceptualization of self-objectification as a trait-like individual
difference variable and as a state-like characteristic that is subject to situational
influences and manipulation (Gapinski, Brownell, & LaFrance, 2003; Hebl, King, & Lin,
2004). Gapinski, Brownell, and LaFrance extended the design of the original research to
affect and cognitive outcomes and found that for the participants in their study, level of
trait self-objectification measured by the SOQ (Noll & Fredrickson, 1998) and state self-
objectification assessed with the Twenty Statements Test (TST; Bugental & Zelen, 1950)
and modified by Fredrickson et al. (1998), were associated with increased negative
feelings, decreased intrinsic motivation, lower self-efficacy, and diminished cognitive
functioning as measured by multiple cognitive tests.

Hebl, King, and Lin (2004) sought to extend the results of Fredrickson et al.
(1998) across gender and ethnicity. These researchers noted that the swimsuit conditions
were not equivalent for women and men in the original study and chose to use a form-
fitting Speedo suit for the men’s swimsuit condition, as they stated this type of apparel
more closely approximated the swimsuit available for women participants. Their
participant group reflected considerably greater diversity than the original study.

Overall, they found support for a main effect of state self-objectification in the
swimsuit condition; that is, both women and men participants who wore a swimsuit
reported increased levels of state self-objectification as measured by the TST (Bugental
& Zelen, 1950) using the same modifications as Fredrickson et al. (1998). Increased
levels of self-objectification also were related to higher levels of body shame, lower
levels self-esteem, and lower math performance for all participants across ethnicity and
gender groups. For all participants, state self-objectification was found to mediate the
relation between condition and the self-esteem, body shame, and math performance.
Across gender, main effects were found for body shame and self-esteem, with women experiencing significantly greater body shame and lower self-esteem than did men. Additionally, there was a marginal main effect for trait self-objectification, assessed by a 10-item version of the SOQ (Noll & Fredrickson, 1998) such that women tended to have higher levels of trait self-objectification than men. A main effect for ethnicity was found indicating the Hispanic participants reported the highest levels of trait self-objectification and African-American individuals reported the lowest. These effects were qualified by a significant interaction between gender and ethnicity such that women reported higher levels of self-objectification across all ethnicities except Asian-American participants. Asian-American men reported higher levels of trait self-objectification than did Asian-American women.

Although these results do extend research on self-objectification to individuals representing a broader-based ethnic group and support the hypothesis that men are subject to objectification, this study did not examine the implications of sexual objectification as it is experienced in vivo. Also, the results of the study showed that women experienced significantly higher levels of body shame and lower levels of self-esteem than did the men. Indeed, cultural sexual objectification has been described as a form of gender oppression that depersonalizes the woman and is theorized as a risk factor for psychological and physical health outcomes (Fredrickson & Roberts, 1997).

Objectification theory has emphasized understanding women’s and girls’ cultural experience and the outcomes of sexual objectification in Euro-Western society. To further explore and clarify gender differences in self-objectification, researchers designed a study that focused on gender differences in memory perspectives (Huebner &
The study was designed to analyze autobiographical memories reported by participants. It was hypothesized that in general, women would report more memories that were characterized by an observer’s perspective than would be reported by men. The research design included memories selected by the participants and specific situational cued memories of public, mixed sex, and unstructured situations.

Results of the study confirmed that women did, on average, report significantly more observer memories than were reported by men. Of the four public, unstructured, and mixed sex situations provided for participant rating, however, only “university party” showed significant gender differences. Women experienced significantly more observer memories and reported significantly more negative affect (i.e., shame, anxiety) than the men in the study. Researchers conducted post hoc tests to rule out any potential differences in the selection of memories that could confound the results of the general memory test, and regression was used to rule out the possibility that affect or observer imagery were influencing the results or serving as mediating variables (Huebner & Fredrickson, 1999). The results of this study provided some support for the predictions that women would report significantly more observer memories than would men and that certain situations may be inherently more objectifying than other situations and those situations may be associated with negative affect.

Much of the remaining research on the objectification model, to date has focused on eating disorders. Tiggemann and Slater (2001) enhanced the literature with a study designed to test the full objectification theory model as it applies to eating disorders. The data from two groups of college-aged women, 50 were former students of classical ballet and 51 were undergraduate students, were compared on self-objectification, self-
surveillance, body shame, appearance anxiety, flow, and eating disorders. As hypothesized the former dancers had significantly higher scores on the measures of self-objectification, self-surveillance, and eating disordered behaviors. Contrary to predictions, there were no significant differences between the groups on the outcome measures of body shame, appearance anxiety, flow, or awareness of internal states. Flow was negatively related to self-surveillance for the former dancers.

Two separate path analyses, one for each group, were performed to investigate the complete model. For the former dancers, self-objectification predicted self-surveillance which predicted body shame, appearance anxiety, and decreased flow as hypothesized. Body shame was the only one of these variables that predicted disordered eating, a finding that replicated previous findings that suggested a mediating role for body shame in the relation between self-objectification and disordered eating (Noll & Fredrickson, 1998). There was also a significant pathway between self-surveillance and disordered eating. For the non-dancers the model was similar, although there was not a direct pathway from self-surveillance to disordered eating and there was no significant relation of self-surveillance with the flow measure. Thus, for both groups, regardless of dance history, body shame mediated the relation from self-objectification to disordered eating.

A notable result from this study is the support for self-objectification and self-surveillance as related but separate variables. Tiggemann and Slater (2001) suggested that self-objectification and self-surveillance assess a similar underlying construct, yet they were conceptually and empirically distinguished as evidenced by only a moderate inter-correlation ($r = .59$). Additionally, data supported distinct pathways for self-objectification and self-surveillance. Although the study was framed as a test of the full
model and measures were included tapping the theorized constructs, it is important to note that two variables resulted in non- or minimally significant results across the groups, flow and the awareness of internal bodily states. Both constructs displayed similar flaws. They were measured by very short scales (i.e., 4-5 items), with only moderate internal consistency (alpha = 0.64) for each measure in this sample, and thus, may reflect inadequate measurement.

A related study explored whether the tenets of objectification theory held for girls aged 12-16 years-old. Slater and Tiggemann (2002) designed a study that included 38 girls who currently studied classical ballet and 45 girls who were not involved in ballet dancing. The participants completed measures tapping self-objectification, body shame, appearance anxiety, and disordered eating. It was hypothesized that the dancers would score higher on self-objectification and the proposed consequences of body shame, appearance anxiety, and disordered eating. Additionally, the researchers sought to test their prediction that body shame and appearance anxiety mediated the relationship between self-objectification and disordered eating.

Contrary to the prediction, the self-objectification scores and self-monitoring scores between the groups were not significantly different. Likewise there were no significant differences in self-objectification, body shame, appearance anxiety, and disordered eating after the effects of body mass index (BMI) were controlled. The results of regression analysis found that body shame and appearance anxiety partially mediated the relations of self-objectification and self-monitoring with disordered eating.

Path analysis reflected significant paths from self-objectification to self-monitoring and to body shame and appearance anxiety. Self-monitoring was found to
predict body shame, which predicted disordered eating. No significant direct pathways were found from self-objectification or self-monitoring to disordered eating. These results were congruent with objectification theory and extended the objectification model to adolescent and teenaged girls. Interestingly, the results of this study reflected a lack of differences between the student dancers and non-dancers, in contrast to the significant results of the Tiggemann and Slater (2001) that compared former professional dancers with non-dancers. This divergence in results may reflect differences between the subjective experiences of being a professional ballet dancer and being a student dancer.

A recent published study tested the objectification model, and replicated relations between self-objectification, body shame, and eating disordered symptoms (Noll & Fredrickson, 1998; Tiggemann & Slater, 2001) and extended the literature by examining the association between internalization of sociocultural standards of beauty and level of self-objectification (Moradi, Dirks, & Matteson, 2005). In addition to the hypothesis that level of internalization of sociocultural standards of beauty would be positively related to level of self-objectification, it was posited that internalization of beauty standards would mediate the relation between cultural sexual objectification and body surveillance, body shame, and eating disorder symptomology.

The study included data from 221 undergraduate women who responded to measures tapping sexual objectification experiences (i.e., sexual objectification subscale daily sexist events; Swim, Cohen, & Hyers, 1998), internalization of sociocultural standards of beauty, body surveillance, body shame, eating disorder symptomology, and a covariate of calculated body mass index. Results of the study reflected significant positive relations between sexual objectification experiences and internalization of
sociocultural standards of beauty, body surveillance, body shame and eating disorder symptoms.

Subsequently, a proposed model was tested to examine the links between the predictor and criterion variables. Results of the analyses found support for several direct paths in the model. Sexual objectification experiences were related to body surveillance and internalization of sociocultural standards of beauty. A direct path was found from internalization of sociocultural beauty standards to body surveillance, body shame and eating disorder symptomology. Body surveillance was directly related to body shame and eating disorder symptomology and body shame was directly related to eating disorder symptomology.

Support for mediation effects was found. Internalization of sociocultural standards of beauty partially mediated the link of reported sexual objectification experiences to body surveillance and fully mediated the link of reported sexual objectification experiences to body shame and eating disorder symptoms. Body shame was found to partially mediate the path between body surveillance and eating disorder symptomology.

Post hoc tests found that body surveillance mediated the link of reported sexual objectification experiences to body shame and body shame partially mediated the path from internalization of sociocultural standards of beauty to eating disorder symptoms. In addition to the replication of the role of body shame in the objectification model, this study tested, and provided empirical support for the role of internalization of sociocultural standards of beauty as a mechanism in the objectification model.

In addition to the research that has explored objectification theory and body shame, appearance anxiety, and disordered eating, there is also empirical support for the
postulate that self-objectification has negative psychological consequences for women. In a carefully designed study that included 98 collegiate women, the relation of trait self-objectification (measured by the SOQ; Noll & Fredrickson, 1998 and the surveillance subscale of the OBCS; McKinley & Hyde, 1996) to shame, anxiety, depression, the Big Five personality factors, and body dissatisfaction was explored (Miner-Rubino, Twenge, & Fredrickson, 2002). Initial correlations supported the hypothesized associations between self-objectification and negative affect (i.e., depression and neuroticism) and body shame. As hypothesized and congruent with objectification theory, self-objectification was not significantly correlated with body dissatisfaction suggesting that they are separate constructs. As predicted, openness to experience, identified as intellect in the study, was significantly negatively correlated with self-objectification and contrary to prediction, agreeableness was significantly negatively correlated with self-objectification. The results of a hierarchical regression analysis using body dissatisfaction, extraversion, agreeableness, and self-objectification scores as predictors of negative affect revealed that self-objectification predicted negative affectivity above and beyond the other personality influences. Overall, the results of this study support the theorized relations between depression and negative affect and trait self-objectification.

Self-objectification and depressive symptoms were the foci in a study using structural equation modeling. Muehlenkamp and Saris-Baglama (2002) extended the body of research on objectification theory that tested the relation between self-objectification and depressive symptoms for a group of 396 women undergraduates. These researchers hypothesized that self-objectification, as measured by self-surveillance and body shame, contributed to depressive disorders among women. They also
hypothesized that the lack of internal awareness of bodily states was a potential mediator in the relations between self-objectification and disordered eating and self-objectification and depressive symptoms. Additionally, depression was conceptualized as a mediator between self-objectification and disordered eating.

Attention was given to the measurement of internal awareness of bodily states. The authors cited a lack of consensus of the conceptualization of the construct as a single or multifactored entity. They noted that studies that have used the private body consciousness subscale of the Body Consciousness Scale (Miller, Murphy, & Buss, 1981) had reflected low internal consistency scores and non-significant results (e.g., Tiggemann & Slater, 2001). In this study, thus, an 11-item scale titled “Alexithymia,” stated to measure difficulties identifying and describing emotions, was developed using exploratory factor analysis of items from three existing measures, the Toronto Alexithymia Scale (Bagby, Parker, & Taylor, 1994), the private body consciousness factor of the Body Consciousness Scale (Miller, Murphy, & Buss, 1981), and the Interoceptive Awareness Subscale on the EDI (Garner, Olmstead, & Polivy, 1983) and was stated to measure difficulties identifying and describing emotions. Its internal consistency was calculated at .87 for this study.

Data were analyzed using structural equation modeling and support was found for the hypothesized relation between self-objectification and disordered eating. There was evidence for a direct path from self-objectification to restrictive eating and from self-objectification to bulimic symptoms. These results replicated findings of Noll and Fredrickson (1998) and demonstrated further support of the theorized role of self-objectification in the development of disordered eating.
The analysis that examined the role of internal awareness in the model produced mixed results. Although support was not found for the postulated mediation effects of self-awareness on the relation between self-objectification and disordered eating, the relation between self-objectification and internal awareness was significant. Further, depressive symptoms were found to be a mediator in the relation between self-objectification and bulimia symptoms.

The measurement of constructs in the Muehlenkamp and Saris-Baglama (2002) study may have contributed to a lack of significant results in the exploration of internal awareness as a mediator. It would appear, and the authors conceded, that the focus of the assessment instrument was on emotional awareness rather than on physiological cues. Fredrickson and Roberts (1997) speak explicitly to “inattention to physiological cues” (pp. 185) and the relation of physical insensitivity to hunger to restrictions in eating and external body focus rather than internal body sensation.

In this research, support was found for the hypothesized relation between self-objectification and depressive symptoms. Significant results reflected both a direct path and the effects of mediation by internal awareness. Additionally, depressive symptoms were found to be a mediator in the relation between self-objectification and bulimia symptoms. These results extended the empirical examination of objectification theory and supported the postulate that self-objectification is related to depressive symptoms.

In a recent study that was designed as a full test of the objectification theory model, researchers included both women and men participants and identified depression as an outcome variable in addition to disordered eating (Tiggemann & Kuring, 2004). Participants completed measures of self-objectification, self-surveillance, body shame,
appearance anxiety, flow, awareness of internal bodily states, and disordered eating and depressive mood. Results were consistent with past studies, with women scoring significantly higher than men on measures of self-objectification, self-surveillance, on the proposed mediators of body shame and appearance anxiety, and the outcome variables of disordered eating. In contrast to prediction, the women participants scored significantly higher on the measure of awareness of internal states. Self-objectification accounted for the majority of the common variance between disordered eating and depressed mood.

The analyses performed to test the complete objectification model produced some differences in the patterns of results for the women participants and the men participants (Tiggemann & Kuring, 2004). For the women, self-objectification predicted self-surveillance, which led to body shame, appearance anxiety, and decreased flow. Body shame and appearance anxiety predicted both disordered eating and depressed mood for the women.

The results for the men were similar with the exception that flow, rather than body shame, predicted depressed mood. There was also a significant negative direct path between self-objectification and body shame for the men participants. The flow variable provided an additional link between self-surveillance and depressed mood that was not found for the women in the study. Body shame and appearance anxiety fully mediated the relation between the self-objectification variables and disordered eating and depressed mood replicating earlier results for disordered eating (i.e., Noll & Fredrickson, 1998; Tiggemann & Slater, 2001).

Tiggemann and Kuring (2004) provided additional empirical support for the relation between self-objectification and depression, thereby fortifying and extending the
literature on Objectification Theory. Additionally, their results offer greater understanding of gender differences in the self-objectification process. The patterns of results for the men and women were congruent with regard to the effects of body shame and appearance anxiety on disordered eating and depressed mood and the differential mediation of the body shame and appearance anxiety variables on the outcome variables. A salient difference in the path models is the role of self-objectification. For the men, the self-objectification variable was not significantly correlated with body shame, appearance anxiety, flow, disordered eating, or depressed mood. Surprisingly, for the men the observed relation between self-objectification and body shame, albeit non-significant, was in contrast to the prediction, that is, for men body shame increased with lower self-objectification. Self-surveillance, however, was found to have negative consequences for both the men and the women.

Some of the recent research on objectification theory has attended to specific aspects of the model. For example, gaze, specifically male gaze, is postulated to trigger the self-objectification process wherein a woman assumes the observer’s perspective as a strategy to cope with evaluative visual consumption (Fredrickson & Roberts, 1997). Gaze was the variable of interest in experimental study with women participants that tested the hypothesis that participants who anticipated male gaze would report greater levels body shame, physical anxiety, and intent to diet than participants anticipating a female gaze or no gaze (Calogero, 2004).

College-aged female participants in the study were randomly assigned to one of three conditions. One-third of the participants were told that they would be interacting with a male stranger, one-third of the participants were advised that they would meet with
a female stranger, and the members of the control group were not informed of any social interaction. Significant differences were found between the anticipated female gaze and the anticipated male gaze conditions, although there was no actual social contact. Participants who anticipated male gaze reported higher scores for body shame and social physique anxiety compared to the female gaze condition. The results extended the empirical literature by providing support for the negative effects of male gaze and further, that mere anticipation of gaze can produce increased levels of body shame, physical anxiety, and intent to diet.

The effects of gaze also were documented in a qualitative study of adolescent girls and their use of public swimming pools (James, 2000). Data were collected from adolescent girls aged 15-16 years of age in focus groups followed by semi-structured individual interviews with 16 of the participants. The purpose of the study was to gather data about what factors might affect the frequency or quality of their participation in swimming activities in public settings. The author stated that one of the strongest constraints was the potential embarrassment or presentation of self. All of the girls reported that they were conscious of critical gaze of others when they were at the pool. Further, there was reported a commonly held view of these participants that girls experienced greater distress and dissatisfaction over body presentation than did boys. Common themes reported by the girls included dissatisfaction with shape, size, and a feeling of being watched and talked about which for some led to comparison of self to others. Additionally, it was noted that the experience of gaze for the majority of these girls was negative and resulted in the development of coping strategies for the experienced discomfort, which for some of the girls was avoidance of public swimming.
(James, 2000). Indeed, 29% of the girls reported that they would use pools more frequently if the boys were not around. Although this was a small qualitative study, the results provided consistent support that cultural sexual objectification and the subsequent process of self-objectification occur early in the development of adolescent girls.

Cultural sexual objectification of women has been documented in media images (Duncan, 1990; Hardin, Lynn, & Waldsdorf, 2005, Kane & Greendorfer, 1994) and is posited to contribute to self-objectification (Fredrickson & Roberts, 1997). Researchers, thus, have examined specific factors that may contribute to or activate a state of self-objectification. Roberts and Gettman (2004) designed a study that tested the whether exposure to objectifying words could promote a state of self-objectification as evidenced by negative affect, appearance anxiety, and decrease in ratings of appeal for sexual scenarios.

Women and men undergraduate students participated in an experimental study in which they were assigned randomly to one of three conditions: self-objectification priming condition, body competence priming condition, and control condition (i.e., no prime). The participants were given a list of five scrambled words containing priming or control words, and given instructions to form a grammatically correct four-word sentence from the list. Following the sentence test the participants completed questionnaires tapping emotions of shame and disgust, appeal of sex, and appearance anxiety.

Results of the study revealed a significant interaction between gender and condition for the shame measure. Women participants’ shame ratings were significantly higher in the self-objectification condition than in the body competence condition whereas men’s reactions were equivalent across the conditions. A main effect for gender
was found for the anxiety measure, with women participants endorsing higher levels of anxiety across conditions than did the men participants. There was also a significant interaction reflecting higher anxiety scores for the women in the self-objectification condition than in the body competence condition, whereas no significant difference was observed for the men.

The effects of the prime on participants’ ratings of the appeal of sex scale revealed differences on the physical subscale of the appeal of sex scale. Overall, women reported less appeal for the physical aspects of sex and the scores of the women in the objectification prime condition were significantly lower than were those of women participants in the other two conditions. This study lends support for the salience of subtle priming of self-objectification, suggesting that the effects of self-objectification, appearance anxiety, negative emotions, and lowered appeal of the physical aspects of sex, can be activated by mere exposure to objectifying words (Roberts & Gettman, 2004).

Many theorists have implicated sexual objectification as an experience that shapes women’s experiences and is causal in negative health outcomes (Barky, 1990; Fredrickson & Roberts, 1997; Kaschak, 1992; Kilbourne, 1999; Wolf, 1991). A study by Hill (2003) sought to extend the understanding of the effects of age and sexual orientation on the relation between cultural objectification and subsequent self-objectification. Cultural objectification was measured, in part, by a multifaceted instrument created and piloted by the author that included items from several existing measures: Objectification Experiences Questionnaire (OEQ; Burnett, 1995), Sexual Victimization Measure (SVM; Belknap, Fischer, Cullen, 1999), Sexual Experiences Survey (SES; Koss & Oros, 1982, and the Sexual Experiences Questionnaire (SEQ; Fitzgerald et al., 1988). Additionally,
the Self-Objectification Questionnaire (SOQ; Noll & Fredrickson, 1998) and the Surveillance Scale of the OBC (McKinley & Hyde, 1996) were included in the assessment array.

In a sample that included participants of diverse sexual orientation, ranging in age from 18 to 79 years, cultural sexual objectification was found to be related to self-objectification in the entire sample. In a pattern inconsistent with hypotheses, age was found to be a moderator for White heterosexual women as the relation between cultural sexual objectification and self-objectification was stronger for women between the ages of 50 and 79 (Hill, 2003). Also contrary to prediction, women reported similar levels of self-objectification across sexual orientation. Results of this study provided strong empirical support for an aspect of objectification theory, the link between cultural sexual objectification and self-objectification, which has garnered little attention to date, to women of diverse sexual orientation across the lifespan.

Self-Objectification and Athletics

Athletics and fitness present an interesting context in which to explore Objectification Theory. From the perspective of Objectification Theory, all women are subjected to some degree of cultural sexual objectification, which, it is theorized, may result in self-objectification (Fredrickson & Roberts, 1997). At a core level, sport and exercise emphasize physicality and the body and offers a special opportunity to explore the influence of sport-related factors and the self-objectification process. In addition to participation in athletics, studies have explored the effects of consumption of sports media on self-objectification (Harrison & Fredrickson, 2003).
Greenleaf’s (2001) study of self-objectification tested the objectification theory model for two age groups of physically active women. College-aged and middle-aged physically active women responded to measures that tapped self-objectification (as measured by the body surveillance subscale of the OBCS; McKinley & Hyde, 1996), body shame, appearance anxiety, and a flow trait measure. Structural equation modeling was used to test and compare the fit of the two data sets (i.e., college aged participants and middle-aged/older participants) to the hypothesized model.

For the college-age women the fit of the model was adequate. Self-objectification was significantly and positively related to body shame and appearance anxiety and significantly negatively related to flow. Body shame, appearance anxiety, and flow were positively and significantly related to the disordered eating outcome measure. The indirect effects of self-objectification were supported as a significant path to disordered eating through body shame, appearance anxiety and flow was found. Congruent with other studies, self-objectification was positively related to body shame, appearance anxiety, and disordered eating (Fredrickson et al., 1998; McKinley, 1999; McKinley & Hyde, 1996; Noll & Fredrickson, 1998).

The fit to the model for the middle-aged and older women was poor. Self-objectification was positively and significantly related to appearance anxiety and disordered eating. Self-objectification was significantly and negatively related to flow. In contrast to the college-age model, only a direct path from body shame to disordered eating was significant.

Overall, the college-aged women endorsed significantly higher levels of self-objectification (i.e., self-surveillance), body shame, social physical anxiety, and
disordered eating than did the middle-aged and older women. In this study, self-objectification was a significant predictor of body shame for the college-age women, but not for the middle-age and older women. Ironically, self-objectification was negatively related to flow experiences as hypothesized for college students only, and contrary to hypothesis, flow was related to higher levels of disordered eating (Greenleaf, 2001).

The results of Greenleaf’s (2001) study should be interpreted with caution. First, there have been few studies that have explored the objectification theory model across the life span and additional research attending to age as a variable is needed to clarify the relation of age in the model. Second, the puzzling flow results may have been an artifact of measurement of the flow construct as the researcher chose to truncate the flow measure, selecting five of nine dimensions and using less than one-half of the total items from the instrument. This choice contradicts the recommendation of flow researchers to measure flow comprehensively and multidimensionally (Csikszentmihalyi & Rathunde, 1993). Finally, the researcher elected to use a flow measure that had been designed and normed for use with elite athletes in a study of “physically active” individuals for whom it may not have been appropriate.

The tenets of self-objectification also have been extended to the field of exercise. A study recruited 104 White female exercisers from a fitness center and explored the relation between self-objectification and reasons for exercising. Results found that participants’ level of self-objectification was related negatively to levels of body satisfaction, body esteem, and self-esteem (Strelan, Mehaffey, & Tiggemann, 2003). Self-objectification predicted reasons for exercise. A strong positive correlation was found between self-objectification and exercising for appearance. In contrast, there was a strong
negative correlation between self-objectification and exercising for health/fitness and a moderation correlation between self-objectification and exercising for enjoyment/mood reasons.

Additionally, the results of a hierarchical regression analysis confirmed the hypothesis that reasons for exercise mediated the relationship between self-objectification and body satisfaction, body esteem, and self-esteem. In other words, women who exercised for appearance-related reasons (e.g., weight control, body tone, and attractiveness) reported more body dissatisfaction and lower self-esteem. In contrast, women who endorsed health or body competence as reasons for exercise reported higher levels of body satisfaction and self-esteem. Researchers stated that these results served to extend empirically theorized psychological and behavioral consequences of self-objectification to the field of exercise.

The participants of this study self-selected to participate and comprised a “convenience sample.” The authors noted that scores from a participant group drawn from a fitness center environment, may have been skewed, due to the body-focused context (e.g., mirrored walls, posters, fitness attire), and that this may have increased the levels of state self-objectification. An additional consideration is the exclusive White ethnic composition of the sample. Both of these considerations may affect the generalizability of the results of this study.

The link between self-objectification and sport was examined from a novel perspective in a study that explored the relation of sports media exposure and watching sports with level of self-objectification for Black and White adolescent girls (Harrison & Fredrickson, 2003). The first part of this two-part study was correlational and explored
the relation between trait self-objectification, mental health risks as measured by depression, disordered eating, and body shame and two sports variables: magazine reading and participating in sports. Participants ranged in grade from 6th to 12th grade. Researchers used grade level to form three groups, youngest to oldest, for data analysis. Results showed that across ethnicity, self-objectification increased significantly with grade level. Regression analyses performed revealed that self-objectification explained an equivalent or greater amount of variance in the criterion variables of depression, body shame, and eating disordered symptomology than the variance explained by grade, racial group, and BMI combined (Harrison & Fredrickson, 2003).

Results from the sports variables reflected that lean sports participation was significantly and positively associated with trait self-objectification. Conversely, participation in non-lean sports was significantly and negatively correlated with trait self-objectification. Participation in non-lean sports was significantly associated with reading of sports magazines. An age effect was detected for the oldest group, 10-12th graders, for these students sports magazine reading was negatively correlated with both body shame and eating disorder symptomology suggesting a link between print media exposure to sports and greater body satisfaction and less disordered eating behaviors. Researchers questioned what this finding meant and chose to more carefully explore media types in the subsequent study, in particular, isolating sports that focused on leanness.

Study two was experimental and used a 2 x 3 full factorial design. The study explored the effects of three video conditions (women’s lean sports, women’s non-lean sports, and men’s sports) on state self-objectification, assessed using a procedure developed and validated by Fredrickson et al. (1998) incorporating a modified version of
TST (Bugental & Zelen, 1950) for White adolescents and adolescents of color. The video segments were carefully edited representations of actual sports contests. Randomized splices balanced individual and team sports, ethnicity of player, and known versus unknown athletes. Effects of trait self-objectification (as measured by the SOQ; Noll & Fredrickson, 1998) were held constant by covariation throughout the analyses. Consistent with the hypothesis, for White adolescents, lean sports viewing was associated with significantly greater state self-objectification than viewing non-lean sports or men’s sports. For adolescents of color, non-lean sports watching was associated with significantly higher levels of state self-objectification than either lean sports viewing or men’s sports viewing. The researchers interpreted these results as indicative of cultural differences in the ideal body type.

Results of this study extend the self-objectification model to adolescents. It was noted that the older adolescent girls had significantly higher levels of trait self-objectification. As in past studies with adult women, self-objectification was correlated with depression, body shame, and disordered eating behaviors. The results of the study also underscore the salience of sport type, that is, lean versus non-lean sports. An important finding in this research is the support found for the effects of exposure to sport and the importance of attending to gender and race in the study of self-objectification.

Conclusions from Objectification Research

Overall, there has been substantial support for the objectification theory model. Research has found support for the theorized effects of cultural sexual objectification (see Path A, Fig. 1), that is, reported experiences of sexual objectification have been shown to be positively related to higher levels of self-objectification (Hill, 2003; Moradi, Dirks, &
Matteson, 2005). Empirical support has been found for the relation between self-objectification and theorized psychological consequences (see Path B, Fig. 1) of shame (Fredrickson et al., 1998; Noll & Fredrickson, 1998), anxiety (Tiggemann & Kuring, 2004; Slater & Tiggemann, 2002), and decreased flow states (Greenleaf, 2001). Results have found significant support for the theorized path from self-objectification to negative psychological experiences to mental health risks (See Path C, Fig. 1) of disordered eating behaviors (Moradi, Dirks, & Matteson, 2005; Noll & Fredrickson, 1998; Tiggemann & Slater, 2001; and depressive symptoms (Muehlenkamp & Saris-Baglama, 2002; Tiggemann & Kuring, 2004).

The theorized relation between self-objectification and flow, however, has been tested minimally. The results of the few extant studies have been inconsistent and inconclusive. A common practice has been to adapt scales of existing measures to assess flow. Interestingly, flow researchers have recommended that flow be assessed using a multi-dimensional approach (Csikszentmihalyi & Rathunde, 1993; Jackson & Csikszentmihalyi, 1999) and abbreviating the scales may corrupt the measurement of the construct. Additionally, researchers typically have used assessment tools that were normed with athlete participants, whereas the published objectification theory studies have not included individuals who currently compete in sport.

The present study is designed to explore self-objectification and flow in a student-athlete participant group. The participants included in this study will be current competitors at a Division I college or university. To address earlier measurement problems, careful attention to construct measurement will result in the choice of assessment instruments that are psychometrically sound, appropriate to the population
and administered in full. The attention to careful measurement of flow is an important step in the examination of objectification theory and essential in furthering the understanding of the relation between self-objectification and flow.

Flow

Flow is defined as a peak motivational state that is subjective in nature and characterized by feelings of intense absorption in an endeavor (Csikszentmihalyi & Rathunde, 1993). Flow happens in the here-and-now. The depth of involvement is described as enjoyable and intrinsically rewarding. Csikszentmihalyi (1993) described flow as a state of consciousness that mirrors contentment. Flow has been theorized as a state that facilitates personal growth and has application in educational and clinical settings where facilitating intrinsic motivation is particularly beneficial.

Early studies of flow sought to discover whether flow was a universal human experience. The results of a broad cross-cultural survey study that included a diverse group of 255 men and 381 women ranging in age from 14 to 86 years, supported the hypothesis that flow is experienced and described in very similar terms for many people (Massimini, Csikszentmihalyi, & Delle Fave, 1988). The state of flow was associated with various work, leisure, and religious activities. Massimini and colleagues (1988) included participants from various cultures, ethnicities, and vocations. The study included northern Italian college students, residents of a traditional Alpine mountaineering community; Navajo students in Arizona, USA; a group of former drug addicts in Italy; and a small sample of nuns and religious lay people with blindness. The results of this survey study provided support that flow was experienced in a similar manner across the diverse sample included in the study (Massimini, Csikszentmihalyi, & Delle Fave, 1988).
Research also has documented the experience of flow in a wide variety of human activities. The experience of flow has been documented in members of Japanese motorcycle gangs (Sato, 1988), in ocean cruising (Macbeth, 1988), for writers (Larson, 1988), for theatre actors (Martin & Cutler, 2002), and for adolescent students (Carli, Delle Fave, & Massimini, 1988). Flow has been reported more frequently in the context of work, physical activity, or social interaction than in leisure activity (Csikszentmihalyi & LeFevre, 1989). Specific activities such as sports, games, artistic performance, and religious rituals are particularly conducive to the experience of flow (Csikszentmihalyi & Rathunde, 1993). In sum, there is support for the construct of flow across various demographic groups and activity sets.

Csikszentmihalyi’s (1975) early work on intrinsic motivation involved extensive interviews with hundreds of artists, rock climbers, chess players, and athletes. As a result of the early interview studies, a set of nine dimensions was identified that described the subjective experience termed “flow.” Subsequent replications have found support for the proposed nine dimensions or components as characteristic of the experience of flow (e.g., Carli, Delle Fave, & Massimini, 1988; Csikszentmihalyi, 1990; Martin & Cutler, 2002; Sato, 1988).

Overall, the early research exploring the construct of flow was qualitative and exploratory in nature. The studies were similar in design and sought to explore basic flow data. Participants were presented with initial statements or quotations about the experience of flow and follow-up semi-structured interviews were conducted to assess frequency and degree of flow, antecedents of flow, and internal or external conditions restricting flow. Although some individual samples sizes were small, the choices of
populations sampled were purposefully unusual and resulted in the conclusion that flow is pancultural experience.

Subsequently, Jackson, a sport psychologist, collaborated with Csikszentmihalyi and refined the descriptions of the flow components to be sport-specific (Jackson & Csikszentmihalyi, 1999). From their work, the first dimension of flow is the balance of challenge and skills. In sport, it is essential that the demands of the athletic challenge meet the skill level of the athlete, which in turn facilitates skill improvement. Elite athletes compete at a level that forces them to continually stretch and grow to remain effective (Jackson & Csikszentmihalyi, 1999). The second component of flow, action-awareness merging, refers to the coalescing of the physical and psychological facets of the activity. Athletes describe being completely absorbed in the action as a pleasurable experience.

The third component of flow is having clear goals. Goal setting promotes focus and allows the tracking of progress. Related to goals, is the fourth dimension of unambiguous feedback. In sports it is critical to have immediate and clear feedback. Sports activities provide several levels of feedback including kinesthetic awareness, coaching, and performance evaluation relative to others or the athlete’s own past performance (Jackson & Csikszentmihalyi, 1999). Focused concentration on the sport task is the fifth component of flow. Unfettered concentration is essential during competition that involves skill and channeling of physical resources.

The sixth component of flow is the sense of control that comes from the athlete’s belief that she has the skills required for the challenge. It is sometimes described in terms of positive self-esteem, empowerment or the potential for control (Jackson & Marsh,
The seventh component is loss of self-consciousness. When in flow, athletes describe the disappearance of worries and negative thoughts and feelings of sureness. Transformation of time is the eighth dimension of flow and refers the experience of being so absorbed in the activity that one loses track of time. The ninth dimension of flow is autotelic experience. The doing of the activity is its own reward. Athletes report flow as an exceptional experience, a high (Jackson & Csikszentmihalyi, 1999).

Measurement of Flow

Researchers have observed that there is a paucity of flow research (Catley & Duda, 1997; Dion, 2003; Jackson & Eklund, 2002; Martin & Cutler, 2002). Much of the empirical support for the theory of flow has been included in the book Optimal Experience (Csikszentmihalyi & Csikszentmihalyi, 1988) which reviewed studies that relied on survey techniques and the experience sampling method (ESM) to gather data. It has been suggested that lack of easily administered measures has been an obstacle to further empirical research of flow (Jackson & Marsh, 1996; Jackson & Roberts, 1992).

For example, ESM was found to be awkward and cumbersome for data collection in an athletic setting. In response to the need for easily administered measures, Jackson and colleagues collaborated in a focused effort on the measurement of flow which resulted in the development of a series of assessment instruments to quantify and measure the dimensions of athletic flow experiences (Jackson & Eklund, 2002; Jackson & Marsh, 1996; Marsh & Jackson, 1999). Jackson and Marsh (1996) initially developed a self-report measure to assess the state of flow, the Flow State Scale (FSS). Flow is a hypothetical construct conceptualized to be a multidimensional and essential psychological state that epitomizes athletic optimal experience (Jackson & Marsh, 1996;
The Flow State Scale was developed as an assessment of the dimensions of flow in relation to a particular event just completed. The results of the validation study that was conducted with 394 athletes, indicated that the measure had reasonable internal consistency (alpha = .83). Confirmatory factor analyses supported the hypothesized nine flow state scales and found an acceptable fit for the 36-item version of the scale. The authors reported that two of the scales measuring transformation of time and loss of self-consciousness reflected lower factor loadings.

Subsequently a Trait Flow Scale (TFS Jackson, Kimiecik, Ford, & Marsh, 1998) was developed because the theorists posited that flow may be conceptualized as an immediate emotional/motivational state and as a dispositional trait (Jackson, et al., 1998). It has been theorized that some people achieve a flow state more easily and frequently than do others (Csikszentmihalyi, 1990). It is suggested that certain people may have an intrinsic psychological propensity to flow, independent of the situation. The Trait Flow Scale was designed to assess the frequency with which an athlete typically experiences flow in sport (Jackson et al., 1998). Correlations between the Trait Flow Scale and the State Flow Scale were found to range from .38 to .78 (Marsh & Jackson, 1999). The psychometrics of the trait scale were examined in a study that included 398 athletes from the 1994 World Masters Games. Internal consistency reliability for the subscales of the TFS in this study ranged from .70 to .88.

Flow researchers have theorized that given the multidimensional nature of the construct of flow, there may be a higher order model with a global flow factor in addition to the 9-first-order factors representing the individual dimensions (Jackson & Eklund, 2002; Jackson & Marsh, 1996; Marsh & Jackson, 1999). Early studies that utilized the
first generation of flow instruments provided some provisional support of a global flow factor with caution extended due to variability in the size of factor loadings and the 24 to 88% of the variance left unexplained in moving from the first-order factors to the higher order factor (Jackson & Marsh, 1996). Increased preliminary support for the higher order representation was found in a study that used combined data from both trait and state measures resulting in an 18-factor model (Marsh & Jackson, 1999). However, a set of analyses incorporating external validity criteria and flow state and trait responses resulted in a pattern of results that were not meaningful and did not support the predicted correlations, thus demonstrating the superiority of the first-order factor models.

To address the weaknesses of the FSS and the TSS, (Jackson and Eklund (2002) conducted a two-part scale development and validation study. Items were developed to replace the loss-of-self-consciousness items (e.g., “I was not worried about what others may have been thinking about me.”) and time-transformation items (e.g., “At times, it almost seemed like things were happening in slow motion.”) which had performed poorly in prior validation studies. Additionally, they focused on the psychometric and conceptual performance of the scales and subscales with regard to a higher-order or global factor of flow.

The first study included the data from 597 athletes, 17 to 72 years in age. The sample was comprised of 49% men and 51% women. There was a broad range of sport types and athletic level. The Flow State Scale-2 (FSS-2, Jackson & Eklund, 2002) and Dispositional Flow Scale-2 (DFS-2, Jackson & Eklund, 2002) were used and reflected item modifications to the old scales (i.e., FSS, TFS). The DFS-2 and FFS-2 demonstrated acceptable factorial validity for assessing dispositional and state flow as goodness-of-fit
values for the first-order factor model and the higher order model reflected good fit (Jackson & Eklund, 2002).

The second study was a cross-validation study and included 897 participants. Gender breakdown was 52% women and 48% men. Goodness-of-fit for a first order model and higher-order model were satisfactory, indicating a reasonable, if not close fit for the data, although one of the new time transformation items had a relatively weak factor loading for the FSS-2 cross-validation sample. For the DFS-2, overall substantial improvement was observed with the newly added items to the scale. Finally, the researchers reported that the participant samples reflected a greater level of diversity across variables than in the development of the original instruments and it was suggested that the scales are likely to be applicable to a wider array of activities (Jackson & Eklund, 2002).

An important consideration in the assessment of flow is the conceptual difference between state and dispositional flow. The FSS-2 was developed to assess events recently experienced and the DFS-2 was designed to assess the overall frequency of the experience of flow related to a specific activity. The use of the label dispositional refers more aptly to the gathering of retrospective data that may relate to individual differences in the propensity to experience flow.

Empirical evidence has demonstrated that the first generation of state flow and dispositional flow were moderately correlated (median $r = .62$). Additionally, in a study that explored psychological factors relevant to the experience of flow, a very similar pattern of results found for the prediction of state flow as was found for dispositional flow (Jackson et al., 2001). For the athlete-participants in the study, positive self-concept
for skilled performance, avoidance of negative thinking, good emotional control, relaxation, and appropriate activation levels predicted both state and dispositional flow.

Additionally, external factors that inhibit or disrupt flow have been identified. In a qualitative study with college athletes, environmental and situational influences were the most frequently cited factors to the disruption of flow. Distractions related to game disruption, negative feedback, negative interactions with opponents, and environmental distraction (e.g., crowd noise) were key themes identified as disruptive to flow. Thus, internal and environmental factors can be hindrances to the experience of flow.

**Athletes and Flow**

It already has been noted that sports may be an ideal arena for the study of flow (e.g., Csikszentmihalyi & Rathunde, 1993), and indeed much of the extant research on flow involves athletes. The overall emphasis of the recent flow research with athletes has been on identifying factors that facilitate or inhibit the experience of flow. Qualitative and quantitative studies have examined psychological factors (e.g., Jackson, et al., 1998; Jackson & Roberts, 1992) and motivational determinants (Kowal & Fortier, 1999) that predict flow. Likewise, researchers have attempted to identify factors that interrupt or prevent flow from occurring (Jackson, 1995; Jackson, Thomas, Marsh, & Smethurst, 2001).

Early work in this area is represented by the results of a 1992 qualitative study by Jackson that included 16 national champion figure skaters. Jackson identified cognitive variables as facilitative of the state of flow. These variables were a positive mental attitude, positive pre-competitive and competitive affect, maintaining focus, and for couples skaters, unity with partner. Physical preparedness was identified as facilitative of
the flow state. Respondents identified inability to maintain focus, having a negative mental attitude, and lack of audience response as factors that prevent or disrupt flow (Jackson, 1992).

In a later qualitative study, Jackson (1995) used a larger and more diverse sample of athletes to extend the understanding of variables that promote or inhibit the experience of flow. Twenty-eight athletes, 14 women and 14 men, from seven sports were included in the study. The results of the study supported and extended the results of the earlier skater study. The athletes reported that cognitive variables of planning and preparation, physical variables of preparation and readiness, experience, and optimal environmental factors contributed to the experience of flow. The key factors that negatively affected flow were non-optimal environmental conditions, lacking confidence, having a negative attitude, and inappropriate focus. Inappropriate focus was described as thinking too much, being over-concerned with what others were doing, and worry about what others think of you (Jackson, 1995).

Anxiety and worry are variables that have been associated consistently with prevention and disruption of flow. A 1998 large scale empirical study (Jackson et al., 1998) that examined correlates of flow included 398 elite athletes from four sports and was comprised of 67% men and 33% women, from the World Masters Games. Flow was assessed quantitatively with the Flow State Scale (FSS Jackson & Marsh, 1996) and the Trait Flow Scale (TFS, Jackson et al., 1998). Perceived sport ability and freedom from anxiety-concentration disruption were found to be the strongest predictors of trait flow. For state flow, three predictors emerged, with the strongest predictor being freedom from anxiety-worry, followed by perceived sport ability and freedom from anxiety-
concentration disruption (Jackson et al., 1998). Anxiety or worry was labeled the “antithesis of flow” (Jackson et al., 1998, p. 373) and athletes who experienced high anxiety or worry had difficulty attaining flow dimensions of concentration, sense of control, loss of self-consciousness, and focus.

Subsequently, Jackson, Thomas, Marsh, and Smethurst (2001) surveyed a total of 236 athletes from three sports and examined links between self-concept, sports-related psychological skills and strategies, and the state of flow. The results of the study which employed flow state (FSS) and a flow trait (DSS)\(^1\) measures found similar patterns for the prediction of state flow as for dispositional flow. Positive self-concept for skilled performance and avoidance of negative thinking combined with good emotional control, relaxation, and appropriate activation levels to facilitate flow for these athletes (Jackson, et al., 2001). Although these researchers did not include a measure that specifically assessed anxiety, their results echo the results from previous studies that did directly assess anxiety; the implication that may be drawn from their results is that worry and negative thinking are counterproductive to flow.

**Gender, Sport and Flow**

Flow has been described as a universal experience, common to all humans (Csikszentmihalyi & Csikszentmihalyi, 1988) and sport-specific research has found evidence to support this postulate for athletes (Young & Pain, 1999). Nevertheless, gender differences have been documented in the types of activities that promote flow for men and for women (Csikszentmihalyi & Csikszentmihalyi, 1988) and researchers have

\(^1\) Dispositional Flow State was previously titled Trait Flow Scale (Jackson, et al., 1998).
suggested that differences in socialization may explain the observed differences. Dion (2003), however, observed that the norm in flow research has been to combine the data from women and men; she suggested that this has resulted in the presentation of flow as a universal and non-gendered experience -- a practice that is not likely to reveal the nature, frequency or intensity of gender differences in the experience of flow.

Thus, in a qualitative study that included in-depth interviews with 10 elite athletes, Dion (2003) explored the athletes’ experience of flow from a gendered perspective. She noted that although loss of self-consciousness has been found to be a less robust dimension of flow compared to the other flow dimensions (Jackson and Marsh, 1996; Jackson et al., 1998), the women in her study reported that loss of self-consciousness was indeed an important variable for flow. Feeling self-conscious, having critical thoughts, and generating negative self-evaluations were identified as obstacles to the flow experience. Several of the participants also identified that they worried about the evaluations of others which also impeded their experience of flow (Dion, 2003). Additionally, all of the participants spoke of being aware of traditional cultural (gendered) expectations of girls’ and women’s sports activities and had observed pressure put on some girls and women to conform to more traditional feminine roles (Dion, 2003).

The results of Dion’s study (2003) argue for further examination of women athletes and flow. The preponderance of flow research has presented group data, combining the results from men and women, and thereby obscuring gender differences in the experience of flow. Yet, substantial data reflect that women’s subjective experience of sports may be different than men’s experience; socialization of role-appropriate behaviors in sports and sport selection (Oglesby & Hill, 1988) and differences in
attributional style (see Biddle, 1988) have been identified as important factors that contribute to experiential differences in athletic participation related to gender. Indeed, in the only study to explore the factor structure of the Flow State Scale for women, data from 144 Greek women athletes indicated that the factor structure of the Flow State Scale (Jackson & Marsh, 1996) did not show adequate fit to either the 9-factor model or the hierarchical model (Douganis, Iosifidou, & Vlachopoulos, 2000). The authors stated that their results reflected that the experience of flow may be different across various groups, including sex and sport type.

Finally, intending to clarify the role of gender in flow, Russell (2001) conducted a study that explored whether gender or sport type (i.e., team or individual) predicted significant differences in flow. The results of quantitative analyses conducted using data from the Flow State Scale (Jackson & Marsh, 1996) suggested no significant effects for gender or sport type. Russell’s sample, however, included data from only 27 men and 15 women. This small sample in conjunction with the number of sports polled (i.e., nine) suggest the data may be at best preliminary.

An additional concern with the Russell study (2001) relates to the sport types selected for study. The team sports included were football, baseball, volleyball, softball, and basketball and the individual sports were swimming, track, triathlon, and wrestling. It has been theorized that sport type can influence the experience of flow (Kimiecik & Stein, 1992), but little rationale was given by Russell for the choice to examine individual versus team sports.

A growing body of empirical literature, then, suggests gender and sport type have potential value for understanding the flow experiences of athletes. This literature provides
a sound rationale for attending to choice of sport in a study that includes women athletes. In addition, from a feminist and objectification theory perspective, sports can be evaluated with regard to the sport’s emphasis on physical appearance, traditional femininity (Parsons & Betz, 2001) and leanness (Smolak, Murnen, & Ruble, 2000; Sundgot-Borgen & Torstveit, 2004). Of the sports included in the Russell study, for example, none were in the top third ranking of perceived focus on appearance and femininity as determined by Parsons and Betz (2001). Such sports may be critical to study in research on self-objectification and female athletes’ experience of flow. Thus, inclusion of sports that are representative of women’s sports and that vary on femininity, leanness, and attractiveness dimensions seems essential to the understanding of self-objectification and the flow experience for women.

Self-Objectification and Women Athletes

Sport is a culturally constructed, universal human endeavor. Athletics in general, and specific sport types, have been shown to be strongly influenced by stereotypical gender-schematic beliefs and expectations (Gill, 1994; Kane, 1996). For example, sports that emphasize grace in movement and aesthetics have been found to be perceived as more acceptable for women than weight-bearing or contact sports (Kane, 1996; Kane & Greendorfer, 1994), and traditional gender schematic beliefs have been implicated in the sport choice process for young people (Kломстен, Marsh, & Skaalvik, 2005). Additionally, Creedon (1994) suggested that differential media coverage of sports serves as a gatekeeper to perpetuate stereotypic gender perceptions about sport by limited and skewed coverage of women’s athletics.
Indeed, studies have found media coverage of women’s athletics to be consistently unequal to coverage of men’s athletics. The female athlete is underrepresented, trivialized, and sexualized in the media (Kane, 1996). This is significant because endorsement of traditional gender beliefs related to sport types has been linked to low self-esteem and lower scores on physical self-concept measures for children and young adults (Kломsten, Skaalvik, & Espnes, 2004), and there is considerable evidence that some women athletes are at risk for eating disorders (Byrne & McLean, 2001; Engel, el al., 2003; Smolak, Murnen, & Ruble, 2000; Sundgot-Borgen & Torstveit, 2004) and increased levels of body shame (Parsons & Betz, 2001). These findings suggest that Objectification Theory may be a useful lens through which to view women’s experiences in athletics. The following is a selective review of the literature related to the experience of cultural sexual objectification and subsequent self-objectification for women athletes. Specifically, a brief history of women’s sport involvements, media representation of women athletes, and contextual risk factors for women in athletics that are relevant to the current study are presented in the sections that follow.

Women’s Sport Involvements

Sports’ historians have chronicled women’s participation in sport and physical activity from ancient Greece (Kennard & Carter, 1994); through the 18th century in Europe (Park, 1994); to the leisure activities of early American women (Struna, 1994). Kennard and Carter (1994) stated “It is inconceivable to write about the genesis of sport without women” (p.18). Feminist sport theorists posit that women’s athletics have always been subject to the constraints of gender-schema expectations (Kennard & Carter, 1994;
Park, 1994; Struna, 1994) and in the modern era women’s athletics have been viewed and defined by a white male Eurocentric perspective (Bredemeier, et al., 1991; Kane & Snyder, 1989; Kennard & Carter).

Women’s history of competitive sport in the modern era is relatively short. Title IX has been regarded as the single most significant piece of legislation to affect the growth and direction of women’s sports. Enacted in 1972, Title IX is a federal education amendment that has required university athletic departments to provide equal participation opportunities to men and women. In the years since the passage of Title IX, young women’s participation in high school athletics has increased nearly ten-fold (National Federation of State High School Athletic Associations, 2005) and college women’s participation in sports ranges from 40 percent to 44 percent of all athletic participation for the three collegiate divisions (National Collegiate Athletic Association, 2004). Strides towards equivalent participation for women athletes have been made, yet, in the thirty years since the passage of Title IX, the majority of colleges and universities are still not in full compliance with the legislation (Stafford, 2004).

There continue to be experiential and perceptual differences in the sport experience between women and men and boys and girls. Gill (2001) reflected that the sport culture mirrors the broader cultural and social expectations of behaviors, appearance, status, and power for women and men. Gender norms have significantly affected the sporting experiences for American women through much of the 20th century by limiting competition and delineating sports as gender-appropriate or gender-inappropriate (Hult, 1994; Ostrow, Jones, & Spiker, 1981). In 1991, nearly twenty years after Title IX, Eccles and Harold (1991) found significant effects of gender-role
stereotyping of sports for children and adolescent participants, such that level of perceived sport ability was correlated to perceptions of a sport’s level of appropriateness. Strikingly, gender-role stereotypes were as large in grade one as in grade four suggesting that the gendered messages occur early in development (Eccles & Harold, 1991).

In spite of increased participation in sport, then, empirical evidence suggests that gender stereotypes continue to impact the perceptions and acceptability of sports for girls and boys. In a study of adolescent athletes, Klomsten and colleagues (2005) found that boys and girls differed in their valuations of feminine and masculine characteristics. These authors reported that stereotypical gender schemas were associated with specific sport choice for the participants of their study. Acceptability of a particular sport related to it being gender-consistent; that is, feminine sports were more likely to be chosen by girls. In a discriminant function analysis, four of the ten feminine/masculine characteristics were found to discriminate between the feminine, masculine, and neutral sport choices. For the girls, higher values on slender appearance and flexibility, and lower values on strength and masculinity delineated the feminine sport group. This pattern of results underscores the importance of appearance for these young female athletes.

The effects of stereotypical gender beliefs are pervasive and strong. The values imbued in, and gender stereotypic messages about, athletic activity have been shown to have broad effects on young people that extend beyond influencing sport choice. A recent study of elementary and secondary students who participated in organized physical activity, explored multiple dimensions of physical self-concept (e.g., sports competence, physical ability, body fat, and flexibility). Results of the study reflected that boys scored significantly higher on ten of eleven physical and self-esteem scales than did girls.
Likewise boys scored higher on physical self-concept than did girls and the gender differences were more pronounced in adolescent than in younger aged children (Kломsten, Skaalvik, & Espnes, 2004). The researchers reported that physical appearance was the strongest predictor of global self-esteem. Emphasis on the importance of physical appearance, particularly slender appearance, parallels aspects of the self-objectification process – particularly the importance assigned to valuation of the external self.

Indeed, Metheny (1965) theorized a typology of athletics based on the socially sanctioned image of the female in the culture. The defining element for the typology model is the dimension of physicality of the sport. The author posited that there are higher levels of acceptability of sports for women that emphasize aesthetics and traditional feminine standards of physical beauty than for those sports that include bodily contact (e.g., boxing, wrestling) or direct application of bodily force to an instrument (e.g., shot put, discus throw).

Metheny’s (1965) classification system was tested in study by Kane and Snyder (1989) which found that although twenty years had lapsed, gender stereotypes continued to prevail in the perception of sports. Data were collected from college-aged men and women students tapping the perceptions of two women’s sports, gymnastics and basketball. A main effect for sport type was found with both women and men participants finding gymnastics more attractive, graceful, and sociable than basketball. Significant interactions between sex of respondent and sport type emerged reflecting that the men and women differed consistently on their perceptions of women’s basketball. Men rated women’s basketball as “lesser than” in size, strength, speed, and they perceived it as more tender, passive, and feminine compared to how the women in the study rated
women’s basketball. Gymnastics, a traditionally “feminine” or gender-appropriate sport was rated highly by both the men and the women on feminine assessments such as graceful and attractive, a finding interpreted as representative of stereotypic sport typing.

Kane and Snyder (1989) suggested that limitations placed on sport participation by social sanction and acceptability have the effect of parsing the sport experience for women and allowing them to claim only parts of their physical experience; they promote grace and aesthetics but limit physical power and aggression. General limitations on sport participation and the heightened focus on appearance and physicality in some sports may serve to promote the experience of objectification for women athletes.

*Women Athletes and Media*

Media communicate cultural values, norms, and status related to athletes and to the culture at-large. Sport sociologists have contended that the popular media shape and perpetuate gender-related assumptions and norms (Kane, 1996). Studies of media coverage of women’s sport and female athletes consistently have found the print and photo coverage of women athletes to be infused with traditional and stereotypical conceptions of femininity. Kane (1996) identified two key areas of difference between men’s and women’s athletics in media coverage. First, women are grossly underrepresented in terms of overall coverage. Second, the focus on men highlights their athletic strength and competence, whereas for women attention is devoted to their attractiveness and femininity, which serves to trivialize, sexualize, and objectify women athletes.

Researchers have used media studies to explore cultural perceptions of women and sport. Studies have shown that media coverage of women’s sports remains inferior to
that given to men’s sports across all media types. Women viewers comprise approximately 22% of the total ESPN audience (Tuggle, 1997). A survey study that compared coverage of women’s athletics on ESPN SportsCenter from 1995 to 2002, revealed several significant findings (Adams & Tuggle, 2004). Primarily, 96% of the stories covered men’s sport and 2% were devoted to women’s sports. Additionally, men’s sports stories were approximately 1-3/4 times as long women’s sport stories. Finally, the coverage of women’s sports appeared later in the show than the coverage of men’s sports. The data led the researchers to the conclusion that women’s sporting events are of secondary importance at SportsCenter because fewer overall resources were allocated to women’s sports. Additionally, unequal coverage minimizes perceptions of women’s contribution and performance in sport.

In contrast to the Adams and Tuggle (2004) study that focused on ESPN which has a young and male target audience, Fink and Kensicki (2002) analyzed visual and literal texts of Sports Illustrated and Sports Illustrated for Women to explore if the way women’s sports were presented depended on the sex of the targeted audience. Photographs were coded into four categorical subtypes reflecting the presentation of the athlete: a) athletic action; b) athletic apparel, without sport activity; c) non-sport setting; and d) sexually suggestive. The narrative articles also were coded by content. The results of the study found that women continue to be significantly underrepresented in Sports Illustrated. Women athletes were featured in non-sport articles at a ratio of 5:2 compared to men athletes in Sports Illustrated. In a comparison of the two magazines, 87% of the stories covering male athletes in Sports Illustrated were coded as sport-related and 43% of the stories covering female athletes in Sports Illustrated for Women were coded as
sport-related. Further, there were significant gender differences between the two magazines in articles that focused on personal struggles and personal health; that is, the focus for women athletes was frequently on their personal lives rather than their sport lives. Fink and Kensicki (2002) interpreted the data, particularly the deflection from the sport setting to the personal or the non-sport, as serving to reinforce socially constructed and traditional gender roles for women.

Media coverage at the university level parallels the significant gender differences in coverage of women’s and men’s athletics that has been documented in the popular press. The results of a survey study in which 285 print stories and 157 broadcast stories from 39 colleges and universities were analyzed indicated that although 41% of all college athletes are female, only 27.3% of news stories and 18.5% of college television coverage were devoted to female athletes (Huffman, Tuggle, & Rosengard, 2004). Interestingly, similar gender differences were found in the gender representation of the individuals polled by the writers for comments and in the gender breakdown of media staff. Thus, these results support that there is a male bias in coverage and media personnel for collegiate athletics. It has been suggested that media shape societal beliefs and that differences in gender representation in sport media serve to reinforce gender stereotypes (Gamson & Modigliani, 1989; Pan & Kosicki, 1993). This study chose to examine media coverage quantitatively and did not look at qualitative differences in coverage of men and women athletes, therefore content data, which could have added another level of detail, from this study is absent from this study.

Researchers also have investigated what, if any, changes in media representation of women athletes have occurred over time. A longitudinal analysis of intercollegiate
media guide cover photographs explored how gender was constructed in images and tested whether images of women and men have become more balanced through the 1990s (Buysse & Embser-Herbert, 2004). It has been suggested that media guides, and particularly cover photographs, are designed to convey salient messages to the consumer about the institution and its athletes. The results of the study revealed that although quantitative coverage of men and women athletes seemed to be equivalent, there were some distinct qualitative differences in the nature of the coverage (Buysse & Embser-Herbert, 2004). Women athletes were photographed off the court or field significantly more often than were the men athletes. Additionally, women athletes were photographed in action significantly less often than were the men athletes. The portrayal of the athletes demonstrated meaningful gender differences in presentation themes of true athleticism and traditional feminine or masculine contextualization. Women were presented in fewer true athletic contexts (i.e., on court, in uniform, in action) and women were photographed significantly more frequently in traditional feminine clothing (i.e., traditionally female clothing, wearing make-up) than were men in traditional masculine clothing (wearing a dress suit or tuxedo). These results provide support that women athletes may be perceived through a gendered and objectifying lens in college media guides.

Media transmit and perpetuate values and beliefs about gender roles and sports participation to the collegiate subculture and to the macro-culture. In her review of post Title IX media coverage of the female athlete, Kane (1996) reported overwhelming evidence of differential coverage given to women and men athletes. She cited underrepresentation of women’s athletics and that men and women are presented in ways
that emphasize and underscore traditional gender roles. An important adjunct to gender parity in participation in athletics is equivalence in media coverage of sports.

In sum, there is evidence that, when media cover them, women athletes appear to be sexually objectified consistently across media outlets: on television; in the popular press; and in university publications. Women are much more likely to be portrayed off of the playing field, out of uniform, and in highly passive and sexualized poses (Buysse & Embser-Herbert, 2004; Fink & Kensicki, 2002; Kane, 1996). The lack of equivalence in media representation of women athletes and women’s athletics serves to trivialize and minimize women’s experience in sport. Objectification theory provides a framework to explore the effects of objectification for women athletes. Examining women athletes’ experience of cultural objectification and subsequently self-objectification provides a method to gain a more complete understanding of the obstacles, as well as the benefits involved in women’s athletic experience.

*Women Athletes and Risk Factors*

Sport participation is considered to be a behavior that promotes physical and psychological well-being, yet research has shown the athletic experience to have differential effects for female participants (Engel, et al., 2003; Smolak, Murnen, & Ruble, 2000). As already noted, women athletes are objectified in how they are presented in the media, and this along with other contextual factors related to the sport experience may contribute to elevated levels of body consciousness and appearance focus for girls and women in athletics. The research reviewed below specifically highlights risk factors related to the experience of cultural objectification and self-objectification for women athletes.
Young women’s sport participation was related to a number of negative mental health outcomes in a two-part study by Parsons and Betz (2001). They initially examined perceptions of sports in a group of 195 male and female students. The participants in this first study ranked seventeen sports on two dimensions: perceived focus on appearance and femininity. These variables were identified as context variables related to body objectification. For example, the two sports that ranked highest in context for body objectification were cheerleading and dance team. On the low end of the spectrum for objectification were golf and lacrosse. The second part of the study explored the nature and extent to which sport participation in high school was related to body objectification, locus of control, and instrumentality for 437 first-year female college students.

Using the hierarchical rankings of the dimensions of femininity and focus on appearance developed in the first study, the relation between specific sports participation and the participant’s scores on measures of self-objectification, instrumentality, and locus of control were analyzed. The results reflected that participation in sports and/or physical fitness activity was associated with increased scores on a body shame measure. Further, participation in sports perceived as highly feminine was related to higher levels of body shame than was participation in sports ranked lower in femininity. The authors concluded that although sport participation was related positively to instrumentality and internal locus of control, for the young women in their study, sport participation also was associated with body shame, especially for those who participated in athletic activity that focused on appearance of the female body or was perceived as high in femininity (Parsons & Betz, 2001). These results underscore the relation between participation in
high school sports that objectify the athlete via a focus on appearance and incorporation of traditional feminine gender beliefs and heightened body consciousness.

Studies of college-aged athletes have revealed that sports that are appearance-focused or have body size requirements may place women especially at risk for eating disordered behaviors. A large survey study that included 1,445 elite Division I athletes at 11 different schools, competing in 11 different sports, found that gender, ethnicity, sport and self-esteem were associated with eating disordered behaviors and attitudes (Engel et al., 2003). Researchers performed separate regression models for women and men and examined the relation of demographics, athletic involvement, perceptions of teammates’ eating behaviors, coaching variables, academic variables, and self-esteem with dependent variables related to disordered eating (i.e., drive for thinness, body dissatisfaction, purge index, restriction index, and binge index). Gender predicted all dependent variables, with the exception of a binge index; women scored significantly higher on these eating disorder measures. In addition to sex, ethnicity predicted restricted eating; White and participants endorsing other ethnicities restricted more food than did Black participants.

The authors also highlighted the finding of sport type as predictive of disordered eating; sport type had a significant relation with each dependent variable. The effects of sport type were most pronounced for wrestlers and gymnasts with these athletes reporting significantly higher food restriction scores. There also was a significant interaction between gender and sport in predicting restrictive eating. For, women athletes, sport explained a relatively small amount of variance (7.2%), but for men, sport predicted a much larger percentage of the variance (39.6%). Interestingly, the results of the gymnasts and the wrestlers on drive for thinness and body dissatisfaction were in opposing
directions. In other words, the eating disordered behaviors were internally driven for the gymnasts and externally driven for the wrestlers. This finding was interpreted as a reflection of the physically evaluative nature of gymnastics and that gymnasts may internalize the appearance norms of gymnastics. Unfortunately, it appears that the researchers did not examine within sport differences—for example, were there specific differences between women gymnasts and men gymnasts? The sample of the study was skewed as well, with one-third of the sample comprised of football players and wrestlers, sports which typically exclude women, and no gender breakdown given for the other sports. Finally, gymnastics was the only sport included that has been identified as focused on appearance/leanliness which may have weakened the strength of the results. Nevertheless, consistent with objectification theory, the overall pattern of the data suggested that women athletes are at greater risk for eating disordered behaviors than are men athletes, particularly those participating in sports that focus on appearance.

Extending the research on risk factors and eating disorders to adult athletes, Sundgot-Borgen and Torstveit (2004) conducted a comprehensive 2-step study that included the entire population of Norwegian elite athletes representing 68 sports to determine the overall prevalence of eating disorders in athletes and to reveal any pattern of risk associated with specific sport type. The results showed that the prevalence of subclinical and clinical eating disorders was higher for the athletes than for members of a comparison group from the general population. Further, female athletes were 2.5 times more likely than were male athletes to meet criteria for subclinical or clinical eating disorders. Again, results underscored physicality as a risk factor. Although, female athletes who participated in sports that emphasized aesthetics or leanliness were at greatest
risk for eating disorders, prevalence of eating disorders in ball sports were shown to have increased approximately 50% in a 7-year span (Sundgot-Borgen & Torstveit, 2004). These researchers interpreted the prevalence of eating disorders in aesthetic or lean sports and the increase in eating disorders in ball sports as indicative of heightened body consciousness and the drive to meet a body shape ideal for female athletes.

It must be noted that there have been studies that have found non-significant results when comparing incidence of eating disorders between female athletes and female non-athletes. DiBartolo and Shaffer (2002), for example, concluded that the Division III athletes in their study had less eating disorder symptomology than did the non-athletes in the comparison group. Interestingly, these researchers cited past findings that identified participation in weight-dependent sports that emphasize leanness and appearance as risk factors associated with disordered eating behaviors, yet they did not use sport type as a grouping variable in their analysis. Additionally, they acknowledged that although elite athletes have been found to be at greater risk than less-competitive athletes (Byrne & McLean, 2001; Smolak, Murnen, & Ruble, 2000), the participants in this study were selected from a Division III college, the least competitive division of collegiate athletics.

Overall, the risk factors identified in the previously reviewed studies cited are consistent with the results of Byrne and McLean’s (2001) literature review targeting women athletes and eating disorders. These authors identified risk factors that have emerged consistently in studies, and two of the three risks factors they identified as contributory to the development of eating disorders for women athletes share conceptual features with tenets of objectification theory. First, it was suggested that athletes are subjected to increased sociocultural pressure to attain the ideal body shape, a pressure
that is heightened for athletes who compete in sports that emphasize a thin body ideal. Second, it was noted that eating disorders typically occur for athletes during adolescence to early adulthood, and this is also the time in development that young women experience heightened cultural objectification and self-objectification.

In sum, a focus on body appearance, leanness, and traditional gender-schematic beliefs are risk factors that intersect conceptually with self-objectification (see Fig. 1). Given the gendered nature of sport and the evidence that perceptions of various athletic activities occur on a continuum that reflects varying degrees of emphasis on appearance and body focus, a relation between level of self-objectification and sport type is hypothesized. Thus, congruent with Objectification Theory, sport type and level of self-objectification may be predictive of flow experience.

Summary

Objectification Theory predicts that cultural sexual objectification results in self-objectification and further, that self-objectification consumes attentional resources by self-surveillance, habitual self-monitoring, and vigilant concern with appearance resulting in decreased flow states (Fredrickson & Roberts, 1997). To date, the theorized consequences of self-objectification on flow have been minimally tested. Further, the few studies that included flow as a variable produced idiosyncratic and inconsistent results that appear to be related to flawed measurement due to the use of truncated measures (Greenleaf, 2001) or use of unique and psychometrically untested, assessment tools created by the researchers for the study (Tiggemann & Slater, 2001). Adequate and multidimensional measurement of the flow construct is a core consideration in the design of the present study.
The proposed research will test the relation between self-objectification and flow for women athletes. In accordance with Objectification Theory, increased levels of self-objectification as evidenced by self-surveillance, habitual self-monitoring, and concern with appearance, are expected to predict lower levels of reported flow experiences because of the decreased availability of attentional resources (Hypothesis 1). Women athletes are targeted as the population of interest as sport has been identified as an activity conducive to the experience of flow and a substantial amount of research has been done extending the knowledge of flow in sport (Catley & Duda, 1997; Dion, 2003; Jackson, 1995; Jackson & Csikszentmihalyi, 1999; White, 1990). Valid and reliable flow instruments have been developed in conjunction with sport research (Jackson & Eklund, 2002; Jackson & Marsh, 1996; Marsh & Jackson, 1999) and will be employed in the present study.

An additional consideration for this study is sport type. There is empirical support for a differential effect of sport participation for women athletes based on sport type. Specifically, women and girls who participate in traditionally feminine sports and sports that are appearance-focused are more likely to exhibit increased levels of body shame (Parsons & Betz, 2001), body dissatisfaction (Reinking & Alexander, 2005), and eating disordered behaviors (Byrne & McLean, 2001, Smolak et al., 2000; Sundgot-Borgen & Torstveit, 2004). Grounded in this research, sport type is expected to relate to self-objectification; that is, appearance-focused sports are expected to be related to higher levels of self-objectification than are non-appearance focused sports (Hypothesis 2). Further, it is predicted that sport type acts as a moderator variable (see Fig. 2) for the relation between level of self-objectification and level of flow, such that, for women
athletes who participate in sports that focus on appearance (e.g., gymnastics, cheerleading), the inverse relation between self-objectification and flow will be intensified (Hypothesis 3).

Figure 2  Antecedents and consequences of self-objectification (as adapted from: Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998)
Review of the objectification theory empirical literature reveals some inconsistency (i.e., number and type of measures) in the manner in which the self-objectification construct has been conceptualized and operationalized. Consequently, the present research takes a deliberate approach to measurement of the construct. Fredrickson and Roberts (1997) described self-objectification as a process by which girls and women internalize an observer’s perspective as a primary view of their physical selves and they theorized that self-objectification is characterized by increased concern with appearance and habitual self-monitoring of appearance. The primary measures used to assess self-objectification in past research have been the Self-Objectification Questionnaire (SOQ; Noll & Fredrickson, 1998) and the Surveillance Scale from the OBCS (McKinley & Hyde, 1996), a subscale that has been used frequently in self-objectification research (e.g., Hill, 2003; Moradi, et al., 2005; Slater & Tiggemann, 2002; Tiggemann & Slater, 2001). These two measures have been described as measuring the same construct, albeit in different manners, as the SOQ is a rank order measure and the OBCS Surveillance scale uses Likert-type ratings. The measures have been shown to be moderately correlated, with an average r = .58 across two participant samples (Tiggemann & Slater, 2001) and appear to assess related facets of the same construct. Consequently, in service of the goal of adequate measurement, the present research will include both measures.

Similarly, measurement of flow has been an issue in the research literature. The current research will employ a measure that is designed to fully tap all of the dimensions of flow as well as global flow. The DFS-2, dispositional flow measure, was selected because the student athletes will be responding retrospectively about their sport experience and this measure targets the frequency with which the athlete typically
experiences flow in sport. Thus, flow will be assessed fully, with an instrument
developed and normed with athletes, and using the measure designed to tap the
retrospective experience.

Finally, self-objectification is posited as resulting from internalizing sociocultural
values about appearance (Fredrickson & Roberts, 1997). The role of internalizing
sociocultural values about appearance is an important piece of the objectification model,
but as yet has garnered little direct attention. Therefore, in this study, internalization of
sociocultural standards of beauty is included as a variable of interest and will be
measured by the Internalization scale of the Sociocultural Attitudes Toward Appearance
Questionnaire (Heinberg et al, 1995). This subscale was designed specifically as a
reliable measure of a person’s acceptance of societally sanctioned standards of beauty
and subsequently was validated as such. Taking an exploratory approach, women
athletes’ reported internalization of sociocultural standards of beauty will be examined in
relation to their self-objectification. Although, some studies have included the OBCS
Shame subscale as a measure of internalization of sociocultural values about appearance
(Muehlenkamp & Saris-Baglama, 2002), the objectification theory model clearly frames
shame as an outcome variable and data support its mediational role in the objectification

Hypotheses

1. Based on theoretical literature (Fredrickson & Roberts, 1997) it is
hypothesized that women athletes’ levels of self-objectification, as measured
by the SOQ and the OBCS Surveillance scale, significantly and negatively
relate to their reported experience of flow.
2. Based on theoretical literature (Parsons & Betz, 2001; Reinking & Alexander, 2005), it is hypothesized that women athletes’ levels of self-objectification significantly and positively relate to their participation in sports in which there is a greater focus on appearance.

3. Based on theoretical literature (Metheny, 1965; Parsons & Betz, 2001), sport type is predicted to moderate the relation between self-objectification and flow for women athletes; the magnitude of the inverse relation between self-objectification and flow is expected to be greater for women athletes who participate in sports that are more appearance-focused than for women athletes who participate in sports that are less appearance-focused.
CHAPTER III

METHOD

Participants and Procedures

Participants were 143 undergraduate women athletes from two midsize universities in the northeastern region of the United States that were ranked as NCAA Division I schools. Sixty-five percent of the sample was represented by one university and 35% from the second university. The participants were notified of the study and asked to participate by a student athlete liaison at each university. The women ranged in age from 18 to 24 years ($M = 20.28$, $Mdn = 20.00$, $SD = 1.32$). Eighty-nine percent of the sample identified as White, 5% multiracial or other, 3% Hispanic or Latina, 2% African American or Black, and 1% as Native American or American Indian. Overall, 32% of the athletes were in their fourth year of college, 26% in their second year, 19% in their third year, 15% in their first year, and 1% in their fifth year of undergraduate study. Based on the Parsons and Betz (2001) rankings of level of perceived focus on appearance (see Table 1), athletes represented a full-range of sports athletes across the spectrum of more appearance-focused and less appearance-focused sports, including gymnastics ($n = 10$), basketball ($n = 11$), crew ($n = 4$), track and field ($n = 25$), cross country ($n = 5$), field hockey ($n = 21$), lacrosse ($n = 1$), soccer ($n = 8$), swimming ($n = 13$) and diving ($n = 4$), tennis ($n = 7$), volleyball ($n = 7$), softball ($n = 7$), and cheering squad ($n = 12$). Eight respondents did not indicate sport type.
Table 1

Parsons and Betz’s (2001) Summary of Means and Standard Deviations for Men’s and Women’s Perceptions of Sports’ Focus on Appearance for Women’s Sports

<table>
<thead>
<tr>
<th>Sport</th>
<th>Males M (SD)</th>
<th>Females M (SD)</th>
<th>Combined Mean M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golf</td>
<td>2.2 (1.1)</td>
<td>1.9 (1.0)</td>
<td>2.09</td>
</tr>
<tr>
<td>Lacrosse</td>
<td>2.1 (.83)</td>
<td>2.2 (1.0)</td>
<td>2.12</td>
</tr>
<tr>
<td>Crew</td>
<td>2.1 (.91)</td>
<td>2.3 (1.1)</td>
<td>2.17</td>
</tr>
<tr>
<td>Field Hockey</td>
<td>2.1 (.92)</td>
<td>2.2 (1.1)</td>
<td>2.25</td>
</tr>
<tr>
<td>Basketball</td>
<td>2.4 (1.0)</td>
<td>2.6 (1.3)</td>
<td>2.27</td>
</tr>
<tr>
<td>Soccer</td>
<td>2.6 (1.0)</td>
<td>2.4 (1.0)</td>
<td>2.33</td>
</tr>
<tr>
<td>Cross Country</td>
<td>2.4 (1.1)</td>
<td>2.7 (1.2)</td>
<td>2.51</td>
</tr>
<tr>
<td>Softball</td>
<td>2.1 (1.0)</td>
<td>2.2 (1.0)</td>
<td>2.58</td>
</tr>
<tr>
<td>Track</td>
<td>2.7 (1.2)</td>
<td>2.7 (1.2)</td>
<td>2.60</td>
</tr>
<tr>
<td>Volleyball</td>
<td>2.9 (.95)</td>
<td>2.7 (1.1)</td>
<td>2.93</td>
</tr>
<tr>
<td>Diving</td>
<td>3.1 (1.2)</td>
<td>3.1 (1.3)</td>
<td>2.99</td>
</tr>
<tr>
<td>Swimming</td>
<td>3.3 (1.3)</td>
<td>3.3 (1.3)</td>
<td>3.17</td>
</tr>
<tr>
<td>Tennis</td>
<td>3.3 (1.1)</td>
<td>3.2 (1.1)</td>
<td>3.29</td>
</tr>
<tr>
<td>Synch. Swimming</td>
<td>3.3 (1.1)</td>
<td>3.8 (1.1)</td>
<td>3.85</td>
</tr>
<tr>
<td>Gymnastics</td>
<td>3.9 (1.1)</td>
<td>4.1 (1.1)</td>
<td>4.02</td>
</tr>
<tr>
<td>Dance Team</td>
<td>4.5 (.76)</td>
<td>4.6 (.81)</td>
<td>4.59</td>
</tr>
<tr>
<td>Cheerleading</td>
<td>4.8 (.56)</td>
<td>4.7 (.80)</td>
<td>4.71</td>
</tr>
</tbody>
</table>

Note. Based on 95 males and 100 females. Sports organized from least to most context for body objectification. Ratings could range from 1 to 5, with low numbers indicating less focus on appearance.


Power analysis procedures were used to determine sample sizes for the hierarchical regression procedures used to test Hypothesis 3 as this is the most statistically demanding of the hypothesis tests. Given that a previous study (Tiggemann & Kuring, 2004) indicated self-objectification contributed approximately 9% of the variance in flow and that no literature exists on the relation of sport type to flow,
equivalent amounts of variance were estimated to be contributed by self-objectification and sport type (9% each) to the prediction of flow, with a smaller increment (5%) estimated for their interaction term. With those assumptions, in order to achieve power of .80 for the test of the interaction term when alpha is set at .05, a sample of 130 was needed (Power & Precision, Version 2; Borenstein, et al., 2001).

Participants were informed of the purpose of the study and were asked to complete a packet of assessments which were ordered in the same sequence as they are presented and described below with one exception. The two measures of self-objectification (SOQ; Noll & Fredrickson, 1998 and Surveillance subscale of OBCS; McKinley & Hyde, 1996) were counter balanced to offset ordering effects of the measures as they tap the same construct in similar, but slightly different manners. Therefore, half of the packets presented the SOQ in the second ordering position, followed by the Surveillance subscale and the other half of the packets presented the self-objectification instruments in reverse order. The flow measure was presented first because it is the dependent variable and thus it is important that was not subjected to influence by any other measure.

Questionnaires were distributed to the participants by research assistants, with instructions for completion and return. Included with the instruments was an opportunity to enter a raffle drawing for a gift certificate to a local sporting goods store as an incentive to complete and return the survey. The information needed to participate in the drawing was completed by the interested participants and separated from the response packet, thereby maintaining the anonymity of the respondent. In accordance with APA standards, a debriefing statement contained in a separate, sealed envelope with printed
instructions for the participant to open after completion of the survey, was included with the packet.

**Instruments**

*Dispositional Flow Scale-2 (DFS-2; Jackson & Eklund, 2002; Appendix A).* The DFS-2 is a 36-item (4 items per dimension), self-report measure designed to assess the frequency of the respondent’s flow experiences related to a specific physical activity across nine flow dimensions. The DFS-2 is used to assess the frequency with which flow is experienced in the target activity in general, rather than immediately following participation in the activity (Marsh & Jackson, 1999) and thus, was appropriate for measurement for this study. The nine fundamental dimensions of flow include: challenge-skills balance; merging of action and awareness; clear goals; unambiguous feedback; concentration on task; sense of control; loss of self-consciousness; transformation of time, and autotelic experience. Respondents are asked to think about how often they experienced the presented characteristic in each item and to rate their responses on a 5-point Likert-type scale (1 = never to 5 = always). The following are examples of the items from each dimension: “My abilities match the high challenge of the situation” (Challenge-Skill Balance); “Things just seem to happen automatically” (Merging of Action and Awareness); “I know clearly what I want to do” (Clear Goals); “I am aware of how I am performing” (Unambiguous Feedback); “My attention is focused entirely on what I am doing” (Concentration on the Task at Hand); “I feel like I can control what I am doing” (Sense of Control); “I am not worried about what others may be thinking of me” (Loss of Self-Consciousness); “The way time passes seems to be different from
normal” (Transformation of Time); and “The experience leaves me feeling great” (Autotelic Experience).

Scale scores are derived by summing the item scores for each dimension to obtain flow dimension scores. Possible scores for each dimension range from 4 to 20. A global flow score is obtained by adding the scores across all the dimensions and its possible range is from 36 to 180. Internal consistency reliability estimates for the nine dimension scales from the instrument validation study ranged from .78 to .86 with a mean of .82 (Jackson & Eklund, 2002). In a cross-validation study, the DFS-2 measurement model for the nine first-order factors exhibited NNFI and CFI values exceeding .9, supporting the construct validity of the measure.

Although individual factors scores reflect stronger psychometric properties than a single global score, it is acknowledged that use of a global flow score is useful for research (Jackson & Eklund, 2002). Structural equation modeling found reasonable support for a global flow factor for the DFS-2, although unequal loadings on the factors, from .44 to .90 (mean = .71) were interpreted as problematic (Jackson & Eklund, 2002). The present study represents a preliminary examination of flow and self-objectification and use of the global score was helpful in gaining an understanding of the relation between these constructs.

Self-Objectification Questionnaire (SOQ; Noll & Fredrickson, 1998; Appendix B). The SOQ is a 12-item measure designed to assess self-objectification. The instrument is intended to measure the extent to which an individual is concerned with external, appearance-related variables (e.g., sex appeal, physical attractiveness) relative to internal, competence-based items (e.g., strength, health). Respondents rank a list of body attributes
in ascending order of impact, from most impact (rank = 1) to least impact (rank = 12). Scores are computed by summing the ranks for competence and appearance attributes separately, and computing a difference score. Possible scores range from -36 to 36, with higher scores suggesting greater emphasis on appearance, which has been interpreted to represent greater self-objectification. To facilitate statistical analyses these scores were transformed (i.e., a constant of 36 will be added to each score) to eliminate the negative values.

Construct validity for the SOQ was demonstrated satisfactorily as scores on the questionnaire were shown to correlate positively with scores on the Appearance Anxiety Questionnaire (Dion, Dion, & Keelan, 1990) a scale that measures preoccupation with observable aspects of the physical self and with body image assessment and with those on the Body Image Assessment (Williamson, Davis, Bennett, Goreczny, & Gleaves, 1985) which is a measure of an individual’s body size dissatisfaction (Noll, 1996). The measure has been used extensively in research with college-aged students (Fredrickson, 1999) and has shown high test-retest reliability $r = .92$ (Fredrickson, et al., 1998).

*Surveillance subscale of the OBCS (McKinley & Hyde, 1996; Appendix C).* The Surveillance subscale of the OBCS is an 8-item measure designed to assess the extent to which an individual monitors herself and views her body from the perspective of an outside observer. This subscale of the OBCS is accepted as a measure of self-objectification (Moradi et. al, 2005; Slater & Tiggemann, 2002), and as such was chosen for use in this research. Participants respond to items on a 7-point Likert-type scale (1 = strongly disagree to 7 = strongly agree) and indicate N/A (not applicable) should the item not apply to them. Examples of items from this subscale are: “During the day, I think
about how I look many times” and a reverse scored item, “I think more about how my body feels than how my body looks.” The scoring protocol for the subscale is to calculate an average by summing the scores for each item answered and dividing by the number of nonmissing items (McKinley & Hyde, 1996). An individual’s score is not valid if more than 2 items (25%) are missing or marked not applicable.

The OBCS has been normed and validated with college-aged participants and the Surveillance subscale has demonstrated strong internal consistency (alpha = .76 to .89) (McKinley & Hyde, 1996). Validity for it has been demonstrated by data that supported the hypothesized correlations between the Surveillance subscale other related scales. McKinley (1998) reported that the Surveillance subscale was negatively correlated, $r = -.55$ with the Body Esteem Scale (BES; Franzoi & Shields, 1984). In a validation study of the OBCS, McKinley and Hyde (1996) found a positive correlation ($r = .64$) between the Surveillance subscale and the Appearance Orientation Scale of the Multidimensional Body-Self Relations Questionnaire (MBSRQ; Cash, 1994; Cash et al., 1986) and a positive correlation ($r = .46$) between the Surveillance subscale and the Public Body Consciousness Scale (BCQ; Miller, Murphy, & Buss, 1981).

**Trait Scale of the State-Trait Anxiety Inventory Form Y (STAI; Spielberger, 1983; Appendix D).** The Trait scale of the STAI is a 20-item scale designed to assess the degree of past anxiety and an individual’s propensity to experience anxiety. It is included in the present research because of the consistent identification of anxiety as an affective state that can interrupt, diminish, or prohibit the experience of flow (Jackson, et al., 1998; Jackson, et al., 2001). Trait anxiety was assessed for exploratory purposes related to
anxiety and the experience of flow and for the role of anxiety as a covariate in the relation between self-objectification and flow.

Participants are instructed to respond to each item on a 4-point Likert-type scale (1 = almost never to 4 = almost always). To control for response set effects, 9 items are written in the positive direction and 11 are written in the negative direction. Examples of items are “I am a steady person” and “I lack self-confidence.” Scores are calculated by adding the scores for the twenty items, taking into account the reverse scored items. Possible scores range from 20 to 80 for the scale. For the full scale, internal consistency is reported to range between .90 and .92. Test-retest reliability estimates ranged from .65 to .77 over 30-, 60-, and 104-day periods (Spielberger, 1983). Factor structure studies of the STAI conducted with two different large samples provided strong support for the hypothesized 2-factor, state and trait anxiety, structure and are indicative of construct validity.

Internalization/Acceptance subscale of the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ; Heinberg, Thompson, & Stormer, 1995; Appendix E). The Internalization/Acceptance subscale of the SATAQ is an eight-item measure that assesses to what degree an individual accepts and internalizes societal standards of beauty. It was included in support of the planned exploratory investigation of the relation between the internalization of sociocultural standards of beauty and self-objectification. Respondents answer items on a 5-point Likert-type scale (1 = completely disagree to 5 = completely agree). One of the items is reverse-scored. Examples of the items are “I believe that clothes look better on thin models” and “Women who appear on TV shows and movies project the type of appearance that I see as my goal.” The scale score is
calculated by computing an average of the item ratings, taking into account the reverse-scored item, with higher scores indicating greater levels of internalization of societal standards of beauty.

In a validation study, the Internalization/Acceptance subscale correlated as expected with the Trait scale \( r = .55 \) of the Physical Appearance State and Trait Anxiety Scale (PASTA; Reed, Thompson, Brannick, & Sacco, 1991) and with the Multidimensional Body Self-Relations Questionnaire—Physical Appearance Evaluation scale \( r = -.42 \) (MBSRQ-PAE; Brown, Cash, & Mikulka, 1990). The internal consistency reliability for this scale in a recent study of objectification theory was .87 (Moradi et al., 2005).

**Demographic Information (Appendix F).** Participants were asked to indicate their age, race/ethnicity, year in school, height, weight, percentage of body fat (if available), and detailed sport participation history (i.e., number of sports in which they have competed, years in each sport, etc.). Sport type was quantified in terms of appearance focus using the data from Parsons and Betz (2001) categorical system. Their research generated data regarding the perceived focus on appearance and femininity of various sports, and a sport score for each participant was assigned based on the woman’s current sport participation.

Participants reported their height and weight on the demographic form. These self-report data were used to compute a body mass index using the formula: 

\[
\text{BMI} = \frac{\text{weight}}{\text{height}^2} \text{ (kg/m}^2\text{; Garrow & Webster, 1985)}; \text{ this value was controlled as a covariate in selected analyses. BMI mean scores by sport type are shown in Appendix H.}
\]
Data Analysis

Descriptive statistics and internal consistency reliability values were computed for all measures. Additionally correlations among all variables were computed.

The first hypothesis was tested by calculating correlations to examine relations between the DFS-2 global flow score and the score on the Surveillance subscale of the OBCS and between scores for each of the nine subscales of the DFS-2 and the score on the Surveillance subscale of the OBCS. Similarly, correlations were calculated to examine relations between the DFS-2 global flow score and the score on the SOQ and between scores for each of the nine subscales of the DFS-2 and the score on the SOQ. Due to these multiple tests, alpha was set at a more conservative level of .01.

The second hypothesis was tested by calculating correlations to examine the relations between sport type rating (i.e., appearance focus rating from Parsons & Betz, 2001) and the score on the Surveillance subscale of the OBCS and between sport type rating and the score on the SOQ. Again, the alpha was set at .01 because of multiple testing.

The third hypothesis was tested with multiple hierarchical moderated regression analyses. For these analyses, the appearance focus rating from Parsons and Betz (2001) was used to operationalize sport type and either the SOQ or OBCS Surveillance score was used to operationalize self-objectification. The criterion variable was the DFS-2 global flow score, or in turn, each of the nine dimension scale scores of the DFS-2. In step 1 of each regression, the self-objectification score (i.e., Surveillance subscale of the OBCS or the SOQ) and sport type score (i.e., Parsons & Betz [2001] rating) was entered. In step 2 of each regression, the interaction term (self-objectification X sport type) for the
two variables entered at step 1 was entered. Evidence for a moderator effect was
determined by the significance of the incremental change in $R^2$ at step 2. Because of the
multiple tests (i.e., regressions for each of the nine DFS-2 scales and for two global flow
scores), alpha was set at a more conservative level of at .01.

The exploratory investigation of the relation of the internalization of sociocultural
standards of beauty and self-objectification was tested by calculating two partial
correlations to examine relations between the SATAQ score and the SOQ and the
Surveillance subscale of the OBCS. Effects of BMI were controlled as a covariate in each
analysis. Additional exploratory analyses examined the whether, consistent with theory
and prior research, self-objectification and flow remain significantly related after
controlling for anxiety, and whether differences in the relations between the constructs of
interest exist when data are disaggregated by sport (e.g., team or individual).
CHAPTER IV

RESULTS

A total of 143 women athletes completed surveys for the present study. There were several individual questionnaires that were considered to be invalid and were not included in specific analyses because they were incomplete. The range of usable surveys reflected a high of 143 and a low of 116. Respondents appeared to have difficulty with the “forced-choice” ranking format of the Self-Objectification Questionnaire as many of the invalid questionnaires contained duplicate rankings of items. There were a total of 116 usable Self-Objectification Questionnaires netted from the data collection; therefore the necessary sample number of 130 established by power analysis was not met. The number of valid surveys from the other measures ranged from a high of 143 from the flow subscales to a low of 134 for both the STAI trait anxiety measure and the SATAQ internalization of beauty standards. Additionally, 10 of the women athletes did not provide a response to the sport participation question, resulting in 133 valid sport responses.

The data were collected from women athletes from two universities who competed at the NCAA division I level. The data collection methods were different. At the first university, the participants completed paper versions of the questionnaires which were subsequently sent back to the researcher. At the second university, it was necessary
to set up a web-based data collection site. Although the sample sizes were unequal, subsequent analyses of all demographic variables resulted in only one significant difference between the two groups: “year in school.” Subsequently, to determine any other salient group differences, the means of each measure for the two groups of students were examined via t-tests and the results of all tests did not meet significance at an alpha of .05 and thus, the data were aggregated for all analyses.

Measures and Variables of Interest

Scale Characteristics

Descriptive and reliability statistics were run for all of the scales and subscales and are shown in Table 2. All of the subscales and the global flow scale of the DFS-2 demonstrated good internal consistency reliability. Internal consistency reliability for the DFS-2 subscales ranged from .82 to .86 and for the global flow scale it was .93 for the present sample. These reliability estimates are consistent with the reliability estimate range of .78 to .86 reported by Jackson and Eklund (2002) from the scale development and cross validation study. For the current sample, means for the DFS-2 subscales ranged from 12.4 to 17.0, with standard deviations that ranged from 2.25 to 3.13. Correlations among the DFS-2 subscales are shown in Table 3 and ranged from .10 to .64 (median $r = .42$). These relations compare favorably to the intercorrelation range of .16 to .73 (median $r = .48$) as reported by Jackson and Eklund (2002).

The OBCS surveillance scale demonstrated good reliability in this study with a Cronbach alpha of .87 ($M = 3.46$, $SD = .81$); this is consistent with the internal consistency reliabilities of .88 (Tiggemann & Kuring, 2004) and .86 (Slater & Tiggemann, 2002) reported for other studies with college-aged women. The observed
mean scores of the OBCS surveillance scale ($M = 3.46$, $SD = .81$) also compare favorably to the scores ($M = 3.44$, $SD = .79$) reported by Parsons and Betz (2002) in a study that included women athletes.

Due to the ranked-choice format of the Self-Objectification Questionnaire, internal consistency reliability could not be computed. When the mean scores on the Self-Objectification Questionnaire for the present study ($M = 23.07$, $SD = 18.86$) are compared to those reported by Fredrickson and colleagues (1998), the data suggest ($M = 41.35$, $SD = 18.79$) that respondents in the current study valued competence-based qualities over appearance-based attributes. Indeed, the pattern of results in the current study is more consistent with the results reported by Tiggemann and Slater (2001). Their respondents, ballet dancers ($M = -4.76$, $SD = 14.59$) and non-dancers ($M = -10.34$, $SD = 12.08$), endorsed more competence-based variables on a 10-item version of the Self-Objectification Questionnaire with a possible score range of -25 to 25.

The internalization of beauty standards scale of the SATAQ evidenced strong internal consistency reliability with an alpha coefficient of .89. Both this alpha and the SATAQ beauty standards mean and standard deviation for the current sample ($M = 2.95$, $SD = .90$) are consistent with those reported by Moradi et al. (2005); she reported an alpha of .88, a mean of 3.27, and a standard deviation of .91. Finally, the trait anxiety scale of the STAI demonstrated strong internal consistency reliability with an alpha of .92 ($M = 38.49$, $SD = 9.28$), and this is consistent with the internal consistency reliability estimate of .91 ($M = 40.40$, $SD = 10.15$) Spielberger (1983) reported for a sample of women college students.
<table>
<thead>
<tr>
<th>Scale/Subscale</th>
<th>M</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
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<th>α</th>
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<td>.27*</td>
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<td>-.05</td>
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<td>.49*</td>
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<td>-.03</td>
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<td>-.07</td>
<td>-.44*</td>
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<td>.63*</td>
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<td>.35*</td>
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<td>-.12</td>
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<td>-.14</td>
<td>-.10</td>
<td>-.38*</td>
<td>.70*</td>
<td>.58*</td>
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<td>15. Sport type</td>
<td>.14</td>
<td>.10</td>
<td>.16</td>
<td>-.15</td>
<td>.13</td>
<td>.03</td>
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Note: * p < .01
Relations between variables

Correlations were calculated to examine relations between the variables, including women’s sport type, as sport type was operationalized as a continuous variable reflective of a sport’s emphasis on appearance (see Table 3). The relations between surveillance, self-objectification, internalization, and the flow global and subscale scores were all in the hypothesized directions. Specifically, surveillance correlated significantly with self-objectification ($r = .29, p < .01$) and this is consistent with past research (e.g., Tiggemann & Slater, 2001; Moradi, et al., 2005). The surveillance variable also correlated significantly with internalization of beauty standards ($r = .57, p < .01$) and this is comparable to the relation reported by Moradi et al. (2005). Overall, the relations between the SOQ scale and the other variables of interest may be summarized as weak, albeit in the hypothesized direction. Similarly, the observed intercorrelations between the subscales of the DFS-2 flow scale were consistent with the pattern of relations reported in past research (Jackson & Eklund, 2002), but slightly weaker.

The observed correlations between sport type and the flow variables, however, were inconsistent with the hypothesized relations. Higher scores on sport type reflected a greater emphasis on appearance and this was hypothesized to relate inversely to the flow scales. All but one of the correlations between sport type and flow were positive, including two correlations that were significant ($r_{goals} = .22, p < .01$; $r_{concentration} = .21, p < .01$).

Tests of Hypotheses

Hypothesis 1 stated that women athlete’s levels of self-objectification, as measured by the SOQ and the OBCS Surveillance scale, significantly and negatively
relate to their reported experience of flow. More consistent support for this hypothesis was found with the OBCS Surveillance scale data than with the SOQ scale data. Pearson Product Moment correlations were computed to test this hypothesis. Correlations were calculated first between the DFS-2 global and subscale flow scores and the score on the Surveillance subscale of the OBCS. Level of surveillance related negatively and significantly to all but two of the DFS-2 scores, and the clear goals and autotelic subscales correlated with the OBCS Surveillance score at levels that approached significance ($r_{global} = -.39$, $p < .01$, $r_{challenge} = -.22$, $p < .01$, $r_{action/aware} = -.26$, $p < .01$, $r_{goals} = -.20$, $p < .05$, $r_{feedback} = -.23$, $p < .01$, $r_{concentration} = -.23$, $p < .01$, $r_{control} = -.23$, $p < .01$, $r_{self-consc} = -.50$, $p < .01$, $r_{time} = -.24$, $p < .01$, $r_{autotelic} = -.16$, $p < .05$).

Next, correlations were calculated between the DFS-2 global and subscale flow scores and the SOQ. Although the SOQ self-objectification score correlated negatively with all of the flow variables, only the correlation for the loss of self consciousness subscale was significant ($r_{self-consc} = -.23$, $p < .01$). The correlations for the SOQ score and four other flow scores, however, approached significance ($r_{global} = -.19$, $p < .05$, $r_{concentration} = -.19$, $p < .05$, $r_{control} = -.17$, $p < .05$; $r_{time} = -.17$, $p < .05$). All correlations are presented in Table 3.

Hypothesis 2 stated that women athletes’ levels of self-objectification as measured by the OBCS Surveillance subscale and the SOQ self-objectification score significantly and positively relate to their participation in sports in which there is a greater focus on appearance. The hypothesis was directional, that is, athletes who participated in sports with a greater focus on appearance as reflected by a higher score on sports type rating, were hypothesized to endorse greater levels of self-objectification.
This hypothesis was not supported. Pearson Product Moment correlations were computed to test this hypothesis. First a correlation was computed between the sport type rating and the OBCS Surveillance subscale score. The association between sport type rating and the OBCS subscale score was not significant ($r = .14, p > .01$). Similarly, the correlation between the sport type rating and the SOQ self-objectification score did not reach significance ($r = .10, p > .01$). Correlations are presented in Table 3.

Hypotheses 3 stated that sport type moderates the relation between self-objectification and flow for women athletes, such that the magnitude of the inverse relation between self-objectification and flow is greater for women athletes who participate in sports that are more appearance-focused than for women athletes who participate in sports that are less appearance-focused. The results of the analyses did not support this hypothesis. Two series of multiple hierarchical moderated regression analyses were conducted to test for moderation. The criterion variable was the DFS-2 global flow score and subsequently each of the nine dimension scale scores of the DFS-2. In the first step of the regression, the self-objectification score (i.e., OBCS Surveillance subscale or the SOQ) and sport type score (i.e., Parsons & Betz [2001] rating) was entered. In the second step of each regression, the interaction term (self-objectification X sport type) for the two variables entered in step 1 was entered. A total of 20 regressions were performed. None of these analyses provided statistical support for a moderator effect. As mentioned previously, the hypothesized relation between sport type and self-objectification was not supported and indeed with a single exception, the observed direction of the relation between sport type and flow was contrary to prediction. Tables 4 and 5 summarize the results of the two regression series.
Table 4
Summary of Regression Analysis for Sport Type and Self-Objectification
OBCS Surveillance Subscale Predicting Global and Dimensional Flow Scores

<table>
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<th>Regression Criterion and Steps</th>
<th>$R^2$</th>
<th>$R^2_{change}$</th>
<th>$F_{change}$</th>
<th>df</th>
<th>$\beta$</th>
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<td></td>
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<td>OBCS Surveillance</td>
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Table 4

Summary of Regression Analysis for Sport Type and Self-Objectification

OBCS Surveillance Subscale Predicting Global and Dimensional Flow Scores (cont.)

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<tr>
<td><strong>F7 Loss of Self-Consciousness</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
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<td><strong>F9 Autotelic</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
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Note:  *$p < .01$.  
<sup>a</sup>N = 131.  
<sup>b</sup>N = 132.
Table 5

Summary of Regression Analysis for Sport Type and Self-Objectification

SOQ Self-Objectification Score Predicting Global and Dimensional Flow Scores

<table>
<thead>
<tr>
<th>Regression Criterion and Steps</th>
<th>$R^2$</th>
<th>$R^2_{change}$</th>
<th>$F_{change}$</th>
<th>df</th>
<th>$\beta$</th>
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</tr>
<tr>
<td>Step 2: Sport Type x SOQ</td>
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<td>.00</td>
<td>.02</td>
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<td>.05</td>
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<tr>
<td><strong>F1 Challenge/Skill</strong>&lt;sup&gt;d&lt;/sup&gt;</td>
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<tr>
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<td>.03</td>
<td>1.47</td>
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<td>.05</td>
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<td>SOQ</td>
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<td></td>
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<td>-.16</td>
</tr>
<tr>
<td>Step 2: Sport Type x SOQ</td>
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<td>.00</td>
<td>.54</td>
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<td>.29</td>
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<tr>
<td><strong>F2 Action/Awareness</strong>&lt;sup&gt;d&lt;/sup&gt;</td>
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<td>-.12</td>
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<td>.00</td>
<td>.07</td>
<td>(1, 114)</td>
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<td><strong>F3 Clear Goals</strong>&lt;sup&gt;d&lt;/sup&gt;</td>
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<td>Step 1:</td>
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<td>4.13</td>
<td>(2, 115)</td>
<td>.25*</td>
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<td>.25*</td>
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<td>-.11</td>
</tr>
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<td>.00</td>
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<td><strong>F4 Unambiguous Feedback</strong>&lt;sup&gt;d&lt;/sup&gt;</td>
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<td>(2, 115)</td>
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<td>Sport Type</td>
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<tr>
<td>SOQ</td>
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<td></td>
<td>-.04</td>
</tr>
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<td>.02</td>
<td>2.21</td>
<td>(1, 114)</td>
<td>.57</td>
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Table 5
Summary of Regression Analysis for Sport Type and Self-Objectification

SOQ Self-Objectification Score Predicting Global and Dimensional Flow Scores (cont.)

<table>
<thead>
<tr>
<th>Regression Criterion and Steps</th>
<th>$R^2$</th>
<th>$R^2_{change}$</th>
<th>$F_{change}$</th>
<th>df</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>F5 Concentration$^d$</td>
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<tr>
<td>Step</td>
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<td></td>
</tr>
<tr>
<td>Sport Type</td>
<td>.10</td>
<td>.10</td>
<td>6.17*</td>
<td>(2, 115)</td>
<td>.25*</td>
</tr>
<tr>
<td>SOQ</td>
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<td></td>
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<td>-.21</td>
</tr>
<tr>
<td>Step 2: Sport Type x SOQ</td>
<td>.10</td>
<td>.01</td>
<td>.94</td>
<td>(1, 114)</td>
<td>.36</td>
</tr>
</tbody>
</table>

F6 Control$^d$

| Step                          |       |                |              |     |         |
| Sport Type                    | .07   | .07            | 4.01         | (2, 115) | .20     |
| SOQ                           |       |                |              |     | -.18    |
| Step 2: Sport Type x SOQ      | .07   | .00            | .02          | (1, 114) | -.06    |

F7 Loss of Self-Consciousness$^d$

| Step                          |       |                |              |     |         |
| Sport Type                    | .05   | .05            | 2.92         | (2, 115) | .04     |
| SOQ                           |       |                |              |     | -.22    |
| Step 2: Sport Type x SOQ      | .05   | .00            | .06          | (1, 114) | .10     |

F8 Time Altered$^c$

| Step                          |       |                |              |     |         |
| Sport Type                    | .03   | .03            | 1.49         | (2, 114) | .03     |
| SOQ                           |       |                |              |     | -.16    |
| Step 2: Sport Type x SOQ      | .03   | .00            | .08          | (1, 113) | .11     |

F9 Autotelic$^d$

| Step                          |       |                |              |     |         |
| Sport Type                    | .02   | .02            | 1.24         | (2, 115) | .06     |
| SOQ                           |       |                |              |     | -.14    |
| Step 2: Sport Type x SOQ      | .03   | .01            | .88          | (1, 114) | -.37    |

Note: *$p < .01$.
$^c N = 116$.
$^d N = 117$. 

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Exploratory Analyses

The results of the exploratory investigation of the relation of the internalization of sociocultural standards of beauty and the two measures of the construct of self-objectification indicated significant correlations for both measures. The effects of BMI were controlled as a covariate in each analysis to be consistent with past practice. A partial correlation analysis controlling for BMI reflected that the SATAQ correlated significantly with the SOQ ($r = .27, p < .01$). Likewise, the partial correlation for the relation of the SATAQ and the OBCS Surveillance subscale score when controlling for BMI also was significant ($r = .57, p < .01$)

Partial correlations also were computed to explore the effect of trait anxiety on the relation between the measures of self-objectification and the flow variables. Consistent with theory and prior research, these analyses revealed that anxiety correlated significantly with the flow scores and both self-objectification measures, and when anxiety was controlled many of the previously reported significant relations between flow and self-objectification were reduced to non-significance. Only three (i.e., loss of self-consciousness, time, and flow global scale) of the 10 correlations between the flow variables and the OBCS Surveillance subscale reached the .01 level of significance when the effects of trait anxiety were controlled. Partial correlations to examine the relation between the flow variables and the SOQ, controlling for the effects of trait anxiety resulted in nonsignificant findings for all 10 flow variables. These partial correlations are shown in Table 6.
Table 6

Partial Correlations between Self-Objectification and Flow Controlling for Anxiety

<table>
<thead>
<tr>
<th>Scale</th>
<th>Global Flow</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBCS Surveillance</td>
<td>-.24*</td>
<td>-.03</td>
<td>-.14</td>
<td>-.09</td>
<td>-.13</td>
<td>-.13</td>
<td>-.07</td>
<td>-.41*</td>
<td>-.25*</td>
<td>-.04</td>
</tr>
<tr>
<td>SOQ</td>
<td>-.09</td>
<td>-.05</td>
<td>-.01</td>
<td>.02</td>
<td>.07</td>
<td>-.12</td>
<td>-.07</td>
<td>-.15</td>
<td>-.14</td>
<td>-.06</td>
</tr>
</tbody>
</table>

Note: *p < .01.
Flow subscales: 1-Challenge-Skill; 2-Action/Awareness; 3-Clear goals; 4-Feedback; 5-Concentration; 6-Control; 7-Self-consciousness; 8-Time; and 9-Autotelic.

A final set of exploratory analyses were conducted to examine whether differences in the relations between the constructs of interest (i.e., OBCS Surveillance subscale, SOQ, and DFS-2) existed when the data were disaggregated by sport type using team sport and individual sport as the criteria for grouping. The decision about whether a sport was an individual sport or group sport was determined by whether competition for the sport generally occurs on an individual or team level. The team sport group included lacrosse, crew, field hockey, basketball, soccer, softball, volleyball, and cheerleading and was represented by 71 athletes. The individual sport group was comprised of cross country, track, diving, swimming, tennis and gymnastics and included 64 athletes. Initial examination of the data for differences included $t$-tests comparing the means of the scores on the flow global and subscales, the OBCS Surveillance subscale, and the SOQ.

The results of these tests reflected no significant differences between the groups. Correlations between these measures were then computed, by sport group, and are shown in Table 7. The pattern of results between the sport groups was similar to the pattern that resulted from analyses performed with the entire respondent sample, with correlations...
similar in direction, slightly muted in strength, and fewer of the correlations reached significance. There were three correlations between the OBCS Surveillance subscale and the DFS-2 scales that were found to be significant with the team sport group, but did not reach significance with the individual sport group. These scales were clear goals, unambiguous feedback, and time transformation and the differences between the correlations accounted for additional explained variances, 7% for clear goals, 10% unambiguous feedback, and 9% for time transformation. No correlations between the SOQ and the DFS-2 reached significance.
Table 7

Correlations between DFS-2 Flow Scales, Self-objectification and Sport Type (Individual or Team)

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
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<td>.52*</td>
<td>.55*</td>
<td>.56*</td>
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<td>.77*</td>
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<td>.67</td>
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<td>-.15</td>
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<td>2. Challenge/skill</td>
<td>.75*</td>
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<td>.21*</td>
<td>.47*</td>
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<td>.46*</td>
<td>.52*</td>
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<td>.59*</td>
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<td>-.05</td>
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<td>3. Action/aware.</td>
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<td>.68*</td>
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<td>.18</td>
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<td>.08</td>
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<td>.33*</td>
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<td>.21</td>
<td>-.23</td>
<td>-.12</td>
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<td>4. Clear goals</td>
<td>.67*</td>
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<td>.55*</td>
<td>-</td>
<td>.45*</td>
<td>.39*</td>
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<td>-.18</td>
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<td>-.19</td>
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<td>-.14</td>
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<td>10. Autotelic</td>
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<td>-.28*</td>
<td>-.33*</td>
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<td>-.21</td>
<td>.15</td>
<td>-.21</td>
<td>.23</td>
<td>-</td>
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</table>

Note: *p < .01. Correlations for team sports are below the diagonal while correlations for individual sport are above the diagonal.
Summary

Overall, the results of the study found partial support for Hypothesis 1. The hypothesized relation between the experience of flow and self-objectification as operationalized by the OBCS Surveillance subscale was supported. The hypothesized relation between flow and self-objectification as operationalized by the SOQ was supported for only one flow subscale. Hypothesis 2 was not supported as correlations between the sport type variable (i.e., rating of emphasis on appearance) and self-objectification were not significant. Hypothesis 3 also was not supported as sport type did not moderate the relation between self-objectification and flow.

Exploratory findings, however, supported the anticipated relation between the SATAQ and both measures of self-objectification. In each case, correlations were computed controlling for the effects of BMI. Additionally, the examination of the effects of trait anxiety on the relation between the measures of self-objectification and flow indicated that anxiety as measured by the STAI had a strong effect as a covariate and reduced the number of observed significant relations between self-objectification from nine to three. Finally, no differences in patterns of relations among variable were found when participants in team and individual sports were examined separately.
CHAPTER V
SUMMARY AND CONCLUSION

This chapter first presents an overview of the current study. The theoretical perspectives of objectification theory and flow theory are discussed. The relevance of these constructs to women athletes and specific sport type then is considered. Next, results of the study are discussed, integrated with the extant literature, and implications of the results are explored. Finally, limitations of this study and recommendations for future research are offered.

The purpose of the current study was to examine and explore the theoretical relation of self-objectification and flow as proposed by Fredrickson and Roberts (1997). Objectification theory (1997) is based on the concept that cultural sexual objectification is infused in Western culture and that the objectification experience is exacerbated for women. Further, the theorists proposed a model that outlines a specific set of consequences that are purported to result from cultural sexual objectification and the resulting internalization process of self-objectification.

To date, research has explored and tested many tenets of the self-objectification model and support has been found for the proposed links between self-objectification and shame (Noll & Fredrickson, 1998), negative affect (Miner-Rubino et al., 2002), disordered eating (Tiggemann & Slater, 2001), and depression (Tiggemann & Kuring,
2004), and for the internalization process of self-objectification (Hill, 2003). There has been minimal examination of the proposed relation of self-objectification to a decreased awareness of bodily states, sexual dysfunction, and inhibition of the peak motivational state known as flow.

Flow is a peak motivational state that has been defined and empirically tested through qualitative and quantitative research. The state of flow is conceptualized to included nine dimensions: 1) challenge-skill balance; 2) merging of action and awareness; 3) clear goals; 4) unambiguous feedback; 5) concentration on task; 6) sense of control; 7) loss of self-consciousness; 8) time transformation; and 9) autotelic experience. Research supports the proposed nine-dimension model of flow (Jackson & Marsh, 1996; Marsh & Jackson, 1999). Csikszentmihalyi and Jackson (1999) collaborated to examine the flow experience specific to athletic participation. These authors stated that athletic experience is particularly conducive to the experience of flow. Jackson and Eklund (2002) subsequently developed a series of instruments to assess flow in sport and the second generation of measures was utilized in this study.

The present study was designed to examine more fully the relation between self-objectification and the experience of flow, and to do so in a more comprehensive manner than has been done in past research. Several observations emerged from critical analysis of the design of earlier studies. Overall, measurement problems were a recurring subject of critique. The use of partial assessment tools as well as the use of “homemade” instruments for the measure of flow was considered problematic. Additionally, the practice of using measures with participants for whom the measure was neither developed nor normed seemed likely to be a source of error. The design of this study addressed
these measurement difficulties through full assessment of flow and careful specification of participants for whom the measure was targeted.

This study was the first study to focus specifically on flow in relation to self-objectification and thus pioneered the empirical examination of self-objectification and flow. Design choices were consciously narrow and specific. Building on the extant literature that has documented the experience of flow in sport, women athletes were selected as the population of interest. Additionally, because the importance of level of competition has been documented within this body of literature as an important factor for the experience of flow, it was decided that women athletes competing at the highest college level, NCAA Division I, would be sought as participants for this research.

Sport type was an additional variable of interest for this study. Sports have been conceptualized as varying in aspects of leanness, focus on appearance, and femininity. Research has documented that eating disorders are more prevalent among athletes who participate in lean sports such as gymnastics (Black et al., 2003; Sundgot-Borgen & Torstveit, 2004), cheer squad, dance team, and aerobic instruction (Smolak, et al., 2000). Conceptually and intuitively, these aspects seem to intersect with objectification theory and the process of self-objectification for women athletes. Thus, a sport’s relative focus on appearance was examined in the present study relative to flow (see: Parsons & Betz, 2001).

Finally, exploratory analyses were performed to understand the relation of trait anxiety to self-objectification and flow. Further, congruent with past research on the objectification model, exploratory analysis with the SATAQ, a measure of internalization of sociocultural standards of beauty, was conducted controlling for BMI. To explore
whether the distinction between team sports (e.g., soccer) or individual sports (e.g., diving) had an influence on the relation between the self-objectification and flow experience reported by athletes, additional analyses were performed and comparisons between team and individual sports were examined.

One-hundred and forty-three NCAA Division I women athletes from two universities in the northeast region of the United States volunteered to participate in this study. Fifty-two (36%) of the respondents were from the first university and 91 (64%) participants were from the second university. Data were aggregated because no significant differences between the group means with regard to the variables of interest were found. The ethnic composition of the group was primarily White/Caucasian as 89% percent of the participants identified their ethnicity/race as White/Caucasian. The balance of the respondents were: 2% African American/Black, 3% Hispanic/Latina, 1% Native American/American Indian, 3% Multiracial, 2% other, and 6% of the participants did not respond to the ethnicity question. The age range of the women athletes was from 18 to 24 and all academic years, first year students through fifth-year seniors, were represented.

Respondents provided their sport history and were instructed to respond to the flow measure considering their primary sport, the one in which they compete or for which they were recruited to compete in college. Participation in the sport types was disbursed relatively evenly across the focus on appearance continuum (Parsons & Betz, 2001) with 45 (33%) representing the lowest third in the sport ranking, 44 (33%) falling in the middle third of scores, and 46 (34%) participating in sports that were found to be in the top third of appearance-focused sports. Additionally, there were 64 participants who competed in individual sports and 71 participants who competed in team sports.
The findings of this study were primarily in support of Hypothesis 1. Higher levels of self-objectification related to lower reported experience of flow. Of the two measures used to assess self-objectification, the OBCS Surveillance subscale was associated with more robust results. The experience of eight dimensions of flow (i.e., challenge-skill balance, merging of action and awareness, unambiguous feedback, concentration on task, sense of control, loss of self-consciousness, time transformation, and the global flow composite) were related negatively to increased levels of self-objectification. Self-objectification as measured by surveillance accounted for between 25% of the variance, for the flow loss of self-consciousness subscale, and 5% of the variance, for the flow challenge/skill balance, unambiguous feedback, concentration, and control subscales, in DFS-2 scores.

The relations demonstrated by the SOQ were far less robust and of the 10 scales, only one, the loss of self-consciousness subscale, supported the prediction that increased self-objectification is associated with decreased experience of flow. This relation accounted for 5% of the variance between flow and the SOQ. The data, however, reflected a trend congruent with the hypothesis; all of the correlations between the flow scale scores and the SOQ scores were in the predicted direction, such that increased levels of self-objectification as reflected by higher SOQ scores were associated with less reported flow.

This study did not find support for the predicted link between self-objectification and the level of appearance focus of sport type as predicted in Hypothesis 2. Examination of the sport type appearance focus ranking and self-objectification scores revealed that sport type was not significantly related to either the OBCS Surveillance subscale or the
SOQ score. The lack of a meaningful relation between these variables is interesting. Parsons and Betz (2001) described their sport type appearance focus ranking as tapping “the objectification context of the sport” (p. 213), yet for the current study an athlete’s sport type appearance focus ranking had no observable relation to the athlete’s level of self-objectification. Notably, the outcome of this study was congruent with that of Parsons and Betz (2001) study; they also did not find support for their hypothesis with regard to sport type appearance focus ranking and level of athlete’s self-objectification.

Additionally, the findings of this study did not support Hypothesis 3, the prediction that sport type appearance focus ranking moderated the relation between self-objectification and the flow dimensions. Although moderation was not supported, there were two significant relations between sport type appearance focus and flow dimensions; correlations between sport type appearance focus and clear goals and sport type appearance focus and concentration suggested that women athletes who participated in sports with a greater focus on appearance were more likely to experience flow related to having clear goals and focused concentration when participating in their sport. Indeed, examination of the correlations between the flow dimension scales and the sport type appearance focus rankings revealed that the relations between all but one of the scales were in the opposite direction of the prediction. The unexpected performance of the sport type appearance focus ranking generated many questions.

The exploratory comparison between athletes who competed in team sports and those who competed in individual sports demonstrated some isolated differences in the experience of flow between the groups. Overall the pattern of results was generally consistent with that of the combined sport data in terms of strength and direction of
observed correlations. Although there were no significant differences in the experience of flow between the groups, three differences between the groups were found regarding the relation between self-objectification and flow. For women athletes who participated in team sports, the link between self-objectification and flow experiences was more pronounced in the dimensions of clear goals, unambiguous feedback, and time transformation than for women who competed in individual sports. These differences are difficult to interpret and overall the differences in flow between the groups seem rather minor.

In sum, consistent support was found for the hypothesized relation between self-objectification and flow. For the NCAA Division I women athletes in this study, the experience of flow was related negatively to the reported levels of self-objectification, most saliently as measured by the OBCS Surveillance subscale. These results extend prior research by examining both a global measure of flow and the nine specific dimensions of flow. Further, it would appear that the experience of flow was relevant for these women athletes across the continuum of sports represented in the study. The relation between self-objectification and flow remained relatively constant whether participation was on a team or at the individual level and, contrary to prediction, regardless of the level of appearance-focus of the sport in which they competed. For these women athletes trait anxiety was related to the experience of flow. This relation was observed across virtually all of the flow dimensions with the exception of the time transformation scale. Thus, it appeared that for this group of athletes, the experience of flow is related both to self-objectification and to anxiety.
Conclusions and Interpretation

The central focus of this study was to examine flow, a relatively overlooked and under-researched tenet of objectification theory. The predictions made about the experience of flow in the objectification theory model make intuitive sense. As attentional resources are allocated to the self-objectification process (e.g., surveillance), it is reasonable to predict that flow, a state that involves multiple cognitive resources will be diminished. Until the current study, the examination of flow seemed to be overlooked or relegated to a consideration of minor importance. This study focused on the experience of flow and thus extended the examination of the objectification model by the contribution of a more fully defined and tested construct. The use of the complete DFS-2 as a measurement of flow both extended prior objectification research by comprehensively assessing flow and also conformed to flow research recommendations that suggest flow be examined from a multidimensional perspective (Jackson, 2001; Jackson & Csikszentmihalyi, 1999; Jackson & Eklund, 2002).

The choice of women athletes as the population of interest was purposeful. Athletics, particularly for individuals who compete at the elite level, has been shown to be facilitative of flow (Jackson & Eklund, 2002, Russell, 2001) and the intention was to increase the likelihood of tapping and examining the flow experience. Tiggemann and Slater’s (2001) study that compared dancers and non-dancers in a test of the full objectification model including flow as a variable, supported only the link between self-objectification and flow for the dancers, although the levels of self-objectification for both groups were roughly equivalent. It is plausible, based on the flow literature, that athletes experience more frequent and intense flow levels. The current study focused
solely on elite athletes who were instructed to consider their primary competitive sport when responding to the flow scales. The choice to focus on elite, college-aged women athletes is congruent with past flow research protocols that examined flow with narrowly defined populations and activities (e.g., Han, 1988; Jackson et al, 1998; Sato, 1988).

For the college-aged elite women athletes who participated in this study, increased experience of self-objectification, particularly as measured by self-surveillance, was associated with decreased experience of global flow and seven of the nine dimensions of flow. A particularly strong link between loss of self-consciousness and surveillance was observed, underscoring that women athletes who engaged in more surveillance reported less of the flow experience that is marked by a loss of concern for the self and the ability to engage in sport with minimal doubt about what to do (Jackson & Csikszentmihalyi, 1999). This link makes intuitive sense as the loss of self-consciousness dimension of flow appears to be antithetical to the experience of self-objectification.

This study offered the opportunity to examine women athletes’ dimensional experience of flow and to refine the understanding of the relation between self-objectification and the individually distinct subscales of flow. The relations between self-objectification and the other dimensions of flow were less robust than that of loss of self-consciousness. Approximately 15% of the variance of the global flow scale was associated with self-surveillance. The other flow scales typically reflected 5% of the variance accounted for by the relation of self-surveillance and flow. It appears that the relation between the flow dimensions and self-objectification is variable, particularly as
reflected by the prominent association between the loss of self-consciousness subscale and self-objectification.

These results are congruent with and an extension of the pattern of results reported in two published studies of objectification theory. These prior studies included the experience of flow as an outcome variable and used both the Surveillance subscale of the OBCS and the SOQ to tap self-objectification (Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001). Specifically, the OBCS Surveillance scale reflected more robust relations across the present study and the two earlier studies.

The measures that were employed to tap self-objectification are related, but distinct, as reflected by their modest correlation ($r = .29$). The OBCS surveillance scale taps the cognitive process of habitual self-scrutiny whereas the SOQ is a measure of values, forcing ranked-choice between appearance and physical competence. Flow is a cognitive construct and may relate more congruently to the surveillance scale because of the cognitive nature of both constructs. Further, surveillance, a cognitive process may more effectively disrupt the cognitive process of flow due to the allocation finite attentional resources.

Additionally, a noticeable difference between the earlier studies and the current study was the full measurement of flow. In the current study, the aim was to measure flow comprehensively, thus nine dimensions and global flow, were assessed. For example, for this group of women athletes, the autotelic dimension of flow was of relatively little importance, whereas the loss of self-consciousness was particularly salient with respect to the experience of self-surveillance. The inclusion of the multiple facets of flow is a distinct advantage in the study of objectification theory and flow.
An additional extension of past objectification theory research that included flow as a variable was the exploratory examination of the relation of anxiety to the experience of flow. The experience of trait anxiety for the women who participated in this study was related to their experience of self-objectification and flow. The women athletes who reported high levels of trait anxiety also reported lower levels of flow. The findings of these analyses reflected significant and robust relations between anxiety, self-objectification, and flow and underscored the salience of the experience of anxiety in the flow model. Although this finding is consistent with the theoretical and empirical flow literature that suggests that the experience of anxiety can disrupt or inhibit the experience of flow (Jackson, Kimiecik, Ford, & Marsh, 1998; Jackson, Thomas, Marsh, & Smethurst, 2001), the intensity of this result was surprising and provocative.

In the objectification theory model, anxiety is postulated to be a psychological outcome, with higher levels of anxiety positively related to increased report of self-objectification. In the flow model, increased anxiety is theoretically related to lower levels of flow, a postulate that has been empirically supported (Jackson et al., 1998). Anxiety has been examined as an outcome in most objectification theory research (e.g., Miner-Rubino et al., 2002; Tiggemann & Slater, 2001) and for this study the relation of anxiety as a covariate was explored because it has been identified as a key factor for the disruption and interruption of flow (Jackson et al., 1998, Jackson et al, 2001). This exploration was unique, an extension of previous research, and in spite of the perplexing results appeared to be a sound theoretical consideration.

It is important to consider the apparent profound influence of anxiety on the relation between self-objectification and flow. Objectification theory postulates that
cultural sexual objectification predicts self-objectification and subsequent outcomes of self-objectification that include negative emotions (e.g., anxiety) and reduced experience of flow. The results of the current study echo the previous research that has supported the link between self-objectification and anxiety (Miner-Rubino, Twenge, & Fredrickson, 2001) and between self-objectification and flow (Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001). Through the lens of flow theory, anxiety is conceptualized as capable of restricting the experience of flow. The results of the current study are consistent with both objectification and flow theories and are indicative of theoretical and observed overlap between the two theories. Indeed, they suggest that anxiety may mediate the relation between self-objectification and flow.

The level of self-objectification as endorsed on the OBCS Surveillance subscale or the SOQ for the athletes in the present study was not related to the level of appearance focus of their primary sport type. These results, although contrary to prediction, mirror those of the Parsons and Betz (2001) study in which the ranking system was developed. Their subsequent analysis did not support their hypothesized relation between appearance focus of sport type and self-objectification. These authors speculated that the lack of observed results was related to competitive level, as the respondents in their study competed at the high school level, and they posited that at it may be at the elite level of competition (e.g., college) that differences in the appearance-focused nature of a sport have an observable impact on psychological variables such as self-objectification. Contrary to their speculation about the importance of competitive level, the current study’s participants competed at the elite level and the link between level of appearance focus of sport type and level of self-objectification again was not observed.
The importance of competitive level is supported in the eating disorder literature that finds elite athletes competing in sports that emphasize leanness to be at most risk for eating disorders (e.g., Smolak, et al., 2000; Sundgot-Borgen & Torstveit, 2004). The lack of results related to appearance focus of sport type raised questions about the validity of the appearance-focus scale (Parsons & Betz, 2001) and about possible differences between the prediction of a motivational state (e.g., flow) and the prediction of pathology (e.g., eating disorders). The results of the current study may influence changes in the way outcomes in the objectification theory model are conceptualized, perhaps manifesting a pathological outcome (i.e., eating disorder) is considerably different that inhibiting the positive state of flow.

This study also examined the relations between the internalization of sociocultural standards of beauty (SATAQ) and the two measures of self-objectification. For the women athletes who participated in the study, increased levels of self-objectification were associated with greater internalization of sociocultural standards of beauty, a finding that is consistent with theory and past research that examined the relation between the SATAQ and the OBCS Surveillance subscale (Moradi et al., 2005; Sinclair, 2006). In the present study both measures of self-objectification were examined. Scores on the OBCS Surveillance subscale demonstrated a stronger relation with the internalization of cultural standards scores than did the SOQ, explaining approximately 32% of the variance compared with 7% explained by the SOQ. Consistent with standard practice in objectification research, effects of BMI were controlled for these analyses.

It has been suggested that the process of internalizing sociocultural beauty standards is a mechanism that mediates theorized links in the objectification theory model
and serves to translate cultural sexual objectification to eating disordered symptoms. Preliminary support has been found for this proposed role (Moradi, 2005) and the current findings provide additional support for the relations between internalization of sociocultural standards of beauty and self-objectification.

Overall, then, the present findings extend the results of other studies that explored self-objectification and flow (Greenleaf, 2001; Tiggemann & Kuring, 2004; Tiggemann & Slater, 2001). The role of anxiety as a covariate was introduced with surprisingly robust results that supported current conceptualizations of its relation to self-objectification and flow but also raised questions about its postulated role in objectification theory. The results of the examination of appearance focus of sport type, although not as predicted, were congruent with past research that employed the ranking system used in this study (Parsons & Betz, 2001).

Implications of Findings

The findings of this study extended support for the theoretical link between self-objectification and flow primarily by providing a multi-dimensional examination of the experience of flow for the student athlete participants of the study. Additionally, these results also highlighted the influential role of anxiety specific to the experience of flow in the objectification theory model. Further, the lack of support for the hypothesized link between level of appearance focus of sport type and self-objectification seemed counter-intuitive and generated questions about operationalizing sport type on aspects that more accurately represent the objectification context of a sport.

The results of this study are consistent with the postulate that self-objectification is associated with decreased experience of peak motivational states (Fredrickson &
Roberts, 1997). In particular, the salience of the dimension of loss of self-consciousness and its inverse relation to flow for the respondents of this study echoes the prediction made by Fredrickson and Roberts (1997) about how self-objectification creates a form of self-consciousness that limits or thwarts the experience of flow. The experience of self-objectification for women athletes in this study was related to less optimal sport experience. Peak motivational states have been theorized to contribute to human development (Csikszentmihalyi & Rathunde, 1992), quality of life (Fredrickson & Roberts, 1997), and have been found to be associated positively with subjective well-being (Robbins & Kliewer, 2000). Thus, understanding the relation of self-objectification to flow experiences is important because reducing flow experiences can affect negatively a person’s quality of life and perceptions of well-being.

Further, anxiety emerged as having an important role in the objectification model. Although this study was correlational, the results of this study were consistent with the results of past studies that have examined factors that impede flow. Research has found that when athletes experience high levels of anxiety, many dimensions of flow are affected negatively (Jackson et al., 1998). In the current study, anxiety was related to both flow and self-objectification. Due to the correlational nature of this study, causality and direction can not be determined, yet these results do raise questions about the source and role of anxiety in the objectification model. Further, the questions that arose from the exploratory analysis involving anxiety suggested that the objectification model may not represent fully the relation between anxiety and flow.

As noted previously, in past objectification research, anxiety has been examined as an outcome variable but its function as a mediator in the relation between self-
objectification and flow had not been considered. Anxiety may be the mechanism through which flow is diminished given its relation with both self-objectification and flow. Indeed, given the pronounced effect of anxiety on the relation between self-objectification and flow, greater attention to the role of anxiety may be indicated. Additionally, these finding suggest that the experience of flow with regard to self-objectification may not be a simple or linear relation, but it may be bi-directional or additive. That is, anxiety may be exacerbated by cultural sexual objectification and the subsequent process of self-objectification. In sum, it seems necessary when studying flow to include variables that have been theorized and evidenced to affect the experience of flow to achieve a good understanding of the relations between these constructs.

Finally, the construct of appearance focus of sport type and the hypothesis that women who participate in sports that are highly appearance-focused also report higher levels of self-objectification and lower levels flow was simply not supported. In fact, the data obtained supported sport type as neither a moderator nor a mediator of the relation between self-objectification and flow. The moderation hypothesis that was tested in this research was derived from a body of literature that links lean sports (e.g., ballet, aerobics instructors, and cheerleaders) with eating disorders (see: Smolak, et al., 2000). In addition, in a study of objectification theory that compared former ballet dancers and non-dancers, the link between self-surveillance and flow was significant only for the former dancers (Tiggemann & Slater, 2001). The researchers proposed that the concept of flow may have been more relevant for the former dancers than the non-dancers.

It is possible that appearance-focus does not equate to leanness, in spite of the some conceptual overlap between the variables. Indeed, concern about operationalization
of the sport type variable in general is supported by the non-significant results from an earlier study that used the same ranking system (Parsons & Betz, 2001). Examination of the development of this ranking system resulted in speculation that might help to understand why it has not performed as expected in this study or in the Parsons and Betz (2001) study.

The Parsons and Betz (2001) appearance focus of sport type ranking system was developed in a study that polled opinions from first-year college students about their perceptions of various sports on dimensions of appearance-focus and femininity. Thus, the results quantified opinions about sports by individuals who may or may not have participated in those sports. Subsequently, the data were extrapolated into a continuum developed from the opinion-based ranking system and it has been used as a tool to quantify the objectification context (i.e., appearance-focus and femininity) of women’s athletics. The expectation that athletes experiences will conform to these opinion data may be flawed and be a causal factor in producing results that are at odds with hypotheses and theory.

Limitations

There are a number of limitations to be mentioned for this study of self-objectification and flow for women athletes. These limitations primarily relate to issues of measurement and to the potential to generalize the results. As noted previously, the focus of this study was narrow to promote the detection of an effect between self-objectification and flow, but this choice was at the expense of reduced generalizability of the results of the study. Further, there was a lack of ethnic and racial diversity in the sample as the respondents were predominantly White, a factor which also limits
generalizability for this study. Unfortunately, the lack of ethnic diversity did not allow additional exploration of the sport type variable by ethnic/racial group, a contrast that produced some observable differences in a past self-objectification study that examined the effects of watching lean and non-lean sports by a diverse group of adolescent girls (Harrison & Fredrickson, 2003).

Participants in the study appeared to encounter problems completing the Self-Objectification Questionnaire (SOQ). Nearly 20% of the participants did not complete the questionnaire properly or fully. The format for this instrument is forced-choice ranking of twelve items. Review of the data revealed that many of the women began the instrument and then ceased completion of the questions or duplicated their responses in spite of clear instructions to use each ranking once. It seems important to note that none of the other questionnaires produced this percentage of invalid responses. Finally, the number of flawed responses raises overarching questions about the quality of the data received.

Other limitations of this study were associated with measurement and design. The study was correlational in nature and as such, no inferences can be made regarding causal direction of the relations. The data were retrospective as the respondents were instructed to consider their athletic participation in the recent past. Retrospective data can be problematic and particularly so for a flow study. Flow is experiential in nature and flow theorists have posited that the best way to assess flow is to collect data immediately following the activity or by interrupting the activity to assess the experience of flow (Csikszentmihalyi, 1992). Methods recommended for flow data collection (e.g., Experiential Sampling Method) are cumbersome and were not considered pragmatic for this study.
A related measurement issue was the use of trait rather than state measures for the flow and anxiety variables. Both state and trait measures for flow and anxiety exist, but based on the retrospective nature of the data collection, trait measures were specified for this study. Ideally, the design could be improved by immediate data collection using both the Flow State Scale (FSS-2; Jackson & Eklund, 2002) and the state form of the STAI (Spielberger, 1983) and may more accurately capture the experiential nature of flow. Other measures of anxiety that are more central to sport or performance activities may also refine the measurement of anxiety related to flow.

Addressing these limitations could provide a richer understanding of the experience of flow from the perspective of the objectification model. The importance of a more diverse respondent group with regard to demographics, particularly age and ethnicity, as well as broader exploration of flow in other activities would be beneficial. The importance of refining measurement of flow by tapping the immediate experience of the activity, rather than a retrospective assessment is more congruent with the theoretical conceptualizations of the construct of flow. Immediate assessment also would allow for state, in addition to trait, measures to be used and would offer a more comprehensive examination of flow.

Clinical Implications

The intersection of objectification theory and flow theory is relevant to the practice of counseling psychology. Understanding factors that promote or impede peak motivational states has application in sport psychology, school psychology, and clinical practice. Although this study is preliminary and further research is needed to refine our understanding of self-objectification and flow; learning to facilitate, intensify, or
overcome obstacles to flow may comprise a set of skills with application in strength-based counseling and in athletics.

Understanding how women athletes’ experience of cultural sexual objectification, self-objectification, and anxiety affects flow experiences has the potential of enhancing sport performance and enjoyment by increasing the experience of flow. Coaches, athletic staff, and athletes could benefit from psychoeducational presentations that promote understanding of the relation between self-objectification and anxiety on the experience of flow. In addition to education and awareness of the negative effects of self-objectification, the inclusion of cognitive-behavioral strategies (e.g., relaxation training for anxiety; thought-stopping and distraction for negative thoughts) could aid in skill training to enhance flow experiences in sport.

Ideally, the findings of this study may promote additional studies to refine the understanding self-objectification and flow for athletes and stimulate research that extends beyond the realm of athletics. Flow has been described as a universal experience and one that has been measured across activities. A broader understanding of the relation between self-objectification and flow across a wide range of human activities would result in more opportunities for interventions that include a focus on self-objectification and flow.

Future Directions

The present study illuminated several areas for development for future studies of self-objectification and flow. Refinement of the measurement of key constructs is important. Further examination of the role of flow in the objectification model and the relation of other variables within the model to flow are essential to better the
understanding of self-objectification and flow. Additionally, it is critical that greater
demographic diversity is represented in future studies of self-objectification and flow, to
insure that the results are more representative and applicable to the culture at-large.

The self-objectification process has been shown to be multifaceted and
researchers need to consider carefully which facets are relevant to their work. The two
measures used in this study, the SOQ and the OBCS Surveillance subscale are related,
but represent slightly different aspects of self-objectification. The SOQ is designed to tap
the importance of physical appearance versus physical competence attributes, and the
OBCS Surveillance subscale is designed to tap the cognitive process of habitual self-
scrutiny. Although the SOQ seemed germane to the study of self-objectification, it
appeared to be a difficult questionnaire for the participants of this study. Including or
developing other measures that tap facets of self-objectification that are more user-
friendly may enhance the measurement of self-objectification.

The exploration of the effects of anxiety on the predicted link between self-
objectification and flow was novel and preliminary for objectification theory research.
The measurement of anxiety in the current research may have had inherent problems at
the conceptual level. For this preliminary research, the STAI, a measure of trait anxiety
was selected. The STAI is widely used to assess clinical anxiety, although Spielberger
(1983) reported that it is useful for identifying high levels of neurotic anxiety. Indeed,
there is empirical support that the STAI is strongly related to neuroticism (Flett, Hewitt,
& Dyck, 1989; Zuckerman, Joireman, Kraft, & Kuhlman, 1998). If indeed the STAI
targeted a global trait of neuroticism, it was not a true measure of the experience of trait
anxiety that was intended to be tapped for this study. Future examinations of self-
objectification and flow that include exploration of anxiety may benefit from careful
selection of a measure that adequately represents the experience of anxiety that impedes
or alters the experience of flow.

Further research is needed as well to develop a more reliable method of
quantifying risk factors associated with the appearance focus or leanness dimension of
sports. The premise that there is risk associated with participation in sports that
emphasize leanness and appearance-focus is sound and empirically supported. There is a
significant body of literature that has identified specific sports as risk factors for the
development of eating disorders. These sports typically have been identified as sports that
emphasize leanness (Smolak et al., 2000) and appearance-focused or aesthetic sports
(Sundgot-Borgen & Torstveit, 2004). Parsons and Betz’s (2002) development of an
appearance focus sports type ranking intended to quantify the objectification context of
the sport was not productive, however, in this study.

The examination of the appearance focus of sports as a predictor appears
conceptually to be well-grounded, so further development of a valid measurement of this
construct seems warranted. Studies that have looked at risk related to the development of
eating disorders (Smolak et al., 2000; Sundgot-Borgen & Torstveit, 2004) typically have
explored sports categorically (i.e., cheerleading, gymnastics) rather than on a continuum.
Future studies of self-objectification with athletes may find group comparison to be more
effective and accurate; subsequently the comparisons could be conducted for risky sports
vs. non-risky sports. Refinement of the sport type risk factors subsequently may lead to
greater understanding of the role of sport type in the relation between self-objectification
and flow.
The current study provided full dimensional measurement of dispositional flow. Perhaps the most promising advancement in studies of self-objectification and flow would be to include immediate assessment of the activity, capturing the in vivo experience. Such designs could include the use of both state and trait measures producing data that would reflect a more comprehensive understanding of the experience of flow. Trait measures of flow could provide a meaningful baseline or dispositional level of flow and a state measure would allow for better assessment of the experiential nature of flow. Additionally, immediate assessment may result in finer grained assessment of each dimension of flow than would retrospective report.

Given the observed relation between flow and anxiety, assessing state anxiety immediately, in addition to flow, may enhance the understanding of how the experience of anxiety affects the experience of flow. Choosing a measure that is specific to the activity may also be beneficial. For future studies with athletes, the Sport Anxiety Scale (Smith, Smoll, & Shutz, 1990) offers a dimensional assessment of anxiety relative to competition which could be an appropriate measure. In sum, expansion and refinement of the conceptualization and measurement of flow and its covariates is indicated for future research.

In sum, this study represents a first step in a focused exploration of objectification theory and flow. The results provided preliminary support for the relation between the experience of self-objectification and the experience of flow, a peak motivational state. For these women athletes, the experience of increased levels of self-objectification was associated with weaker reported flow experiences. Flow is theorized to be a pancultural, universal experience that contributes to well-being and optimal life experience. Research
that adds to the knowledge base of factors that promote or hinder the experience of flow is useful. The importance of facilitating peak experiences extends beyond the realm of athletics to all human activity and future research to refine and extend this work as it applies to other dimensions beyond athletics is important and needed.
REFERENCES


APPENDIX A

ACTIVITY EXPERIENCE SCALE (DFS-2)

Please answer the following questions in relation to your experience in your chosen activity. These questions relate to the thoughts and feelings you may experience during participation in your activity. You may experience these characteristics some of the time, all of the time, or none of the time. There are no right or wrong answers. Think about how often you experience each characteristic during your activity and circle the number that best matches your experience.

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When participating in ____________________________ (name activity)

1.   I am challenged, but I believe my skills will allow me to meet the challenge. ________

2.   I make the correct movements without thinking about trying to do so. ________

3.   I know clearly what I want to do. ________

4.   It is really clear to me how my performance is going. ________

5.   My attention is focused entirely on what I am doing. ________

6.   I have a sense of control over what I am doing. ________

7.   I am not concerned with what others may be thinking of me. ________

8.   Time seems to alter (either slows down or speeds up). ________

9.   I really enjoy the experience. ________

10.  My abilities match the high challenge of the situation. ________

11.  Things just seem to happen automatically. ________

12.  I have a strong sense of what I want to do. ________

13.  I am aware of how well I am performing. ________

14.  It is no effort to keep my mind on what is happening. ________

15.  I feel like I can control what I am doing. ________
<p>| | | | | | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>16.</td>
<td>I am not concerned with how others may be evaluating me.</td>
<td></td>
<td></td>
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<tr>
<td>17.</td>
<td>The way time passes seems to be different from normal.</td>
<td></td>
<td></td>
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<tr>
<td>18.</td>
<td>I love the feeling of the performance and want to capture it again.</td>
<td></td>
<td></td>
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<tr>
<td>19.</td>
<td>I feel I am competent enough to meet the high demands of the situation.</td>
<td></td>
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<tr>
<td>20.</td>
<td>I perform automatically, without thinking too much.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>21.</td>
<td>I know what I want to achieve.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>I have a good idea while I am performing about how well I am doing.</td>
<td></td>
<td></td>
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<tr>
<td>23.</td>
<td>I have total concentration.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>I have a feeling of total control.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>25.</td>
<td>I am not concerned with how I am presenting myself.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>26.</td>
<td>It feels like time goes by quickly.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>27.</td>
<td>The experience leaves me feeling great.</td>
<td></td>
<td></td>
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<tr>
<td>28.</td>
<td>The challenge and my skills are at an equally high level.</td>
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<td></td>
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<tr>
<td>29.</td>
<td>I do things spontaneously and automatically without having to think</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>30.</td>
<td>My goals are clearly defined.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>I can tell by the way I am performing how well I am doing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>I am completely focused on the task at hand.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.</td>
<td>I feel in total control of my body.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td>I am not worried about what others may be thinking of me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td>I lose my normal awareness of time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36.</td>
<td>The experience is extremely rewarding.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rating Scale

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX B

THE SELF-OBJECTIFICATION QUESTIONNAIRE

We are interested in how people think about their bodies. The questions below identify 12 different body attributes. We would like you to rank order these body attributes from that which has the greatest impact on your physical self-concept (rank this a “12”), to that which has the least impact on your physical self-concept (rank this a “1”).

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 physical self-concept regardless of whether you consider yourself to be physically fit, not physically fit, or any level in between.

Please first consider all 12 attributes simultaneously, and record your rank ordering by writing the ranks in the column provided to the right of each item. Scale: 12 = most impact to 1 = least impact.

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

When considering your physical self-concept...

1. …what rank do you assign to physical coordination?  __________
2. …what rank do you assign to health?  __________
3. …what rank do you assign to weight?  __________
4. …what rank do you assign to muscular strength?  __________
5. …what rank do you assign to sex appeal?  __________
6. …what rank do you assign to physical attractiveness?  __________
7. …what rank do you assign to physical energy level?  __________
8. …what rank do you assign to firm or sculpted muscles?  __________
9. …what rank do you assign to physical fitness level?  __________
10. …what rank do you assign to coloring?  __________
    (e.g., skin tone, eye and hair color)
11. …what rank do you assign to measurements?  __________
    (e.g., chest, waist, hips)
12. …what rank do you assign to stamina?  __________
## APPENDIX C

**SURVEILLANCE SUBSCALE OF THE OBJECTIFIED BODY CONSCIOUSNESS SCALE***

Directions: Read each question and using the following scale, respond in the blank given to the right of the question.

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>strongly disagree</td>
<td>moderately disagree</td>
<td>mildly disagree</td>
<td>mildly agree</td>
<td>moderately agree</td>
<td>strongly agree</td>
<td></td>
</tr>
</tbody>
</table>

1. I rarely think about how I look
   
2. I think it is more important that my clothes are comfortable than whether they look good on me.
   
3. I think more about how my body feels than how my body looks.
   
4. I rarely compare how I look with how other people look.
   
5. During the day, I think about how I look many times.
   
6. I often worry about whether the clothes I am wearing make me look good.
   
7. I rarely worry about how I look to other people.
   
8. I am more concerned with what my body can do than how it looks.

* In administering the scale, the title is not included.
APPENDIX D

ITEMS FROM THE STATE-TRAIT ANXIETY INVENTORY (STAI)

FORM Y-2: TRAIT

Directions:
A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate value to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel pleasant.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I feel nervous and restless.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I feel satisfied with myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. I wish I could be as happy as others seem to be.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. I feel like a failure.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I feel rested.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. I am “calm, cool, and collected.”</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. I feel that difficulties are piling up so that I cannot overcome them.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. I worry too much over something that really doesn’t matter.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. I am happy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. I have disturbing thoughts.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. I lack self-confidence.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. I feel secure.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
2. I am content………………………………… 1 2 3 4
3. Some unimportant thought runs through my mind and bothers me…………………… 1 2 3 4
4. I take disappointments so keenly that I can’t put them out of my mind…………….... 1 2 3 4
5. I am a steady person………………………… 1 2 3 4
6. I get in a state of tension or turmoil as I think over my recent concerns and interest… 1 2 3 4
APPENDIX E

INTERNALIZATION/ACCEPTANCE SUBSCALE OF THE
SOCIOCULTURAL ATTITUDES TOWARDS APPEARANCE QUESTIONNAIRE
(SATAQ)

Please read each of the following items and circle the number that best reflects your agreement with the statement.

1. Women who appear in TV shows and movies project the type of appearance that I see as my goal.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely disagree</td>
<td>neither agree nor disagree</td>
<td>completely agree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. I believe that clothes look better on thin models.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely disagree</td>
<td>neither agree nor disagree</td>
<td>completely agree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Music videos that show thin women make me wish that I were thin.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely disagree</td>
<td>neither agree nor disagree</td>
<td>completely agree</td>
<td></td>
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</tbody>
</table>

*4. I do not wish to look like the models in the magazines.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely disagree</td>
<td>neither agree nor disagree</td>
<td>completely agree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. I tend to compare my body to people in magazines and on TV.

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<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely disagree</td>
<td>neither agree nor disagree</td>
<td>completely agree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Photographs of thin women make me wish that I were thin.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely disagree</td>
<td>neither agree nor disagree</td>
<td>completely agree</td>
<td></td>
<td></td>
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</table>

7. I wish I looked like a swimsuit model.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely disagree</td>
<td>neither agree nor disagree</td>
<td>completely agree</td>
<td></td>
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</tr>
</tbody>
</table>

8. I often read magazines like *Cosmopolitan*, *Vogue*, and *Glamour* and compare my appearance to the models.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
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<tbody>
<tr>
<td>completely disagree</td>
<td>neither agree nor disagree</td>
<td>completely agree</td>
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</table>

In administering the measure, the title is not included.

* Reverse scored.
APPENDIX F

DEMOGRAPHIC INFORMATION QUESTIONNAIRE

This questionnaire is designed to provide us with information which will help us describe the people who participated in this research. All information is anonymous and confidential. Please respond to each item by either filling in the blank or circling the appropriate number.

1. How old are you? _____________

2. What is your year or level in school? ___________

3. Please indicate your race/ethnicity.
   1. African American/Black
   2. White/Caucasian
   3. Hispanic/Latina
   4. Native American or American Indian
   5. Asian/Pacific Islander
   6. Multiracial
   7. Other
   8. Unknown

4. Please provide your sport history. In the columns provided, list the sport(s) in which you currently participate and indicate the date you began this sport and the number of years/seasons that you have played the sport. Begin with your current sport and also list, in descending order (that is, going back from present to earliest sports played) other sports that you played or competed. Finally please rank the sports in terms of how well you liked the individual sport with 1 = to least favorite ascending to highest number assigned to favorite sport.

<table>
<thead>
<tr>
<th>Sport</th>
<th>Start date</th>
<th>Years Played</th>
<th>Rank</th>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

145
<table>
<thead>
<tr>
<th>Sport</th>
<th>Start date</th>
<th>Years Played</th>
<th>Rank</th>
</tr>
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<tbody>
<tr>
<td></td>
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APPENDIX G

HUMAN SUBJECTS APPROVAL

Office of Research Services and Sponsored Programs
Akron, OH 44325-2102
(330) 972-7066 Phone
(330) 972-6265 Fax

April 10, 2006

Jeanne M. Durand
78 N. Main St.
Brewer, ME 04412

Ms. Durand:

The University of Akron’s Institutional Review Board for the Protection of Human Subjects (IRB) completed a review of the protocol entitled “Objectification Theory: Examining the Relation between Self-Objectification and Risk for Collarless Women.” The IRB application number assigned to this project is 2006-05.

The protocol was reviewed on April 7, 2006 and qualified for exemption from continuing IRB review. The protocol represents minimal risk to subjects and matches the following federal category for exemption:

(i) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information is recorded in such a manner that subjects can be identified, directly or through identifiers linked to subjects; and (ii) disclosure of responses outside the research could reasonably place the subjects at risk of civil or criminal liability or be damaging to subjects’ financial standing, employability, or reputation.

Enclosed are copies of the informed consent documents, which the IRB has approved for your use in this research. In addition, your request for a waiver of documentation of informed consent, as permitted under 45 CFR 46.117(c), is also approved.

Annual continuation applications are not required for exempt projects. If you make any changes or modifications to the study’s design or procedures that either increase the risk to subjects or include activities that do not fall within one of the categories exempted from the regulations, please contact the IRB first, to discuss whether or not a request for change must be submitted. Any such changes or modifications must be reviewed and approved by the IRB prior to their implementation.

Please retain this letter for your files. If the research is being conducted for a master’s thesis or doctoral dissertation, the student must file a copy of this letter with the thesis or dissertation.

Sincerely,

Sharon M. McPherson
Interim Director

Cc: Letha Subich, Advisor
    Department Chair
    PHI Allen, IRB Chair
# APPENDIX H

## BMI MEAN SCORES BY SPORT TYPE

<table>
<thead>
<tr>
<th>Sport</th>
<th>Mean</th>
<th>N</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lacrosse</td>
<td>21.45</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Crew</td>
<td>23.27</td>
<td>4</td>
<td>2.23</td>
</tr>
<tr>
<td>Field Hockey</td>
<td>23.40</td>
<td>18</td>
<td>6.01</td>
</tr>
<tr>
<td>Basketball</td>
<td>23.36</td>
<td>11</td>
<td>1.72</td>
</tr>
<tr>
<td>Soccer</td>
<td>23.84</td>
<td>7</td>
<td>2.09</td>
</tr>
<tr>
<td>Cross Country</td>
<td>20.51</td>
<td>5</td>
<td>.86</td>
</tr>
<tr>
<td>Softball</td>
<td>24.51</td>
<td>7</td>
<td>2.26</td>
</tr>
<tr>
<td>Track</td>
<td>22.36</td>
<td>25</td>
<td>4.20</td>
</tr>
<tr>
<td>Volleyball</td>
<td>22.03</td>
<td>7</td>
<td>3.05</td>
</tr>
<tr>
<td>Diving</td>
<td>22.78</td>
<td>4</td>
<td>2.38</td>
</tr>
<tr>
<td>Swimming</td>
<td>21.89</td>
<td>13</td>
<td>1.91</td>
</tr>
<tr>
<td>Tennis</td>
<td>21.47</td>
<td>7</td>
<td>1.57</td>
</tr>
<tr>
<td>Gymnastics</td>
<td>22.07</td>
<td>9</td>
<td>2.09</td>
</tr>
<tr>
<td>Cheerleading</td>
<td>22.28</td>
<td>12</td>
<td>1.77</td>
</tr>
</tbody>
</table>