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Presented in Partial Fulfillment of the Requirements for
The degree of Doctor of Philosophy in the
Graduate School of The Ohio State University

By
Elizabeth M. Parsons, M.A.

* * * * *

The Ohio State University
2000

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ABSTRACT

The primary purposes of this study were to assess the possible impact of sports participation during high school on the development of instrumentality and self-objectification among young women, and to explore the possibility that different sports might affect the development of instrumentality and self-objectification in different ways, according to perceived stereotypical masculinity or femininity of the sport. The relationship of instrumentality to self-objectification was also examined. Participants were 437 first year college women under the age of 21, with a mean age of 18.32. As predicted, instrumentality and self-objectification were inversely related. Sports participation was associated with a stronger sense of instrumentality among women, but also with a heightened degree of body shame. No differences were found in instrumentality or self-objectification between women who had participated in more "feminine" sports or less "feminine" sports. Further research is needed to understand the relationship between sports participation and self-objectification among women.
To my daughter and her friends.
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# TABLE OF CONTENTS

| Abstract | iii |
| Dedication | iv |
| Acknowledgments | v |
| Vita | vi |
| List of Tables | vii |
| List of Figures | ix |

## Chapters:

1. **Introduction** ......................................................... 1  
   Summary of Purposes ................................................. 7

2. **Review of the Literature** ........................................... 9  
   Body Image and Objectification Theory ............................... 9  
   Instrumentality ......................................................... 33  
   Self-Efficacy Theory ...................................................... 42

3. **Study I** ................................................................. 50  
   Method ................................................................. 51  
   Results ................................................................. 58  
   Discussion .............................................................. 62

4. **Study II** ................................................................. 71  
   Method ................................................................. 73  
   Results ................................................................. 83  
   Summary ............................................................... 94  

vi
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Means, Standard Deviations and Gender Comparisons for Perceived Focus on Appearance for 17 Sports</td>
<td>65</td>
</tr>
<tr>
<td>3.2</td>
<td>Means, Standard Deviations and Gender Comparisons for Perceived Femininity Ratings for 17 Sports</td>
<td>66</td>
</tr>
<tr>
<td>3.3</td>
<td>Overall Mean Ratings for Focus on Appearance and Femininity, Combined Mean Ratings and the Categorization of 17 Sports</td>
<td>67</td>
</tr>
<tr>
<td>3.4</td>
<td>Descriptive Statistics and Alpha Reliabilities for All Measures</td>
<td>68</td>
</tr>
<tr>
<td>3.5</td>
<td>Mean, Standard Deviations and Gender Comparisons for Spheres of Control, Instrumentality and Bem Sex Role Inventory</td>
<td>69</td>
</tr>
<tr>
<td>3.6</td>
<td>Pearson Product Moment Correlations Among the Spheres of Control, Instrumentality, and Bem Sex Role Inventory Measures</td>
<td>70</td>
</tr>
<tr>
<td>4.1</td>
<td>Number of Women Participating in Each Sport</td>
<td>96</td>
</tr>
<tr>
<td>4.2</td>
<td>Number of Sports in Which College Women Participated as High School Students</td>
<td>97</td>
</tr>
<tr>
<td>4.3</td>
<td>Number of Seasons of Participation</td>
<td>98</td>
</tr>
<tr>
<td>4.4</td>
<td>Descriptive Statistics for Activities Measures</td>
<td>99</td>
</tr>
<tr>
<td>4.5</td>
<td>Pearson Product Moment Correlations Among School Organization Participation, Sports Participation, Physical Activity Level and Job Participation Measures</td>
<td>100</td>
</tr>
<tr>
<td>4.6</td>
<td>Descriptive Statistics and Alpha Reliabilities for All Measures</td>
<td>101</td>
</tr>
<tr>
<td>4.6</td>
<td>Descriptive Statistics and Correlations for the Objectified Body Consciousness Scale Scores and Total Scores</td>
<td>102</td>
</tr>
</tbody>
</table>
Table | Page
--- | ---
4.8 Pearson Product Moment Correlations for Instrumentality, Locus of Control and Self-Efficacy Measures with the Objectified Body Consciousness Measures | 103
4.9 Pearson Product Moment Correlations Among the Instrumentality, Locus of Control and Self-Efficacy Subscale and Total Scale Scores | 104
4.10 Means, Standard Deviations and t-tests for the Spheres of Control Scale, Instrumentality Scale and Bem Sex Role Inventory, Comparing Scores from the Sample of Women from Study I to the Sample of Women Athletes from Study II | 105
4.11 Means, Standard Deviations and t-tests for All Measures, Comparing Women Who Had Participated in Sports to Those Who Had Not | 106
4.12 Analysis of Variance for Number of Sports on Scores for All Measures Except the Skills Confidence Inventory | 107
4.13 Analysis of Variance for Amount of Average Weekly Physical Activity on Scores for All Measures Except the Skills Confidence Inventory | 108
4.14 Analysis of Variance for Body Mass Index on Self Objectification Subscales Scores | 109
4.15 Thematic Categories for Responses to Question 2b | 110
4.16 Thematic Categories for Responses to Question 3b | 111
<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>Antecedents and Consequences of Self-Objectification</td>
<td>16</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Bandura's Self-Efficacy Model</td>
<td>43</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Holland’s Hexagon</td>
<td>46</td>
</tr>
</tbody>
</table>
CHAPTER 1
INTRODUCTION

Since the early 1970's, there has been a dramatic increase in the participation of girls and women in the world of sport, largely due to participation opportunities in a variety of school, community, and club programs that didn’t exist 25 years ago (Coakley, 1994). Many of the traditional barriers (i.e., laws and regulations barring girls from competing) have been removed, and legislation requiring equity in educational institutions has been enacted, such as Title IX of the Educational Amendments in 1972 (Barnett & Wright, 1994). More women today are participating in athletic activities than ever before. Other factors cited by Coakley (1994) for this increase in participation include the women's movement, the health and fitness movement, and increased media coverage of women in sports.

Because of the comparatively recent entry of women into the sports domain and the different sociocultural attitudes toward and influences on women, the experience of the athletic woman is distinct from that of the athletic man in various ways. Some research suggests that playing sports can be a personally empowering experience for girls and women (Blinde & Taub, 1993; Butcher, 1989; Cate & Sugawara, 1986). Blinde and
Taub interviewed twenty-four women athletes in Division I intercollegiate sport programs. The athlete's responses suggested that sports participation related to the development of three empowering qualities that women traditionally lack: bodily competence, perceptions of a competent self, and a proactive approach to life. Thus, being an athlete can change the way that women see themselves. It can make them feel physically stronger, more competent, and more in control of their lives as independent individuals (Blinde & Taub, 1993; Coakley & Westkott, 1984). This is important because social life is often organized in ways that lead girls and women to see themselves as weak, dependent, and powerless (Cantor & Bemay, 1992). Until recently, girls did not have many role models of women in powerful political or business positions, which are still dominated by men. The stereotype of femininity (at least, white femininity) has not traditionally included qualities such as powerful, strong, independent or decisive (Bem, 1974; Cantor & Bemay, 1992).

Sports participation provides girls and women with opportunities to experience their bodies as strong and competent. Many images of women in society present the female body as an object to be looked at, evaluated, and consumed. Objectification theory (Fredrickson & Roberts, 1997) proposes that girls and women learn to objectify their own bodies as they apply these images to themselves. Because identity and a sense of power are grounded in a person's body and body image (Harter, 1987), it has been suggested that sports participation can help women overcome the perception that their bodies are objects (Fredrickson & Roberts, 1997).

Objectification theory proposes that, due to a process of socialization, women are more prone than men to view their bodies as separate from themselves or as objects to be
put on display. According to objectification theory (Fredrickson & Roberts, 1997), this object orientation creates a self/other relationship to the body that makes the lived experience of women fundamentally different from that of men, who instead tend to experience the body as active, competent, and a unified body-self whole. The result of this self/other orientation for women is self-objectification—a state not unlike public self-focus in which the body is habitually monitored and compared to societal standards of beauty. According to Fredrickson and Roberts (1997), this self-objectification can lead to an increased experience of shame and anxiety, a decreased awareness of internal body states, and a decreased experience of peak motivational states. They further propose that self-objectification may contribute to three psychological disorders that are disproportionately experienced by women in American culture: unipolar depression, sexual dysfunction, and eating disorders.

Fredrickson and Roberts have suggested that women who experience their bodies in an active instrumental way will be less prone to internalize a passive, object oriented sense of self. Thus, involvement in organized sports activities (i.e. soccer, softball), or actively exercising may lead women to experience their bodies in a more competence-focused manner rather than an object-focused manner. This perception of the body as active and competent may buffer women from the negative consequences of self-objectification.

Furthermore, the physical strength often gained through sports participation can make a woman feel less vulnerable, more independent, and more in control of her physical safety and psychological well-being (Birrell, 1988; Coakley & White, 1991).
This may be summed up by the term instrumentality, defined as the ability to take action on one's own behalf and thus to have a sense of control in one's life (Betz, 1997).

The concept of instrumentality has been derived from sex-role identity research on the personality attributes that members of our culture perceive as "masculine" or "feminine." Qualities seen as "masculine" include adjectives such as independent, decisive, and forceful; while qualities seen as "feminine" include adjectives such as tender, affectionate, and gullible. Bem (1974) provided substantive interpretations of the terms "masculinity" and "femininity" by suggesting that they represented constellations of traits better summarized as "instrumentality" and "expressiveness," respectively. She saw them as two independent constructs rather than the anchors for a single continuum. Since then, research has demonstrated that individuals of either gender can indicate high levels of both instrumentality and expressiveness (a combination also called "androgyny"), low levels of both, or a high-low combination. Further, it has been shown that high levels of instrumentality are consistently positively related to other indices of mental health, such as self-esteem, an absence of depression or anxiety, and effective coping strategies (for a review, see Sharpe & Heppner, 1991.)

As mentioned above, Betz (1997) has suggested a definition of instrumentality as the ability to take action on one's own behalf and to feel a sense of control in one's life. She has further suggested that one way to build a sense of instrumentality for women is to increase self-efficacy in traditionally masculine domains of activity such as home repairs, financial investing, and self-defense. According to Bandura (1977; 1986), self-efficacy expectations, or confidence in one's abilities in a particular domain, are enhanced in four principle ways: experiences of performance success, vicarious learning, verbal
persuasion, and the absence of emotional arousal or anxiety. Self-efficacy does not simply reflect the perception of accomplishments; instead it is based on subjective inferences from different sources of information, and has been shown to exert an effect on performance, independent of actual ability levels, and on persistence in a task (Bandura, 1992). Of interest in the current study is whether the self-efficacy acquired by participation in a stereotypically masculine arena of sport, such as basketball or field hockey, may generalize to or promote other types of self-efficacy in other stereotypically masculine domains.

From the small amount of research that has been done, (for example, Jackson & Marsh, 1986; Henschen, Edwards, & Mathinos, 1982), it seems that a stronger sense of instrumentality is associated with sports participation for women. Sports participation also seems to be associated with higher levels of self-esteem among girls and women (Butcher, 1989; Cate & Sugawara, 1986.) Because high self-esteem and instrumentality are generally associated with lower psychopathology, athletic participation may serve to help protect against the development of psychological problems. Further, Fredrickson and Roberts (1997) have suggested that sports participation may help to reduce self-objectification in girls, which is thought to place girls and women at higher risk for developing psychological problems such as depression, sexual dysfunction, and eating disorders.

However, athletic participation – at least in certain sports – has been linked to a higher incidence of eating problems for girls and women (for reviews see Barnett & Wright, 1994; Beals & Manore, 1994; Brownell, 1995; Brownell & Rodin, 1992; Slavin, 1987; Sundgot-Borgen, 1994). This is theoretically inconsistent with the notion that
sports participation may reduce self-objectification, as self-objectification is thought to be a mediating factor in disordered eating. It is also inconsistent with the idea that sports participation is associated with stronger instrumentality and higher self-esteem. This intriguing contradiction has in part motivated the current study.

There are several possible explanations for this contradiction. One possibility is that the psychological effects of sports participation could depend on the particular sport. Research seems to indicate that some sports place athletes at higher risk for disordered eating than others (Brownell & Rodin, 1992). Included in this category are sports in which success requires a particular appearance, a lean, virtually prepubescent appearance, such as gymnastics, diving, figure skating, dance, and synchronized swimming. Also included are sports that emphasize body leanness for optimal performance, such as long distance running, and sports that use weight classifications such as rowing (Brownell & Rodin, 1992). Leanness is also viewed as generally enhancing performance, with heavier athletes expected to be slower (Brownell, Rodin, & Wilmore, 1992). Thus, even in sports with less appearance focus, for example, basketball as compared to gymnastics, there may be pressure to attain and maintain a body with a low percentage of body fat.

It is also possible that certain types of sports participation are harmful for certain types of people. Brownell et al. (1992) have listed some personality characteristics that are associated with disordered eating that could also be descriptive of some athletes: competitiveness, concern with performance, and perfectionism. However, not everyone participating in sports is competitive and driven, particularly at nonelite levels of sport. Elite versus nonelite participation may be another differentiating factor that needs to be considered when examining the relationship of athletic participation and eating problems.
Reviews of the literature examining this relationship raise more questions than provide answers. The data appear inconsistent, varying by sport, athletic performance level, and methodology of the study (Smolak, Murnen, & Ruble, 2000). Finding resolution to the conflicting models of how athletic participation might be related to eating problems among girls and women is an important issue. If sports participation increases the risk of eating disorders, then secondary prevention programs are necessary to ensure that participation in high school and college sports is a positive experience. If sports participation is a protective factor, then this information could be useful in designing better prevention programs in general.

The current study is an investigation of the possibility that participation in different sports may affect the development of self-objectification (a risk factor for the development of disordered eating) and the development of instrumentality (a protective factor in terms of disordered eating) in different ways. The effects of participation in sports such as synchronized swimming or gymnastics, which emphasize appearance while simultaneously requiring active use of the body, may be different than those from participating in a less appearance-focused sport such as basketball.

Summary of Purposes

The goals of the current study were several. One main objective was to explore the possible impact of sports participation during high school on the development of self-objectification among girls. Specifically it is hypothesized that women who have participated in high school sports will report lower levels of self-objectification than women who did not. A second main objective was to explore the possibility that within
the group of athletes, levels of self-objectification may differ depending on the emphasis on appearance and perceived stereotypical femininity of the sport. It is hypothesized that women who have participated in the more “feminine” sports will have higher self-objectification scores than the women who participated in the less “feminine” sports.

A third main objective was to explore the relationship of instrumentality to sports participation. It is hypothesized that women who have participated in high school sports will report higher levels of instrumentality than women who have not. Related to this, the relationships between measures of instrumentality and self-objectification will be explored in order to increase our understanding of these constructs. It is hypothesized that instrumentality measures will be inversely related to self-objectification measures.

A final question addressed in this study concerned whether the experience of participation in more traditionally “masculine” sports would generalize to a greater sense of self-efficacy in other stereotypically masculine domains. It is hypothesized that those who participated in stereotypically masculine sports will indicate higher levels of self-efficacy in non-gender-stereotypic career domains.

In order to establish an empirical basis with which to characterize sports as “more feminine” or “less feminine” and with greater or lesser emphasis on appearance, it was necessary to carry out a preliminary study with first year college students on their perceptions of different sports. Therefore, the main purpose of Study 1 was to gather data on the perceived “femininity” and perceived “focus on appearance” of different sports. This data provided a metric so that different sports could be categorized and analyses carried out to address the main purposes and hypotheses, as already described, in Study 2.
CHAPTER 2
LITERATURE REVIEW

The current review will introduce the topics of objectification theory and the theory of objectified body consciousness and review research on these topics to date. A review of the construct of instrumentality and the theory of self-efficacy follows. Relevant research relating women’s sports participation to these constructs will be reviewed and summarized. This review will conclude with a summary of the hypotheses and purposes of this study.

**Body Image and Objectification Theory**

**Body Dissatisfaction**

Body image has been the subject of much theoretical and empirical work over the past three decades (Fisher, 1990). Although body image has been conceptualized in many different ways, it is body satisfaction that has been the most often examined (Muth & Cash, 1999). Feingold and Mazzella (1998) conducted a meta-analysis of gender differences in self-rated attractiveness and body image using 222 studies from the past 50
years. Their analysis shows dramatic and continuing increases in the numbers of women among individuals who have poor body image. This trend was found across multiple conceptualizations and measures of body image, including self-judgments of physical attractiveness.

Previous psychological research supports and documents gender differences in body satisfaction. Studies typically indicate that women have more body dissatisfaction than men (for example, McCauley, Mintz & Glenn, 1988; Mintz & Betz. 1986; Sullivan & Harnish, 1983.) The components of women's and men's body dissatisfaction are typically found to be different, with women reporting consistent patterns of greater cognitive, affective, and behavioral concern with weight and weight loss than men (e.g. Cash & Brown, 1989). Women typically are found to be more likely to perceive themselves as overweight or slightly overweight, regardless of their actual weight, and to want to lose weight, while men who are dissatisfied tend to perceive themselves as underweight and want to gain rather than lose weight (e.g. Mintz & Betz, 1986; Silberstein, Striegel-Moore. & Rodin, 1987).

The desire to be thin is perpetuated by sociocultural norms in American culture (Striegel-Moore, Silberstein & Rodin, 1986), which influence all women. Behaviors contributing to the development of abnormal eating patterns, such as dieting, have become the norm for American girls and women (Polivy & Herman, 1987). Thinness has come to be equated with control, success, goodness, power, and beauty (Root, 1991; Silverstein & Perdup, 1988). Because the ideal female body has become so unrealistically thin, negative feelings towards their bodies adversely affect large numbers
of U.S. women, not just psychologically, but economically and politically as well (Wolf, 1991).

Using a social construction perspective, feminist theorists have provided a rich framework for understanding women's body experience within U.S. culture and how this contributes to negative body esteem (Bartky, 1988; Bordo, 1993; Spitzack, 1990). Rather than assume that meaning is determined and objective, social construction theorists study the meanings that a given culture constructs. By examining these social "constructions" of the feminine body, feminist theorists have provided an explanation that shows how negative body experience is accomplished in individual women. According to feminist theorists, the feminine body is socially constructed as an object "to be looked at" and evaluated (Bartky, 1988; Bordo, 1993; Spitzack, 1990). Recently, two psychologists independently used this feminist social constructionist theory to try to better understand the lived experiences and mental health risks of girls and women who encounter sexual objectification; Fredrickson with objectification theory (Fredrickson & Roberts, 1997), and McKinley, with the concept of objectified body consciousness (McKinley & Hyde, 1996). A review of these two theories follows.
Objectification Theory

The theoretical framework of objectification theory places female bodies in a sociocultural context. Objectification theory begins from the premise that American women exist in a culture in which their bodies are looked at, evaluated, and always potentially sexually objectified by others (Fredrickson & Roberts, 1997). Sexual objectification is defined as occurring whenever a woman's body, body parts, or sexual functions are separated out from her person, reduced to an object status that exists for the use and pleasure of others, or regarded as if they were capable of representing her (Bartky, 1990).

According to Fredrickson and Roberts (1997), there is substantial research showing that this objectifying gaze plays out in three arenas: actual interpersonal and social encounters, in visual media that depicts interpersonal and social encounters, and in visual media that spotlights bodies and body parts and aligns viewers with an implicit sexualizing gaze. They summarize the empirical evidence that in actual interpersonal and social encounters, women are gazed at more than men, women are more likely to feel "looked at" during interpersonal encounters, men direct more nonreciprocated gaze toward women than vice versa, particularly in public places, and men's gazing is often accompanied by sexually evaluative commentary (for citations see Fredrickson & Roberts, 1997). In visual media depicting interpersonal and social encounters, analyses of advertisements show that men are pictured looking directly at a woman far more often than the reverse. Thirdly, analyses of visual media such as mainstream films, visual arts, advertisements, television programming, pornography, music videos, women's magazines, and sports photography provide evidence that women's bodies are targeted
for sexual objectification much more often than men's (for citations see Fredrickson & Roberts, 1997). Although sexual objectification is but one form of gender oppression, it is one that holds great significance, as it is related to a host of other oppressions women face, ranging from employment discrimination and sexual violence to the trivialization of women's work and accomplishments.

According to objectification theory (Fredrickson & Roberts, 1997) the most profound effect of objectifying treatment is that, over time, it coaxes girls and women to adopt a sense of self as object or "sight" to be appreciated by others. Objectification theory posits that the cultural milieu of objectification functions to socialize girls and women to, at some level, treat themselves as objects to be looked at and evaluated. In other words, as numerous feminist theorists have argued, women often adopt an observer's perspective on their physical selves (Bartky, 1990; de Beauvoir, 1952; Berger, 1972; Spitzack, 1990; Young, 1990). This perspective on self has been termed self-objectification by Fredrickson and Roberts (1997), and leads to a form of self-consciousness characterized by habitual monitoring of the body's outward appearance. Similarly, McKinley (1995) called this experience of the body as an object and the beliefs that support this experience "objectified body consciousness" (OBC). She theorized that women internalize cultural body standards so that the standards appear to originate from the self and believe that achieving these standards is possible, even in the face of considerable evidence to the contrary.

Fredrickson and Roberts summarize empirical evidence that demonstrates that how a woman's body appears to others can be a determinant of her life experiences. For example, women who aspire to high-status work positions may suffer job discrimination
based on an unfeminine appearance (Fiske, Bersoff, Borgida, Deaus, & Heilman, 1991), and physical attractiveness has been shown to be correlated more highly with popularity, dating experience, and marriage opportunities for women than for men (Margolin & White, 1987). Unger (1979) argues that attractiveness functions as a prime currency for women’s social and economic success. Given the evidence that women’s social and economic prospects can be determined by their physical appearance, it makes sense that women would try to anticipate how others will view them. Women’s attentiveness to their own physical appearance, which has often been interpreted as narcissism and vanity (for example, Freud, 1933), might be more appropriately understood as a strategy to help to determine how others will treat them (Silberstein, Striegel-Moore, & Rodin, 1987). This strategy need not be conscious or deliberately chosen, but with repeated exposure to many subtle external pressures to enhance their appearance, girls and women come to experience their efforts to do so as freely chosen and “natural”.

The framework of objectification theory proposed by Fredrickson and Roberts, 1997, acknowledges both relatively stable individual differences across women, as well as powerful situation-specific effects in the experiences of objectification and its consequences. That is, while some women may be aware of observer’s perspectives on their bodies in nearly all the social contexts they find themselves in, others may only become aware of that perspective on occasion, for example, walking past a group of men on the street. In terms of sports participation, it seems likely that some sports provide a more objectifying context for women participants than others, for example, gymnastics versus soccer. It follows that repeated exposure to one context versus another over time,
as a girl develops, may encourage a stronger internalization of objectification, which may contribute to a relatively stable individual difference in self-objectification for that girl.

Fredrickson and Roberts propose that not all women will experience and respond to sexual objectification in the same way. Unique combinations of ethnicity, class, sexuality, age and other physical and personal attributes create unique sets of experiences across women as well as experiences shared by particular subgroups. However, they propose that amid this heterogeneity, having a reproductively mature female body may create a shared social experience, that is, a vulnerability to sexual objectification, which in turn may create a shared set of psychological experiences and consequences.

Proposed Consequences of Self-Objectification

Fredrickson and Roberts propose the psychological and experiential consequences of self-objectification to be: an increased experience of shame, an increased experience of anxiety, a decreased experience of peak motivational states, and a decreased awareness of internal bodily states (see Figure 1, p.15). A brief summary of their reasoning follows. An increase in shame is proposed as a direct consequence of the continual comparison a woman may make between her actual body and the idealized "mythic" (Wolf, 1991) female body. An increased experience of anxiety is proposed to have two sources; both appearance anxiety and safety anxiety. Data show that women do experience more anxiety than men about their appearance, and that women's appearance anxiety may have roots in negative early life social experiences, often of receiving negative appearance-related comments (for citations see Fredrickson & Roberts, 1997). This anxiety becomes fused with concerns about safety, as women face the possibility of sexual victimization,
Cultural Practices of Sexual Objectification

Self-Objectification (Appearance Monitoring)

Psychological Consequences:
- Increased Shame and Anxiety
- Decreased "Flow" States
- Insensitivity to Body Cues

Mental Health Risks:
- Disordered Eating
- Depression
- Sexual Dysfunction

Figure 1: Antecedents and Consequences of Self-Objectification
and of being blamed for their own victimization by being too "striking" or "provocative" in their appearance. Thus, Fredrickson and Roberts argue that a culture that objectifies the female body presents women with a continuous stream of anxiety-provoking experiences, requiring an almost chronic vigilance both to physical appearance and to physical safety. They further argue that peak motivational states may be decreased or prevented both by actual others calling attention to a woman's appearance, and by the state of self-consciousness caused by maintaining an observer's perspective on self. They draw on Csikszentmihalyi's (1990) arguments that a person must be able to lose self-consciousness in order to achieve a peak state of "flow" or optimal experience.

Finally, Fredrickson and Roberts argue that self-objectification may be linked to a decreased awareness of internal bodily states. They review the empirical evidence that, in the absence of relevant contextual cues, women are less accurate than men at detecting internal physiological sensations, such as heartbeat, stomach contractions, and blood-glucose levels. They argue that because women are often vigilantly aware of their outer bodily appearance, they may be left with fewer perceptual resources available for attending to inner body experience. The repeated experience of social contexts that highlight women's awareness of observers' evaluations of their bodies could lead to a more generalized loss of the privileged access people usually have to their own inner states. Another possibility suggested is that the active suppression of hunger cues required by dieting and restricted eating may lead to a generalized insensitivity to internal bodily cues.

Fredrickson and Roberts provide a rich exploration of how these psychological consequences may contribute to the development of three disorders disproportionately
experienced by women in our culture: unipolar depression, sexual dysfunction, and eating disorders. Research to date of this theory will be summarized after introducing the concept of objectified body consciousness.

Objectified Body Consciousness (OBC)

While Fredrickson and Roberts (1997) theorized shame to be one of the consequences of self-objectification, McKinley and Hyde (1996) conceptualized objectified body consciousness in a similar yet slightly different way. This theory is also based on the feminist theorists Bartky (1988) and Spitzack (1990). Objectified body consciousness is theorized to have three components: body surveillance, internalization of cultural body standards, and beliefs about appearance control. Body surveillance, like self-objectification, refers to the experience of existing as an object to oneself and habitually monitoring one's appearance. Internalization of cultural body standards refers to the idea that unrealistic body standards become internalized, and the comparison of one's body to this ideal often becomes a source of intense shame. Appearance control beliefs refer to the idea that women come to believe that they are responsible for how their bodies look and that they can, given enough effort, control their appearance and comply with cultural standards.

Body Surveillance. A central tenet of OBC is the same as that of objectification theory, namely, that the feminine body is socially constructed as an object of male desire to be looked at” (Spitzack, 1990). Because of this construction, women learn to view their bodies as if they were outside observers. This constant self-surveillance, seeing
themselves as others see them, is understood as the attempt to comply with cultural body standards and to avoid negative judgments. "Body surveillance" is the term used by McKinley equivalent to that of "self-objectification" used by Fredrickson; both are defined as a state of self-consciousness characterized by habitual monitoring of the body's outward appearance.

Internalization of Cultural Standards and Body Shame. Cultural body standards provide the ideal to which a woman compares herself when she watches her body (McKinley & Hyde, 1996). Internalization of cultural body standards makes it appear that these standards originate from the self and makes the achievement of these standards appear to be a personal choice rather than a result of social pressure. This internalization of cultural body standards can become a source of intense shame. The negative emotion of shame occurs when people evaluate themselves relative to some internalized or cultural ideal and find themselves inadequate (Lewis, 1992). Some empirical studies have reported that women experience more shame than men (Rodin, Silberstein, & Striegel-Moore, 1985; Silberstein, Striegel-Moore, & Rodin, 1987; Stapley & Haviland, 1989). In American culture, there is continuous exposure to images of idealized female bodies (Wolf, 1991). These idealized images are almost invariably of youth, slimness, and Whiteness. Pointing out that only 1 in 40,000 women actually meet the requirements of a model's size and shape, Wolf (1991) argues that the ideal female body is a myth, unrealistic and virtually impossible to attain. As such, the continual comparison that a woman may make between her actual body and the mythic ideal is "a recipe" for shame. Although only a minority of girls and women in our society are actually overweight,
empirical studies report that the majority report feeling fat, and ashamed of this "failure" (Silberstein et. al., 1987).

Shame generates an intense desire to hide, to escape the painful gaze of others, or to disappear, alongside feelings of worthlessness and powerlessness (Lewis, 1992; Tangney, Miller, Flicker, & Barlow, 1996). Intense shame can further disrupt an already fragmented state of consciousness. Lewis (1992) identifies this disruption as "adaptive," arguing that its function is to inhibit or change that which fails to live up to the person's internally or externally derived standards. Shame is thus considered a moral emotion. If "that which fails" is changeable, as actions often are, shame may be adaptive. However, bodies are harder to change than actions. The body weight that is considered attractive has dropped farther and farther below the weight of the average woman over the last few decades (Wiseman, Gray, Mosimann, & Ahrens, 1992). Genetic studies have shown that identical twins raised apart have more similar body makeup than do fraternal twins raised together (Bray, 1991), suggesting that body type is more genetically, rather than environmentally, determined. Research has demonstrated that body weight may not be as amenable to change as doctors and the media suggest and several studies report that weight loss using current methods is poorly maintained in the long run (Wadden, Sternberg, Letizia, Stunkard, & Foster, 1989; Wilson, 1994). Normal biological events in women's lives, such as puberty, childbirth, and menopause, tend to make women gain weight over their lifespan (Rodin et al., 1985).

Seen in this way, women's ongoing efforts to change body and appearance through diet, exercise, fashion, beauty products, and perhaps most dangerously, surgery and eating disorders, reveal what may be a perpetual and hardly adaptive body-based
shame. The extent to which body "correction" is motivated by shame elevates the task of meeting societal standards of beauty to a moral obligation. Thus, women who fail to live up to this obligation have often been deemed uncivilized and immoral (Crocker, Cornwell, & Major, 1993).

**Appearance Control Beliefs.** McKinley and Hyde (1996) theorize that appearance control beliefs are a necessary part of OBC. They see OBC as relying on the underlying belief of women that they are responsible for how their bodies look and can, given enough effort, control their appearance and comply with cultural standards. Even though many aspects of appearance cannot be controlled, there are some benefits to women in believing that they can control their appearance. Working to control appearance is one way women can resolve the contradiction between being "feminine" and being instrumental (Rodin et al., 1985; Mayer, 1983). Controlling appearance is a skill that gives women a sense of competence that they do not easily give up (Bartky, 1988). When people believe they are in control, even when they are not, their psychological and physical well-being is enhanced (for example, Taylor, 1989). This may be especially important because cultural standards for body appearance are difficult or impossible for many to attain. The illusion of control both helps people handle stressful situations and makes them persistent in pursuing their goals (Taylor, 1989). Therefore, believing they can control their appearance may relieve some of the stress for women that accompanies body surveillance and the internalization of cultural body standards and may provide more positive psychological outcomes.
Unfortunately, control beliefs may also encourage negative behaviors such as restricted eating. Restricted eating can damage health, can actually induce weight gain by changing metabolic processes, and may be the most underrated cause of illness in Western society (Ernsberger & Haskew, 1987). The inevitable regain of weight that follows food restriction can increase the risk of diabetes, high blood pressure, and heart disease (Ernsberger & Haskew, 1987). Restricted eating may also lead to disordered eating and eating disorders. In addition, restricted eating may have negative cognitive effects. Etaugh and Hall (1989) have found restricted eating to account for gender differences in a cognitive task. Finally, as already mentioned, restricted eating may also play a role in decreased awareness of internal bodily cues. Some have argued that the suppression of hunger cues leads to a generalized insensitivity to internal bodily cues (Heatherton, Polivy, & Herman, 1989.)

Research on Objectification Theory

Noll and Fredrickson (1998) tested a mediational model of disordered eating derived from objectification theory. They proposed that the emotion of body shame would mediate the relationship between self-objectification and disordered eating and also hypothesized an additional direct path between self-objectification and disordered eating based on anticipated body shame (the idea being that anticipated body shame would motivate women who self-objectify yet are satisfied with their weight to engage in disordered eating in an effort to maintain their satisfaction and thereby avoid the experience of body shame.)
Two samples of undergraduate women (93 and 111 women respectively) completed self-report questionnaires assessing self-objectification, body shame, and disordered-eating symptoms. They used the Self-Objectification Questionnaire (developed by Noll & Fredrickson, in press) to assess individual differences in self-objectification. This questionnaire was designed to assess the extent to which individuals view their bodies in observable, appearance-based (objectified) terms versus nonobservable, competence-based (nonobjectified) terms. Respondents are asked to rank a list of body attributes in ascending order of how important each is to their physical self-concept from that which has the most impact (rank=1) to least impact (rank=12). Twelve body attributes are listed: six that are appearance based (physical attractiveness, coloring, weight, sex appeal, measurements, and muscle tone) and six that are competence based (muscular strength, physical coordination, stamina, health, physical fitness, and physical energy level.) Scores were computed by summing the ranks for the appearance and competence attributes separately, then computing a difference score. Scores range from -36 to 36, with higher scores reflecting a greater emphasis on appearance, which is interpreted as greater self-objectification.

The Body Shame Questionnaire (developed by Noll & Fredrickson) was used to measure body shame. This questionnaire infers body shame from participants’ reported desire to change various body parts/attributes and the reported intensity and frequency of their desire for these changes. It lists 28 different body parts and physical attributes such as weight, coloring, shape of legs, or hips. For each, participants are asked to report whether they would like to change that particular aspect of their body (yes or no), as well as both the intensity of their desire for change and how frequently they think about the
desired changes. Intensity ratings range from 1 to 9, with 1 indicating very mild desire for change and 9 indicating very intense desire; likewise, frequency ratings range from 1 to 9, with 1 indicating participants seldom thought about change and 9 indicating that they very often thought of change. Three scores were derived from this, the total number of body parts/attributes participants desire to change, the total intensity of desires, and the total frequency of thoughts. As these scores were highly correlated (correlations ranging from $r=.88$ to $r=.98$, $p<.01$), they were combined into a single composite body shame score. This was created by separately standardizing each of these three scores, then summing the standardized scores.

The Revised Bulimia Test (BULIT-R; Thelen, Farmer, Wonderlich, & Smith, 1991), a measure of bulimic symptoms, the Eating Attitudes Test (EAT; Garner & Garfinkel, 1979), a measure of a broad range of behaviors and attitudes common in anorexia nervosa, and the Revised Restraint Scale (Polivy, Herman, & Howard, 1988), a questionnaire assessing weight fluctuations, degree of chronic dieting, and related attitudes toward weight and eating, were used to assess disordered eating.

Results included significant positive correlations between self-objectification and body shame, bulimic symptoms, anorexic symptoms, and dietary restraint in both samples. There were also significant positive correlations between body shame, bulimic symptoms, anorexic symptoms, and dietary restraint in both samples. These correlations replicate the basic findings reported by McKinley and Hyde (1996), although McKinley and Hyde used different measures for self-objectification, body shame, and disordered eating.
The hypothesized mediational model was tested using multiple regression analyses. Results supported the hypothesis that body shame mediates the relationship between self-objectification and disordered eating. The mediational model accounted for 35% of the variance in bulimic symptoms in Sample 1 and 51% in Sample 2 ($p<.01$); 27% of the variance in anorexic symptoms in Sample 1 and 30% in Sample 2 ($p<.01$); and 47% of the variance in dietary restraint in Sample 2 (not measured in Sample 1), ($p<.01$). In addition to the mediated effects of self-objectification, direct effects of self-objectification on disordered eating were also observed for all criterion variables. The idea that experiences of body shame may be bypassed is consistent with objectification theory, which suggests that the negative consequences of self-objectification may occur regardless of how satisfied women are with their physical appearance (Fredrickson & Roberts, 1997). Limitations of this study include its correlational nature and the limited generalizability of its samples.

In an experimental study (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998), several hypotheses were tested: that self-objectification produces body shame, which in turn predicts restrained eating, that self-objectification diminishes math performance, and that the emotional and behavioral consequences of self-objectification will be evident for women and not for men. Participants in two experiments were pretested on trait self-objectification (using the Self-Objectification Questionnaire already described) and later took part in a presumably unrelated study on “emotions and consumer behavior.”

Under the cover story, participants sampled and evaluated a number of consumer products. State self-objectification was manipulated by randomly assigning participants to try on and evaluate a swimsuit or a sweater. This was done alone in a dressing-room
in front of a full-length mirror. While wearing the garment, participants completed
questionnaires aimed at measuring body shame (a modified version of the Body Shame
Questionnaire described above) and a measure asking for ratings on the
phenomenological experiences of various emotions, nineteen items of which were based
on theoretical descriptions of the phenomenology of shame, i.e., “I wish I were invisible”
or “I feel like covering my body.” Filler items were included to bolster the cover story.
Behavioral measures were obtained by administering a food taste test and a math test.

The first experiment found that the situation of increased self-objectification
(trying on a swim suit) significantly increased body shame, which in turn predicted
restrained eating, among a sample of 72 undergraduate women. Trait and state self-
objectification interacted such that the greatest amount of body shame was reported by
women in the swimsuit condition who had scored high on trait self-objectification. The
second experiment found that these effects on body shame and restrained eating
replicated for a sample of 42 undergraduate women only, and not among a sample of 40
undergraduate men. Men’s reports of body shame were not influenced by whether they
wore a swimsuit or a sweater, but instead were best predicted by trait self-objectification
grouping. Moreover, relative to women in swimsuits, men in swimsuits reported feeling
more silly, awkward, and foolish and less disgust, distaste, and revulsion. The behavioral
consequences of self-objectification were clearly evident for women and completely
absent for the men. Only one man, for example, engaged in restrained eating, and he was
in the sweater condition. Likewise, wearing a swimsuit did not disrupt men’s
performance on the math test, whereas women in the swimsuit condition performed
worse on the math test than did women in the sweater condition. Thus, this study
provides some evidence that state self-objectification may draw on women’s attentional resources and disrupt their mental performance. It also provided an empirical basis for the claim that self-objectification may serve as a risk factor for disordered eating.

**Research on Objectified Body Consciousness**

McKinley (1998) has examined relationships between the three components of objectified body consciousness (body surveillance, body shame, and control beliefs), actual/ideal weight discrepancy, and body esteem among a sample of 164 undergraduate women and 163 undergraduate men. She used the Objectified Body Consciousness Scales (McKinley & Hyde, 1996) to measure objectified body consciousness, the Body Esteem Scale (Franzoi & Shields, 1984) to measure body esteem (35 aspects of the body listed and participants rate each on a 5-point scale from “have strong negative feelings” to “have strong positive feelings,” summed to form single score), and the absolute value of the difference between participants’ self-reported actual weight and desired weight was used as a measure of actual/ideal weight discrepancy.

First, the OBC scales were found to be factorially sound and reliable for men, although 2 items from the Control Beliefs Scale did not load on any factor. The relationships between body surveillance, body shame, and body esteem were found to be significantly stronger for women than for men. Women indicated significantly higher surveillance, body shame, and actual/ideal weight discrepancy scores, and lower body esteem scores than did men. No differences were found on Control Beliefs. Multiple regression analysis indicated that gender differences in body esteem were no longer significant when objectified body consciousness was controlled for. This suggests that
objectified body consciousness mediates the relationship between gender and body esteem. Entering actual/ideal weight discrepancy into the equation further increased the predictive power of the model.

McKinley (1999) has also examined age-related differences and similarities in the components of objectified body consciousness among a sample of 151 undergraduate women and their middle-aged mothers. She found that the mothers had lower levels of surveillance and body shame than the daughters in this sample, and no differences were found in appearance control beliefs, body esteem, or restricted eating, even though the mothers weighed more and were less satisfied with their weight than the daughters. The evaluation of the self in terms of achievement of cultural body standards (body shame) was strongly negatively related to multiple dimensions of psychological functioning for women in both age groups (as measured by the Scales of Psychological Well-Being, Ryff, 1993).

Believing that appearance can be controlled was unrelated to young women’s body esteem, but was positively related to the older women’s body esteem. For the older women, the closer they were to cultural weight ideals, the more they engaged in surveillance (although it may also be that those who engage in surveillance work more at controlling their weight). However, for the younger women, their body mass index was unrelated to surveillance. Body esteem was an important predictor of all six domains of the Psychological Well-being Scales (Ryff, 1993), including autonomy, environmental mastery, personal growth, positive relations, purpose in life, and self-acceptance, for both groups of women.
Self-Objectification and Sports

Fredrickson and Roberts (1997) suggest that one way to help girls and women resist the internalization of a passive, object oriented sense of self may be to encourage sports participation and related forms of physical activity and risk-taking, thus promoting a more active, instrumental experience of the self. Some preliminary evidence suggests this may be so (Harper & McCoy, 1998). Harper and McCoy found significantly less self-objectification (as measured by the Self-Objectification Questionnaire; Noll, 1997), fear of negative evaluation (Watson & Friend), and public self-consciousness (Fenigstein, Scheier, & Buss, 1975) and significantly more body self-esteem (Franzio and Shields, 1984) and masculinity (Bem Sex-Role Inventory, Masculinity Scale, Bem, 1974) among college women who had participated in one sport during high school compared to those who had participated in no sports during high school. They found no differences on a measure of depression (Beck, 1967) and a marginal effect for self-esteem (Rosenberg, 1965). These findings provide some support for the hypothesis that sports participation may buffer women from focusing on body appearance and may result in more positive mental health. However, the expected pattern of increasing sports participation resulting in an increase in these positive effects was not found. A consistent and significant drop in these positive effects was found with those women who participated in two or more organized sports versus those who had participated in one sport. Reasons for this curvilinear relationship were not understood. However, the sample size was small, with only 92 college women total: 21 women in the no sport group, 18 in the one sport group, and 53 in the two or more sports group.
In a related way, McKinley and Hyde (1996) speculate that women who feel out of control in many domains of their lives may try to achieve more control through practices such as increased body surveillance and restricted eating. It follows, then, that women who experience self-efficacy and achievement in domains other than appearance, such as a sport, may be less vulnerable to high levels of body surveillance and body shame.

However, there is increasing empirical evidence suggesting that the athletic arena may place the female athlete at increased risk for developing patterns of disordered eating (Barnett & Wright, 1994). This seems theoretically inconsistent with the idea that sports participation could reduce self-objectification, as self-objectification is theorized to be a risk factor leading to disordered eating. The prevalence of disordered eating in female athletes, based on a number of small studies, has been reported in the 15% to 62% range, and is greatest in "thin-build" sports such as long-distance running (Brownell & Rodin, 1992). This prevalence has been perceived to be such a problem that in 1992, the American College of Sports Medicine convened a panel of experts in order to develop an action plan concerning the prevention, assessment, and treatment of eating disorders, amenorrhea, and osteoporosis among women athletes (Putukian, 1994).

Perhaps this contradictory state of affairs for women has developed out of the health and fitness movement cited by Coakley (1994) as encouraging the participation of women in physical activities, including sports. The "fitness boom" of the mid-1970's created increased health awareness and an emphasis on the development of physical strength and competence. However, since the early 1980's, there has been a move away from promoting sport as a means for women to experience personal freedom,
independence, and power and a move toward the use of sport to lose weight and increase sexual attractiveness (MacNeill, 1988; Cole, 1993).

Coakley (1994) points out that this emphasis can be related to participation in sports by women in two ways: many women of all ages don't want to begin participating in physical activities and sports until they are thin enough to look "right" and to wear the "right" clothes; and many women who do participate combine their physical activity with pathogenic weight-control behaviors that lower body fat but produce amenorrhea, deprive them of necessary nutrients, and increase their risk of injuries. Studies show that an alarming number of women athletes use laxatives, diet pills, diuretics, self-induced vomiting, binges, and starvation diets in conjunction with their training (Brownell & Rodin, 1992; Clark, 1988; Rosen, 1986).

Although disordered eating is seen in athletes of all sports, some sports place athletes at higher risk for the development of these behaviors. Included in this category are sports in which subjective judging encourages lean appearance, such as gymnastics, diving, figure skating, dance, and synchronized swimming, as well as sports that emphasize body leanness for optimal performance, such as long distance running, swimming, and cross-country skiing, and sports that use weight classifications such as rowing, judo, weightlifting, and taekwondo (Brownell & Rodin, 1992).

It seems that the arena of athletics may provide a positive context for women that reduces self-objectification by giving them the opportunity to value their bodies for what they can do rather than what they look like. At the same time, certain sports may also become a context for increased self-objectification. This may happen if an emphasis on weight or appearance is inherent in the sport or if the particular subculture of coach and
teammates emphasizes weight and appearance. From the individual athlete’s perspective, it may be that the motivation for participation in sports may influence the effects of that participation. When women participate in a sport to meet needs for fun, social activity, or the experience of mastery and achievement, self-objectification may decrease. However, if too much emphasis is placed on top performance, either from within or without, and hence on an athlete’s physical shape and build as a determinant of her performance, then self-objectification may increase. A recent meta-analysis (Smolak, Mumen, & Ruble, 2000) found that elite athletes, especially those in sports emphasizing thinness, were more at risk for eating disorders than nonathletes. However, nonelite athletes, especially in high school, were found to have reduced risk of eating problems compared to controls.

Therefore, the first major purpose of this study is to examine whether or not high school girls who participate in sports report different degrees of self-objectification than those who do not participate in sports. The current study will add to the work of Harper and McCoy (1998) by using a larger sample size and adding more positive measures of mental health. It will also attempt to make distinctions between different types of sports, to try to ascertain whether some sports create a more objectifying context and more self-objectification than others, depending on the emphasis in that sport on physical appearance and “femininity.”
Instrumentality

The concept of instrumentality has its origins in the study of the construct of masculinity-femininity, which was for a long time conceptualized as bipolar and unidimensional. However, beginning in the 1970s, a number of writers (Bem, 1974; Constantinople, 1973; Spence, Helmreich, & Stapp, 1974) suggested that masculinity and femininity should be conceptualized as separate independent constructs rather than as opposite ends of a single dimension. In 1974, Bem introduced the Bem Sex-Role Inventory (BSRI) as a measure of the two constructs of masculinity and femininity. Her substantive definitions were as follows: “In general, masculinity has been associated with an instrumental orientation, a cognitive focus on ‘getting the job done,’ and femininity has been associated with an expressive orientation, an affective concern for the welfare of others” (p.156).

In order to create the BSRI, Bem (1974) compiled a list of 200 adjectives that seemed either masculine or feminine in tone. Adjectives judged by undergraduate students to be significantly more desirable for males than for females were eligible for the masculinity scale and vice versa for the femininity scale. This empirical method of item selection thus went considerably further than the definitions given originally (Betz, 1997). For example, the Masculinity scale items “independent,” “assertive,” and “acts like a leader” seem related to an instrumental orientation, but the items “athletic” and “masculine” are less well related. In this way however, instrumentality was defined as possessing stereotypically masculine traits such as independence, decisiveness, and
dominance, and expressiveness was defined as possessing stereotypically feminine traits such as tenderness and compassion.

In her original androgyny model, Bem (1974) proposed that individuals who have a balance of "masculine" and "feminine" traits would enjoy healthier psychological functioning than those who are stereotypically masculine or feminine. Bem’s original theory defined androgyny as a balance of instrumentality and expressiveness, rather than amounts of either, however, since then, androgyny has been defined as the possession of high degrees (above the median) of both masculine, instrumental qualities and of feminine, expressive qualities (Gilbert, 1981).

Research has shown that members of our culture largely agree about which personality traits are primarily either masculine or feminine in nature (Rosenkrantz, Vogel, Bee, Broverman & Broverman, 1968; Spence, Helmreich, & Stapp, 1975). This gender role stereotyping limits the kinds of roles, activities, and personality attributes that our society views as appropriate for each gender. Bem theorized that people would be healthier and more functional without these limitations, in other words, if they displayed androgynous qualities rather than primarily either masculine or feminine ones. In theory, people who are androgynous are not limited by sex-typed prescriptions, and are freer to display characteristics viewed as most effective for the situation, regardless of whether cultural expectations would deem them appropriate for either women or men.

A number of studies have compared the self-concepts of instrumentality and expressiveness in males and females of diverse ages and socioeconomic backgrounds (Spence & Helmreich, 1978). These studies have shown that women tend to score lower on instrumentality and higher on expressiveness than men; that there is much variability
in responses within each sex; and that within each sex, masculinity (instrumentality) and femininity (expressiveness) scores are essentially uncorrelated. Support was found for the idea that individuals of either sex could have high levels of instrumentality and expressiveness, low levels of both, or a high/low combination of either.

Bem's original balance model of androgyny (1974), the dual main effects androgyny model of Spence, Helmreich, and Stapp (1975), and the emergent interaction androgyny model of Lubinski, Tellegen, and Butcher (1983) caused a stir of excitement among researchers, and many studies were undertaken to test these androgyny models. The focus of this androgyny research has been primarily on relations between self-ratings of instrumental and expressive personality traits and measures of self-concept and psychological adjustment. Overall, the results of these studies have been disappointing in terms of finding either additive or interactive effects of both instrumentality and expressiveness for psychological health. While a positive association between mental health and androgyny has been found, this association seems to be primarily due to the contribution of instrumentality.

In a comprehensive review of the androgyny research, Sharpe and Heppner (1991) concluded that instrumentality, as measured by the Bem Sex Role Inventory (BSRI) and the Personal Attributes Questionnaire (PAQ), has consistently been shown to correlate more strongly than expressiveness with self-esteem, healthy ego development, and global measures of psychological adjustment. Similarly, Cook (1987) reviewed the androgyny literature and found that despite the positive relationship between expressiveness and a range of variables such as congeniality (Orlofsky & O’Heron, 1987) and positive relations with parents and same-sex peers (Marsh, 1987), instrumentality is
more strongly related to various indices of psychological health. In general, instrumentality has often been found to be as adjustive as androgyny for both sexes, whereas expressiveness is much less so.

Instrumentality seems to be a psychological variable that, like self-esteem, can be conceptualized as a psychological resource for coping with stressful events. The qualities of instrumentality such as assertiveness, self-reliance, and decisiveness can contribute to active and effective coping strategies in response to stressful events. Betz (1997) has suggested a redefinition of instrumentality as the ability to take action on one's own behalf and thus to feel some sense of control in one's life. Research has supported the view that instrumentality is an important factor in overall mental health. Accordingly, it is important to consider ways of increasing a sense of instrumentality, especially in women, who tend to have lower levels of instrumentality. In our culture, the self-reliance and independence of women may be inhibited by gender role socialization, which encourages women to sacrifice self-development to relationship development and taking care of others, rather than taking care of themselves. Internalization of traditional gender norms can discourage women from viewing themselves as competent, autonomous, and strong individuals (Cantor & Bernay, 1992; Schur, 1984).

Measures of Instrumentality

As mentioned previously, the concepts of instrumentality and expressiveness have grown out of the constructs of masculine sex-role identity and feminine sex-role identity, and have been measured primarily by the Bem Sex-Role Inventory (BSRI; Bem, 1974) or the Personal Attributes Questionnaire (PAQ; Spence, Helmreich, & Stapp, 1974).
However, the use of these instruments may be somewhat limiting. One problem is that they both include personality attributes that are associated with stereotypical "masculinity" of a more socially negative type, such as aggressiveness. The definition of instrumentality used for this study – the ability to take action on one's own behalf (to solve problems, take care of oneself, etc.) and to thus have a sense of control in one's life – is not assumed to necessitate "aggressiveness". Another problem is that these instruments may be tapping into an individual's concept of his or her self as "feminine" or "masculine" rather than into her/his ability to take action on his/her own behalf and to feel a sense of control.

Therefore, for the purposes of this study, along with a traditional measure of instrumentality (BSRI), a new measure of instrumentality and a measure of internal locus of control will also be used (see Measures in Study 1 and Study 2).

Instrumentality and Sports Participation

The world of sports appears to provide good opportunities to develop the qualities of instrumentality. Much has been written on the virtues of participation in sports. Athletics provides an arena in which to develop qualities such as leadership, teamwork skills, feelings of self-confidence and self-worth, emotional and physical stability, and physical strength and coordination (Coakley, 1994). Although most of the research on personality characteristics seen in athletes has been conducted with male athletes, the small body of research that has been conducted on the psychological characteristics of female athletes has shown that athletic women tend to be more intrinsically motivated,
assertive, achievement oriented, independent, and self sufficient than nonathletic women (Jackson & Marsh, 1986).

Jackson and Marsh (1986) compared three groups, 30 female "powerlifters" competing in a national championship, 46 high school female athletes randomly selected from all the major sports at the school (track, swimming, tennis, volleyball, field hockey, softball, and gymnastics), and 46 high school female nonathletes on measures of role conflict, sex-role identification, and multidimensional self-concepts. They found little evidence of role conflict and found that both athletic groups scored substantially higher on masculinity (as measured by an adapted version of the Bem Sex-Role Inventory, 1974, for Australian language) and on a measure of self-concept of physical ability than the nonathletic group. There were no group differences on femininity. Both athletic groups also scored significantly higher on measures of self-concepts of physical appearance, general self-esteem, math ability, and emotional stability.

In another study, Henschen, Edwards, and Mathinos (1982) investigated differences in achievement motivation (Mehrabian Scale of Achieving Tendency; Mehrabian, 1969) and sex-role orientation (Bem Sex-Role Inventory; Bem, 1974) between 67 female high school track and field athletes, and 67 female nonathletes. They found that the female athletes exhibited significantly higher achievement motivation than did the nonathletes; also, high achievement motivation was related to androgynous and masculine sex roles, while low achievement motivation was associated with feminine and undifferentiated (low in both masculinity and femininity) sex-role orientations. Both the androgynous and masculine sex-role orientations involve a high level of instrumentality;
while both the feminine and the undifferentiated sex-role orientations involve a low level of instrumentality.

Chalip, Villiger, and Duignan (1980) administered the Bem Sex-Role Inventory to a sample of 23 female nationally competitive field hockey players, who had a mean age of 19.9 years and had a mean of 8.1 years of experience in the game. These individuals were in daily training for their sport. When the frequencies of androgynous, masculine, feminine, and undifferentiated categories were compared to normative frequencies in a population matched for age, socio-economic status, and community, significant differences were observed, due to a greater number of androgynous women in the sample of field hockey players and a smaller number of feminine women. In other words, the athlete group compared to the normative group indicated more instrumentality.

Two experimental studies in which groups of college women were assessed before and after participation in intensive running or weight lifting programs found that these fitness activities had a positive impact on the women's assessments of their self-esteem and body competence (Skrinar, Bullen & Cheek, 1986; Trujillo, 1983). In another study, Blinde, Taub, and Han, 1993, conducted telephone interviews with 24 women athletes in three Division I intercollegiate sport programs in the U.S. These athletes were involved in a variety of sports, including basketball, track and field, volleyball, swimming, softball, tennis, diving, and gymnastics. They had an average age of 20.2, and were almost all the recipients of an athletic scholarship. Three individuals independently performed a content analysis of the verbatim transcriptions of the interviews in order to identify common personal outcomes of sports participation. Results of this task yielded a very high level of consistency among the researchers who
agreed on a set of coding categories depicting various concepts, themes, and patterns. Although there was evidence in the athletes’ responses that disempowering forces coexist in college sport (e.g., homophobia, discrimination, and pressure to win), the majority of the athletes’ responses were positive in nature, suggesting that they felt sports participation was beneficial. The analysis of their comments suggested three main outcomes of sport participation that reflected personal empowerment: bodily competence, perceptions of a competent self, and a proactive approach to life. The majority of respondents mentioned factors related to the development and benefits of a strong and competent body. They also reported self-perceptions of competence, of being able to achieve goals through hard work and persistence, and a feeling of being in control. A final theme involved the adoption of a proactive approach to life, with elements such as the ability to seek challenge and take risks, to set goals and establish strategies for achieving them, and the ability to be comfortable with being assertive and competitive.

This research suggests that differences between athletes and nonathletes are to be found on dimensions such as instrumentality and locus of control. However, it is unclear whether the athletic experience leads to the development of these characteristics, or if people with these characteristics gravitate toward or persist in athletics. It is likely that both of these factors are at work; people with characteristics that are associated with success in sports are more likely to pursue sports experience, and sports are likely to facilitate the development of these characteristics as well. Another major purpose of this study is to add to the literature exploring the relationship of instrumentality to sports participation, and to also examine the relationship of instrumentality to self-objectification.
Because of the importance of instrumentality in overall mental health, it is important to consider ways of increasing feelings of instrumentality for women. As mentioned above, Betz (1997) has suggested a definition of instrumentality as the ability to take action on one's own behalf and to feel a sense of control in one's life. She has further suggested that one way to build a sense of instrumentality for women is to increase self-efficacy in traditionally masculine domains of activity related to self-reliance, such as home repairs, financial investing, and self-defense. Physical competence, in domains of athletics or fitness activity, may also be related to instrumentality (Betz, 1997). Additionally, it may be that the development of self-efficacy in a number of different domains becomes the building blocks for a generalized sense of instrumentality (Betz, 1997).

In thinking about how to increase competence in certain domains of activity, Bandura's (1977) self-efficacy theory may be useful. Bandura developed the theory of perceived self-efficacy expectations as a social learning theory to explain behavior change (1977; 1986). He theorized that behavior change is cognitively mediated. Bandura postulated that self-efficacy expectations are an important consideration in predicting behavior because they affect whether an individual will "approach" a given behavior/domain or "avoid" it (See Figure 2, p. 43). He reasoned that people are more likely to attempt behaviors toward which they feel confidence (i.e. have higher levels of self-efficacy expectations) and more likely to avoid those behaviors in which they lack...
confidence. In other words, people tend to avoid activities and situations they believe will exceed their coping capacities, but they readily undertake activities and select social environments which they judge themselves capable of handling (Betz & Hackett, 1986). Bandura (1977) also postulated that self-efficacy expectations would influence the likelihood of an individual performing a behavior successfully and persisting in that behavior in the face of obstacles.

Bandura theorized that people's self-efficacy expectations could be enhanced in four principle ways (Bandura, 1986) (see Figure 2, p. 43). The most effective vehicle for developing a resilient sense of efficacy is through mastery experiences. Performance successes build a sense of personal efficacy; failures undermine it. The other three ways are vicarious learning or modeling, verbal persuasion or encouragement from others, and emotional arousal, by which Bandura referred to physiological states that are read as anxiety and can reflect personal vulnerability and tend to lower self-efficacy expectations.

Self-efficacy does not simply reflect the perception of accomplishments; instead, it is based on subjective inferences from different sources of information. Perceived self-efficacy has been shown to exert an effect on performance, independent of actual ability levels (Bandura, 1992). High self-efficacy expectations allow people to invest more effort and persist longer than those low in self-efficacy. When setbacks occur, they recover more quickly and maintain the commitment to their goals. High self-efficacy also allows people to select challenging tasks and environments and to set themselves higher goals. The sense of self-efficacy is considered to influence various processes of human functioning: cognitive processes, motivation, affect, and selection of
Figure 2: Bandura's Self-Efficacy Model
(as adapted by Betz, 1992, based on Bandura, 1977)
environments. This concept has been applied to such diverse areas as school achievement, emotional disorders, mental and physical health, and career choice (for ex., Bandura & Wood, 1989; Coe & Levine, 1991; Betz & Hackett, 1986; Nicholls, 1984; Kent & Gibbons, 1987).

Betz (1997) has proposed that one method of increasing instrumentality might be to use the four sources of self-efficacy to deliberately increase self-efficacy in domains of activity usually associated with male gender-role socialization. For example, college women who are involved in nontraditionally feminine sports such as basketball or field hockey, and who develop high self-efficacy expectations in such a domain, may have increased instrumentality. They may also be more likely to have high self-efficacy expectations in other nontraditionally feminine domains, such as the Realistic domain from Holland's career domain concepts.

The six interest types of Holland's (1973; 1997) theory, Realistic, Investigative, Artistic, Social, Enterprising, and Conventional, (RIASEC) have been among the major individual differences variables used in career theory, assessment, and counseling (Betz, Borgen & Harmon, 1996) (see Figure 3, p.46). Holland has postulated that these interest types describe personality characteristics, as well as job environments, and that congruence between the two leads to job stability and satisfaction. A description of the Realistic personality type might include "likes to work outdoors and with tools and machines; prefers to deal with things than people; prefers action to talk". Jobs with a significant Realistic component include Engineering, Forestry, and Carpentry. As can be seen from this description, the Realistic personality type is highly related to stereotypically masculine characteristics.
Consistent gender differences have been found among Holland's RIASEC themes, whether they are measured as interests with instruments such as the Strong Interest Inventory or as areas of perceived competence with instruments such as the Skills Confidence Inventory (Betz, Harmon, & Borgen, 1996). The biggest differences have been found on the Realistic theme, on which men generally score higher than women, and the Social theme, on which women generally score higher than men. These differences make sense in light of gender-role socialization. A third purpose of this study is to examine the possibility that the experience of participation in more traditionally "masculine" sports would generalize to a greater sense of self-efficacy in other stereotypically masculine domains, such as the Realistic theme.
Realistic
Operating equipment, using
tools, building,
repairing

Investigative
Performing lab work,
solving abstract
problems, researching

Conventional
Setting up procedures,
organizing, operating
computers

Artistic
Composing music,
writing, creating
visual art

Enterprising
Selling, managing
persuading

Social
Teaching, explaining
helping

Figure 3: Holland's Hexagon (Holland, 1973)
Summary and Purposes

The goals of the current study were several. One main objective was to explore the possible impact of sports participation during high school on the development of self-objectification among girls. Specifically it is hypothesized that women who have participated in high school sports will indicate lower levels of self-objectification than women who did not. Self-objectification theory, according to Fredrickson and Roberts, 1997, would predict that a more active, instrumental use of the body such as occurs during sports participation, would provide a protective factor that would help girls to not internalize objectifying treatment to the same extent.

A second main objective was to explore the possibility that within the group of women who had participated in high school sports, levels of self-objectification may differ depending on the emphasis on appearance and perceived stereotypical femininity of the sport. It is hypothesized that sports with a greater emphasis on appearance will be considered more “feminine” than sports with less emphasis on the athlete’s appearance. It is hypothesized that women who have participated in the more “feminine” sports will have higher self-objectification scores than the women who participated in the less “feminine” sports, because of the greater emphasis on the athlete’s appearance in those sports.

A third main objective was to explore the relationship of instrumentality to sports participation by girls. Instrumentality will be measured in the traditional way, with a sex-role inventory, and also with a new measure designed by the author to avoid some of the problems inherent in the use of the old measure. Another facet of instrumentality will be

47
measured with an internal locus of control measure, as the definition of instrumentality used for this study includes the concept of a sense of control in one's life. It is hypothesized that women who have participated in high school sports will indicate higher levels of instrumentality on these three measures than women who have not. Related to this, the relationships between measures of instrumentality and self-objectification will be explored in order to increase our understanding of these constructs. It is hypothesized that instrumentality measures will be inversely related to self-objectification measures. Finally, the relationship between different types of sports, in terms of perceived stereotypical femininity, and the development of instrumentality of their participants, will also be examined.

A final question addressed in this study concerned whether the experience of participation in more traditionally "masculine" sports would generalize to a greater sense of self-efficacy in other stereotypically masculine domains. It is hypothesized that those who participated in stereotypically masculine sports will indicate higher levels of self-efficacy in non-gender-stereotypic career domains, particularly one that is conceptually related to the arena of sports participation.

In order to establish an empirical basis with which to characterize sports as "more feminine" or "less feminine," it was necessary to carry out a preliminary study with first year college students on their perceptions of different sports. The "masculinity" or "femininity" of different sports has never been studied empirically before, at least, not recently with a college population; nor has perceived emphasis on the athlete's appearance. Therefore, the main purpose of Study 1 was to gather data on the perceived "femininity" and perceived "focus on appearance" of different sports. This data provided
a "metric of objectifying context" so that different sports could be categorized in those
terms and analyses carried out to address the main purposes and hypotheses in Study 2, as
outlined above.
CHAPTER 3
STUDY 1

Introduction

The primary purpose of Study 1 was to find a way to empirically obtain ratings of the emphasis on appearance and the degree of perceived femininity/masculinity of seventeen different sports. Fredrickson and Roberts (1997) theorized that self-objectification not only varies from individual to individual as a trait, but also varies as a state depending on the environmental context. It seems likely that different sports create different environmental contexts for objectification and/or self-objectification (for example, figure skating versus basketball). It also seems likely that the more "feminine" a sport is considered to be, the more that the appearance of the athlete is an important aspect of the sport and vice versa. In order to investigate this hypothesis, it was decided to assess sports on both dimensions: perceived focus on the female athlete's appearance within a sport and perceived femininity of the sport.

A secondary purpose of Study 1 was to gather some data on measures of instrumentality and locus of control. This served both to provide information about the relationships among these measures and also provided data from a group of first year students who were not selected as athletes. The group of participants for Study 2 who reported having been involved in sports would later be compared to this group.
Method

Participants and Procedures

The participants were 196 first year students enrolled in introductory psychology classes at the Ohio State University during a single academic quarter (a ten-week period). Students were volunteers in that they had the option to enroll in a wide variety of psychological experiments or to do an alternative assignment. For their participation students received course credit. Students were recruited by using a sign up sheet that gave a brief description of the study, criteria for participation, and the time and place of the study.

First year students were chosen for this study because subsequently, in Study 2, first year students under the age of 20 would be the population studied, and it is possible that people of different ages may have different perceptions of sports. A classification of sports was desired that would be congruent with the perceptions of participants similar to those to be utilized in the main study. Of the 196 participants, 100 were women, 95 were men, and one person did not specify his/her gender. Approximately equal numbers of male and female participants were solicited in order to determine if there were any significant gender differences in their perceptions. In terms of ethnicity, 20 (10.2%) described themselves as African-American, 127 (64.8%) as Caucasian, non-Hispanic, 5 (2.6%) as Hispanic, 16 (8.2% as Asian-American), 14 (7.1%) as an international student, 2 (1%) as other, and 12 (6.1%) did not indicate any ethnic status.

1 Study 2 examines the sports experiences of high school girls in a retrospective way. An assumption made for Study 2 was that this population, particularly with data being collected during the first quarter of the year, would be close enough to their high school experience that any effects of sports participation might
All participants were asked to complete a questionnaire entitled "Experiences and Views of Self," in groups of approximately 30. The questionnaire included measures of perceptions of sports, internal locus of control, instrumentality, and sex-role identification in that order. Before the start of every session, students were assured that their participation was anonymous. Each student was given a half-hour in which to complete the questionnaires and the majority of students finished within 25 minutes. Upon completion of the session, each student was given a debriefing statement explaining the nature of the study. The researcher's campus phone number was given so that any student could ask questions about the study or his/her participation, and the phone number of the university counseling center was also given in case any concerns were raised by responding to the questionnaire.

Measures

Demographic Information. Each participant was asked to respond to questions regarding sex, age, rank in college, and race/ethnicity. Gender was used as a basis of some of the analyses. The numbers were not large enough on the basis of race/ethnicity to be used for analytic purposes. Age and rank in college were used to provide a basis for inclusion in the study, as already described.

"Attitudes Towards Sports". The seventeen sports selected for both Study 1 and Study 2 had been chosen based on results from discussions with a sample of fifteen female first year students who had been athletes during high school. This sample was still be with them. Also, there might not yet have been too many intervening experiences to completely
used to get feedback on the activities participation questionnaire developed for Study 2 and to identify the usual sports played by girls in high school.

The participants for Study 1 were asked to fill out a questionnaire on "attitudes of college students towards sports." First they were asked to think about each of 17 sports in terms of how much emphasis is usually placed on the female athlete's appearance and body and to rate them on a Likert scale from 1 "little focus on appearance" to 5 "strong focus on appearance." Then they were asked to think about the same 17 sports in terms of femininity and to rate them on a scale from 1 "least feminine" to 5 "most feminine." (See Appendix B).

**Spheres of Control.** Because the definition of instrumentality used for this study ("the ability to take action on one's own behalf and thus to have a sense of control in one's life," Betz, 1997) includes the concept of an internal locus of control, this was seen as an important aspect of instrumentality to measure. The Spheres of Control Scale (SOC) is a locus of control measure developed by Paulhus (1983). While Rotter's (1966) Internal-External (I-E) Locus of Control Scale has been the more widely used and cited measure in the locus of control literature, the SOC has certain advantages over Rotter's I-E Scale. Rotter's I-E Scale has been criticized extensively with regard to its presumed unidimensionality, its inherent social desirability response bias, and the difficulties and complications created by its forced-choice format (Collins, 1974; Ashkanasy, 1985; Marsh & Richards, 1987). In contrast, the SOC provides a profile of an individual's perceptions of control across three primary behavioral domains, has

obscure these effects.
reduced social desirability response bias, and uses a Likert-format that avoids the difficulties of a forced-choice format. Further, it takes less time to complete than Rotter’s I-E Locus of Control Scale.

In its entirety, the SOC measures locus of control in three domains or spheres: personal efficacy, interpersonal control, and sociopolitical control. “Personal efficacy” refers to perceived control in the nonsocial environment in situations of personal achievement, for example, solving crossword puzzles, building bookcases, or climbing mountains. “Interpersonal control” refers to perceived control in the sphere of interactions with others in dyads and group situations, for example, defending one’s interests at a meeting, attempting to develop social relationships, or maintaining harmony in the family. “Sociopolitical control” refers to perceived control in that sphere in which an individual’s goals may conflict with those of the political and social system, for example, taking part in a demonstration, boycotting a particular product, or writing letters to a member of Congress.

For the purposes of these studies, only the first two scales were used. The Personal Efficacy Scale and the Interpersonal Control Scale consist of ten items each. Sample items include “When I make plans I am almost certain to make them work” for the former scale and “I’m not good at guiding the course of a conversation with several others” for the latter. Items are rated on a five-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5). Half of the items on each scale are keyed in opposite directions and are intermixed in the inventory. Higher scores indicate a more internal locus of control.
The samples used in the construction of the SOC have largely been drawn from university student populations. Internal consistency reliabilities for the Personal Efficacy Scale and the Interpersonal Control Scale have ranged from between .75 and .80 (Paulhus, 1983). Test-retest correlations at 4-week intervals were above .90 and at a 6-month interval were above .70 for all subscales. Factor analytic studies have confirmed the three independent facets that Paulhus postulated (Paulhus, 1983). Convergent validity has been demonstrated by negative correlations with Rotter's I-E scale (-.37 with Personal Efficacy, -.28 with Interpersonal Control). The Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964) was not strongly related to the SOC scales (r values = .19 and .11, respectively) in a sample of 110 students. Correlations between SOC subscales and a measure of verbal comprehension were .01 and .16.

Construct validity of the SOC scales has been demonstrated by several studies (Paulhus, Molin & Schuchts, 1979; Paulhus, 1983). In the former study, the authors reported the control profiles of varsity football players, varsity tennis players, and nonathletes (all males), and correctly predicted significantly higher Personal Efficacy and Interpersonal Control scores for the athletes than the nonathletes. In addition, the football players were correctly predicted to have the highest Interpersonal Control scores (this group is oriented toward team coordination and cooperative relationships in their athletic activities). In contrast, the tennis players scored highest on the Personal Efficacy scale, in line with the individualistic, competitive character required of successful tennis players. No significant differences between the three groups were predicted or found on the Sociopolitical Control scale scores. In another study, scores on the Personal Efficacy and Interpersonal Control scales were found to be significantly related to whether
Instrumentality. Instrumentality has been traditionally measured by the Bem Sex Role Inventory (BSRI) (Bem, 1974) or the Personal Attributes Questionnaire (PAQ) (Spence, Helmreich, & Stapp, 1975). These both involve rating the self on attributes that are stereotypically seen as "masculine" or "feminine" in our culture. The origins of these instruments as a measure of "masculinity" or "femininity" have created some problems in terms of using them to measure instrumentality. One problem is that they both include personality attributes that are associated with stereotypical "masculinity" of a more socially negative type, such as aggressiveness or dominance. The definition of instrumentality used for this study – the ability to take action on one’s own behalf (to solve problems, take care of oneself, etc.) and to have a sense of control in one’s life – is not assumed to necessitate "dominance" or "aggressiveness." Another problem is that these instruments may be tapping into an individual’s concept of his or her self as "feminine" or "masculine" rather than into her/his ability to take action on his/her own behalf and to feel a sense of control.

For the purpose of this study, a different measure of instrumentality was devised, the Instrumentality Scale (IS). This scale was in part derived from the work of Klein Voyten (1997). She theorized that several concepts that are conceptually and definitionally distinct, (although related), that is, global self-esteem, generalized self-efficacy, psychological hardiness, and instrumentality, operationally overlap. She factor
analyzed several instruments measuring these concepts, (including a measure of negative affect), and found a three-factor solution, one of which she named instrumentality. The instrumentality scale devised for this study included the 10 items that loaded most strongly on that factor, that were also statements rather than single adjective personality descriptors. An example of these items is: “I know if I try things will come out well.” An additional ten items were added by the author, for example “When something goes wrong, I can usually think of something to do to make it better.” These items were added so that there would be enough items to create a scale from which items with the lowest item-total correlations could be later removed. Participants indicate their degree of agreement with such statements on a 5-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5). Six of the twenty items are reverse scored. Higher total scores indicate a stronger sense of instrumentality. All of the items can be seen in Appendix D.

**Bem Sex-Role Inventory.** The Bem Sex-Role Inventory (BSRI) (Bem, 1974) was designed to measure degree of masculinity and femininity using two 20-item scales. The Masculinity scale has frequently been used to obtain a measure of instrumentality in research on androgyny (Cook, 1987; Sharpe & Heppner, 1991). Responses are obtained using a 5-point continuum to rate personality characteristics from “Never or Almost Never True” (1) to “Almost Always or Always True” (5). Examples of the Masculinity scale characteristics include: “dominant”, “self-reliant”, and “strong personality”. Examples of the Femininity scale characteristics include: “gentle”, “soft-spoken”, and “sensitive to the needs of others”. Total scores are obtained by averaging the responses
for each scale. The resulting total score can range from 1 to 5. These scales have been found to be highly reliable. Values of coefficient alpha have been found to range from .86 to .90 for both scales (Bem, 1974).

Results

Perceptions of Sports

The first analyses involved only the questions about perceptions of sports, that is, how much focus on appearance there is in each sport, and how feminine each sport is considered to be. First, t-tests were calculated for each sport to determine whether there were significant differences between men and women in their perceptions on either question. Descriptive statistics and results of t-tests for perceived focus on appearance are provided in Table 3.1 (p.65); descriptive statistics and results of t-tests for perceived degree of femininity are provided in Table 3.2 (p.66). The data show that sports considered to have the least focus on appearance include golf, field hockey, softball, lacrosse, and crew, while sports considered to have the most focus on appearance include cheerleading, dance team, gymnastics, and synchronized swimming. Sports such as volleyball and track were perceived as having intermediate levels of focus on appearance. In terms of perceived femininity, the sports considered to be least feminine include golf, soccer, crew, basketball, and lacrosse, while the sports considered to be most feminine include dance team, cheerleading, synchronized swimming, and gymnastics. Again sports such as volleyball and track fall in the middle.

Concerning focus on appearance (FOA), Levene's (1985) test for equality of variances indicated that for five of the seventeen sports (volleyball, cheerleading,
basketball, lacrosse, and field hockey), the standard deviations of the mean responses from men and from women were significantly different. In each of these five cases, the responses of women were more variable than the responses of men – in other words, women were using a broader range of the Likert scale in their responses. Significant differences between the mean responses for men and women (as shown by t-tests) were found for only two of the seventeen sports, synchronized swimming (p<.01) and golf (p<.05). For synchronized swimming, men rated it as focusing less on the female athlete’s appearance than did women, and for golf, men indicated more focus on the female athlete’s appearance than did women.

In terms of how feminine each sport is considered to be, Levene’s (1985) test for equality of variances indicated that there were significant differences in the variance for men and for women on three of the seventeen sports (volleyball, basketball, and dance team). Again, in each case, women showed more variability in their perceptions than did men. Significant differences between the means of men and women on ratings of femininity were found for three of the seventeen sports, swimming (p<.05), gymnastics (p<.05), and synchronized swimming (p<.01). Women rated all three of these sports as being significantly more feminine than did men.

Because there were few differences in the ways that women and men rated these sports, the means of the combined group were used to obtain final ratings of both the femininity and focus on appearance of these 17 sports. It had been hypothesized that the perceived femininity of a sport and perceived focus on the athlete’s appearance in a sport would be highly related. A Pearson product moment correlation was calculated in order to examine the relationship between these two sets of mean ratings. As
hypothesized, the mean ratings for these two attributes were found to be highly related, with a correlation of .93 between mean ratings of focus on appearance and mean ratings of femininity. As this correlation was so high, it was decided to combine the mean ratings for both attributes to provide a basis for categorization of the sports.

Categorization of Sports

Sports were categorized according to whether they provided a context for low self-objectification, moderate self-objectification, or high self-objectification. For purposes of analysis, the categories were assigned numbers of 1, 2, and 3. Sports with a combined mean rating below 2.50 (low focus on appearance, low femininity on the original 5-point scale) were classified as providing a low self-objectification context, and assigned a “1” for purposes of analyses of variance. Sports with a combined mean rating that fell between 2.5 and 3.5 were classified as providing a moderate self-objectification context, and assigned a “2”. Finally, sports with a combined mean rating above 3.5 (high focus on appearance, high femininity) were classified as providing a high self-objectification context, and assigned a “3”. Combined mean ratings and resulting sports categories are provided in Table 3.3 (p.67).

According to this system, the only sports that would have received a different classification if solely the “focus on appearance rating” (FOA) or the “femininity rating” (FEM) had been used are softball and track. Softball received a FOA rating of 2.16 (low) and an FEM rating of 3.00 (moderate), with a combined mean rating of 2.58 (moderate). Of all the sports studied herein, softball is the only one that can be viewed as a “feminine” version of a “masculine” sport, that is, baseball. Therefore it was reasoned
that it may have received a moderately high femininity score because it is seen as feminine in contrast to baseball, rather than because there is a strong focus on the athlete's appearance. Therefore, it was decided to classify it as a low self-objectification context (a "1"), despite its combined mean rating of 2.58. Track received an FOA rating of 2.73 (moderate) and a FEM rating of 2.46 (low), barely under the cutoff of 2.50, with a combined mean rating of 2.60 (moderate). It was decided to assign it to the moderate self-objectification category (a "2").

Instrumentality, Spheres of Control, and Bem Sex-Role Inventory Measures

Alpha reliabilities, means, and standard deviations for the Spheres of Control, Instrumentality Scale, and Bem Sex-Role Inventory (SOC, IS, and BSRI, respectively) were calculated and are shown in Table 3.4 (p.68). Alpha reliabilities were adequate (above .77) except for the two individual subscales of the Spheres of Control Scale, for which alpha was .67 in both cases. Descriptive statistics were also calculated for each gender, and t-tests were employed in order to determine whether significant gender differences were present among any of the measured variables (see Table 3.5, p.69). The only significant gender differences were found on the Masculinity and the Femininity scales of the BSRI. Women had lower scores on masculinity (p<.05) and higher scores on femininity (p<.001). However, no significant differences on instrumentality, personal efficacy, interpersonal control, or spheres of control total were found.

In order to obtain more information about the relationships that exist among these variables, a correlational analysis was performed. Table 3.6 (p.70) shows the Pearson Product Moment correlations among these measures. The Personal Efficacy Scale and
the Interpersonal Control Scale (subscales of the Spheres of Control Scale) correlated moderately ($r = .48$) with each other, and highly ($r = .86$ and $.87$ respectively) with the Spheres of Control Total, suggesting that they measure locus of control in distinct arenas that together give an overall sense of control. The Instrumentality Scale correlates highly ($r = .75$) with the Spheres of Control Scale and moderately ($r = .58$) with the BSRI - Masculinity Scale. Moderately high correlations exist between the BSRI – Masculinity Scale and all the other scales except the BSRI-Femininity Scale. There are no significant correlations between the BSRI – Femininity Scale and any of the other measures.

Discussion

In order to explore the effects of sports participation on various aspects of women’s psychological functioning, it was necessary first to describe sports in terms of perceptions of their degree of focus on appearance and the degree to which they were perceived as masculine versus feminine. Accordingly, male and female college students were asked to rate 17 sports on their degree of emphasis on appearance and their degree of femininity. Results indicated that college males and females’ perceptions of sports are very similar. Further, there was a close association between perceptions of focus on appearance and degree of femininity, that is, sports perceived as focusing more on the athlete’s appearance are also perceived as more feminine in nature.

Because of this close association, ratings of focus on appearance and femininity were combined to form a single index of self-objectification context. This index indicated that the sports that create a context of greater self-objectification for female athletes include synchronized swimming, gymnastics, dance team, and cheerleading. In
contrast, the sports that create a context of lower self-objectification include golf, lacrosse, crew, field hockey, basketball, soccer, and softball. This combined index, derived from the perceptions of 196 college students, will provide a metric, along with number of years of participation in different sports, by which extent or degree of sport "traditionality" (for women) can be studied in relation to issues of self-objectification, instrumentality, perceived locus of control, and self-efficacy. This method used to create a metric of sports "traditionality" is similar to that used by Zytowski (1969) to create categories of "degree of vocational participation" of types of work for women. He operationalized the idea of occupational traditionality using a combination of the nature (femininity/masculinity) of the work and the duration of participation (number of years) in that type of work.

Although overall, college men and women's perceptions of sports are very similar, the differences that did emerge invite a closer scrutiny. In terms of variability of response, for 8 out of 34 comparisons between men and women's responses, the responses of women were significantly more variable. It is interesting to speculate about why there is more variability in these attitudes among college women than among college men. Several factors may be involved: including degree of trait self-objectification, degree of adherence to feminist beliefs, and personal experience in sports participation. For example, it may be that women with stronger trait self-objectification perceive a greater focus on appearance than women with weaker trait self-objectification.

It is also interesting to note that three of the four sports on which women's perceptions differ significantly from those of men (synchronized swimming, swimming, and gymnastics) are sports in which the female athlete's body is clearly outlined,
providing a context for higher self-objectification. Fredrickson, Noll, Roberts, and Twenge (1998) found in their study that the situation of trying on a swimsuit (even without any observers) increased women's self-objectification and feelings of shame. In the current study, women rated these three sports (synchronized swimming, swimming and gymnastics) as having more focus on the athlete's appearance and/or as more feminine than did men.

Among the measures used in this study, which included the Instrumentality Scale, the Spheres of Control Scale, and the Bem Sex-Role Inventory (BSRI), the only significant differences found between men and women were on the Masculinity and Femininity scales of the BSRI, with lower scores for women on the former and higher scores for women on the latter. The pattern of correlations among these variables indicated that a more internal locus of control, whether in the domains of personal efficacy, interpersonal control, or combined, is relatively closely related to measures of instrumentality. On the other hand, none of these measures are related to the Femininity scale of the BSRI, also characterized as emotional expressiveness or communion.

In summary, the results of the present study have provided a metric for the description of 17 different sports along dimensions of perceived femininity and perceived focus on appearance for female athletes. These two dimensions combined create a metric for the description of these sports as a context for self-objectification. This metric will be essential to the analyses to be done in the next study. In addition, the results support hypotheses that instrumentality is importantly related to perceptions of personal (internal) control; in the study to follow these variables will be examined in relationship to several variables important to body image in women.
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<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Golf</td>
<td>2.22</td>
<td>1.07</td>
<td>1.91</td>
</tr>
<tr>
<td>Field Hockey</td>
<td>2.05</td>
<td>.92</td>
<td>2.16</td>
</tr>
<tr>
<td>Softball</td>
<td>2.14</td>
<td>1.00</td>
<td>2.18</td>
</tr>
<tr>
<td>Lacrosse</td>
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<td>.83</td>
<td>2.23</td>
</tr>
<tr>
<td>Crew</td>
<td>2.07</td>
<td>.91</td>
<td>2.27</td>
</tr>
<tr>
<td>Soccer</td>
<td>2.57</td>
<td>1.03</td>
<td>2.38</td>
</tr>
<tr>
<td>Basketball</td>
<td>2.38</td>
<td>1.01</td>
<td>2.55</td>
</tr>
<tr>
<td>Volleyball</td>
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<tr>
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<td>1.24</td>
<td>2.71</td>
</tr>
<tr>
<td>Diving</td>
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<td>1.22</td>
<td>3.07</td>
</tr>
<tr>
<td>Tennis</td>
<td>3.27</td>
<td>1.07</td>
<td>3.21</td>
</tr>
<tr>
<td>Swimming</td>
<td>3.29</td>
<td>1.25</td>
<td>3.30</td>
</tr>
<tr>
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<td>3.81</td>
</tr>
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<td>3.87</td>
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<td>4.11</td>
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<td>Dance Team</td>
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<td>.76</td>
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</tr>
<tr>
<td>Cheerleading</td>
<td>4.82</td>
<td>.56</td>
<td>4.67</td>
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</tbody>
</table>

\textsuperscript{a}Table organized by female perceptions, from least to most focus on appearance. Lower scores indicate less focus on appearance.

\*p<.05  \**p<.01

Table 3.1. Means, Standard Deviations, and Gender Comparisons for Perceived Focus on Appearance for 17 Sports.
<table>
<thead>
<tr>
<th>SPORT²</th>
<th>MALES (N=95)</th>
<th>FEMALES (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Golf</td>
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<td>.97</td>
</tr>
<tr>
<td>Soccer</td>
<td>2.27</td>
<td>1.08</td>
</tr>
<tr>
<td>Crew</td>
<td>2.27</td>
<td>.92</td>
</tr>
<tr>
<td>Basketball</td>
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<td>.80</td>
</tr>
<tr>
<td>Lacrosse</td>
<td>1.98</td>
<td>1.02</td>
</tr>
<tr>
<td>Field Hockey</td>
<td>2.52</td>
<td>1.34</td>
</tr>
<tr>
<td>Track</td>
<td>2.47</td>
<td>1.01</td>
</tr>
<tr>
<td>Cross Country</td>
<td>2.56</td>
<td>.90</td>
</tr>
<tr>
<td>Diving</td>
<td>3.00</td>
<td>.97</td>
</tr>
<tr>
<td>Softball</td>
<td>3.03</td>
<td>1.11</td>
</tr>
<tr>
<td>Volleyball</td>
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<td>Swimming</td>
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<td>.95</td>
</tr>
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<td>Tennis</td>
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<td>1.02</td>
</tr>
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<td>Gymnastics</td>
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<td>1.15</td>
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<tr>
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<td>1.13</td>
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<td>.72</td>
</tr>
<tr>
<td>Dance Team</td>
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<td>.79</td>
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</table>

*Table organized by female perceptions, from least to most feminine. Lower scores indicate perceptions as less feminine.

*p<.05 **p<.01

Table 3.2. Means, Standard Deviations, and Gender Comparisons for Perceived Femininity Ratings for 17 Sports.
<table>
<thead>
<tr>
<th>SPORT</th>
<th>FOA</th>
<th>FEM</th>
<th>Combined M*</th>
<th>CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golf</td>
<td>2.06</td>
<td>2.11</td>
<td>2.09</td>
<td>1</td>
</tr>
<tr>
<td>Lacrosse</td>
<td>2.16</td>
<td>2.08</td>
<td>2.12</td>
<td>1</td>
</tr>
<tr>
<td>Crew</td>
<td>2.17</td>
<td>2.18</td>
<td>2.17</td>
<td>1</td>
</tr>
<tr>
<td>Field Hockey</td>
<td>2.11</td>
<td>2.39</td>
<td>2.25</td>
<td>1</td>
</tr>
<tr>
<td>Basketball</td>
<td>2.47</td>
<td>2.06</td>
<td>2.27</td>
<td>1</td>
</tr>
<tr>
<td>Soccer</td>
<td>2.47</td>
<td>2.18</td>
<td>2.33</td>
<td>1</td>
</tr>
<tr>
<td>Cross Country</td>
<td>2.51</td>
<td>2.50</td>
<td>2.51</td>
<td>2</td>
</tr>
<tr>
<td>Softball</td>
<td>2.16</td>
<td>3.00</td>
<td>2.58</td>
<td>1</td>
</tr>
<tr>
<td>Track</td>
<td>2.73</td>
<td>2.46</td>
<td>2.60</td>
<td>2</td>
</tr>
<tr>
<td>Volleyball</td>
<td>2.76</td>
<td>3.11</td>
<td>2.93</td>
<td>2</td>
</tr>
<tr>
<td>Diving</td>
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<td>2.89</td>
<td>2.99</td>
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</tr>
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<td>3.17</td>
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</tr>
<tr>
<td>Tennis</td>
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<td>3.34</td>
<td>3.29</td>
<td>2</td>
</tr>
<tr>
<td>Synch. Swim.</td>
<td>3.57</td>
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</tr>
<tr>
<td>Gymnastics</td>
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<td>4.02</td>
<td>3</td>
</tr>
<tr>
<td>Dance Team</td>
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<td>4.59</td>
<td>3</td>
</tr>
<tr>
<td>Cheerleading</td>
<td>4.74</td>
<td>4.68</td>
<td>4.71</td>
<td>3</td>
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</tbody>
</table>

*Table organized by combined mean rating, from lowest to highest.

Table 3.3. Overall Mean Ratings for Focus on Appearance (FOA) and Femininity (FEM), Combined Mean Ratings, and the Resultant Categorization of 17 Sports (N=196).
Table 3.4. Descriptive Statistics and Alpha Reliabilities for All Measures. (N=192)

<table>
<thead>
<tr>
<th>Measure</th>
<th>No. of items</th>
<th>M</th>
<th>SD</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Efficacy</td>
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<td>3.80</td>
<td>.51</td>
<td>.67</td>
</tr>
<tr>
<td>Interpersonal Control</td>
<td>10</td>
<td>3.54</td>
<td>.53</td>
<td>.67</td>
</tr>
<tr>
<td>Spheres of Control Total</td>
<td>20</td>
<td>3.67</td>
<td>.45</td>
<td>.77</td>
</tr>
<tr>
<td>Instrumentality Scale</td>
<td>20</td>
<td>3.73</td>
<td>.49</td>
<td>.84</td>
</tr>
<tr>
<td>BSRI Masculinity Scale</td>
<td>20</td>
<td>3.64</td>
<td>.51</td>
<td>.86</td>
</tr>
<tr>
<td>BSRI Femininity Scale</td>
<td>20</td>
<td>3.56</td>
<td>.49</td>
<td>.84</td>
</tr>
</tbody>
</table>

*Bem Sex-Role Inventory*
### Table 3.5. Means, Standard Deviations, and t-tests for Gender Comparisons on Spheres of Control, Instrumentality, and Bem Sex-Role Inventory (Study 1).

<table>
<thead>
<tr>
<th>MEASURE</th>
<th>MALES (N=95)</th>
<th>FEMALES (N=100)</th>
<th>TOTAL (N=196)</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>t</th>
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<tr>
<td>Interpersonal Control</td>
<td>3.49 .51</td>
<td>3.57 .55</td>
<td>3.54 .53</td>
<td>-1.04</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Spheres of Control Total</td>
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<td>3.67 .46</td>
<td>3.67 .45</td>
<td>-.14</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Instrumentality</td>
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<td>3.73 .47</td>
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</tr>
<tr>
<td>BSRI - Masculinity</td>
<td>3.72 .51</td>
<td>3.56 .51</td>
<td>3.64 .51</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>BSRI - Femininity</td>
<td>3.34 .47</td>
<td>3.77 .41</td>
<td>3.56 .49</td>
<td>-6.93***</td>
<td></td>
<td></td>
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</tbody>
</table>

* *p<.05  ***p<.001
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<th>4.</th>
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<td>1. Personal Efficacy</td>
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</tr>
<tr>
<td>2. Interpersonal</td>
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<tr>
<td>Control</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Spheres of Control</td>
<td>.86**</td>
<td>.87**</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Total</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Instrumentality</td>
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<td>.59**</td>
<td>.75**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. BSRI – Masculinity</td>
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<td>.42**</td>
<td>.58**</td>
<td>.58**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. BSRI – Femininity</td>
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<td>.06</td>
<td>.06</td>
<td>.13</td>
<td>-.04</td>
<td></td>
</tr>
</tbody>
</table>

**p < .01

Table 3.6. Pearson Product Moment Correlations Among the Spheres of Control, Instrumentality, and Bem Sex-Role Inventory Measures (Study 1). (N=196)
CHAPTER 4

STUDY 2

Introduction

There were several purposes of Study 2. The overall purpose of the study was to explore the impact of high school girls' sports participation on the development of traits of instrumentality, locus of control, self-efficacy expectations, and self-objectification. It was theorized that a more positive state of mental health, as indicated by a higher degree of instrumentality, a more internal locus of control, higher self-efficacy expectations, and lower self-objectification, would be associated with sports participation. Another main objective was to further understand the constructs of instrumentality and self-objectification by examining their relationships with each other. A third objective was to explore the possibility that different sports affect the development of instrumentality and self-objectification in different ways. The results of Study 1 indicate that less emphasis is placed on the athlete's appearance in sports that are considered to be less "feminine". Different sports may thus provide different contexts within which the development of instrumentality and self-objectification may be either encouraged or discouraged.

A final question addressed in this study concerns whether the experience of participation in more traditionally "masculine" sports generalizes to a sense of greater confidence in other domains that are stereotypically considered to be "masculine" in their
nature. More specifically, the domains to be investigated are derived from Holland's (1973; 1997) career theory. Consistent gender differences have been found among Holland's career themes, whether they are measured as interests with instruments such as the Strong Interest Inventory or as areas of perceived competence with instruments such as the Skills Confidence Inventory (Betz, Harmon, & Borgen, 1996). The biggest differences have been found on the Realistic theme, on which men generally score higher than women, and the Social theme, on which women generally score higher than men. For this study, it is of interest to examine whether scores on the Realistic theme are higher for female athletes than for female nonathletes, as the Realistic theme is somewhat conceptually related both to sports participation and to male gender-role socialization. The Realistic theme includes descriptors such as liking to use tools, liking to be outdoors, preferring action to talk, and using the physical body to achieve things.

Specific hypotheses are as follows: 1) instrumentality and self-objectification measures will be inversely related; 2) women who have participated in high school sports will report higher levels of instrumentality, a more internal locus of control, higher self-efficacy expectations, and lower levels of self-objectification than women who did not; 3) women who have participated in more “feminine” sports will have higher self-objectification scores than the women who participated in less “feminine” sports; and 4) women who participated in the less “feminine” (i.e., more masculine) sports will demonstrate higher self-efficacy in other “masculine” domains (i.e., Realistic, Investigative, and Enterprising career themes) than the women who participated in the more “feminine” sports or in no sports.
Method

Participants and Procedures

Participants in the study were 467 first-year female students enrolled in introductory psychology classes at the Ohio State University during a single academic quarter, (a 10-week period starting in September). Students were volunteers in that they had the option to enroll in a wide variety of psychological experiments or to do an alternative assignment. For their participation students received course credit. Students were recruited by using a sign up sheet that gave a brief description of the study, criteria for participation, and the time and place at which the experiment would be conducted. In order to ensure the presence of enough high school athletes for the analyses, half of the sign-up sheets specified the participation of first-year women who had participated in high school sports.

The data from 16 of these participants had to be discarded because it was incomplete or incorrectly filled out; and the data from a further 14 was discarded because the participant’s age was 21 or older. Because this is a retrospective study examining high school participation in sports, too many intervening years would be a serious confounding variable. Four hundred and ten of the remaining 437 participants indicated their age, which ranged from 17 to 20, with a mean of 18.32 and a standard deviation of .54. Nearly sixty-two percent (269) of the participants were 18, 28.8% (126) were 19, 1.8% (8) were 17, and 1.6% (7) were 20. The age of 27 (6.2%) participants is unknown.

Ethnicity was indicated by 402 of the 437 participants. Nearly nine percent (37) of the students indicated African-American, 74.8% (327) indicated Caucasian, non-Hispanic, 1.8% (8) indicated Hispanic, 2.5% (11) indicated Asian-American, .9% (4)
indicated American Indian, .7% (3) indicated international student, 2.7% (12) indicated other, and 8.0% (35) did not indicate any ethnicity.

Height was indicated by 425 out of the 437 participants. It ranged from 49 inches to 73 inches, with a mean of 65.11 and a standard deviation of 2.89. Weight was indicated by 418 out of the 437 participants. It ranged from 88 to 285 pounds, with a mean of 131.78 and a standard deviation of 23.93. From these height and weight statistics, the body mass index (BMI) could be calculated for 407 of the 437 participants, using the formula weight/height² (kg/m²). The BMI ranged from 16.2 to 46.9, with a standard deviation of 3.6. For women of this age group, a BMI under 20.80 is considered to be underweight and a BMI over 25.85 is considered to be overweight (Must, Dallal, & Dietz, 1991).

All participants were asked to complete a questionnaire entitled “Experiences and Views of Self” in groups of approximately 30. The questionnaire included the measures described below in the order presented. Before the start of every session, students were assured that their participation was anonymous. Each student was given an hour in which to complete the questionnaires and the majority of students finished within 35-40 minutes. Upon completion of the session, each student was given a debriefing statement explaining the nature of the study (Appendix F). The experimenter’s campus phone number was given so that any student could ask questions about the experiment or her participation, and the phone number of the university counseling center was also given in case responding to the questionnaire raised any concerns.
Measures

Demographic Information. The participants were asked to give information regarding their sex, age, year in college, race/ethnicity, height, and weight. The numbers were not large enough on the basis of race/ethnicity to be used for analytic purposes, so this information was used for descriptive purposes only. Age and rank in college were used to provide a basis for inclusion in the study, as already described. The height and weight statistics were used to calculate the body mass index (BMI), using the formula weight/height$^2$ (kg/m$^2$). This statistic was included in analyses with self-objectification.

Objectified Body Consciousness Scale. McKinley and Hyde (1996) developed a measure of self-objectification, based on the theoretical work of Bartky (1988) and Spitzack (1990). The Objectified Body Consciousness Scale (OBCS) is composed of three scales: the Surveillance Scale (SS), the Body Shame Scale (BSS), and the Control Beliefs Scale (CBS). A high scorer on the Surveillance Scale would look at her body frequently from the vantage of an observer and would think of her body more in terms of how it looks than how it feels; a sample item is: “I rarely think about how I look.” A high scorer on the Body Shame Scale would believe that she is a bad person if she does not meet cultural expectations of her body; a sample item is: “I feel ashamed of myself when I haven’t made the effort to look my best.” A high scorer on the Control Beliefs Scale would believe that she could control her weight and her appearance if she works hard enough; a sample item is: “A large part of being in shape is having that kind of body in the first place.”
Each scale consists of eight items. Participants rate their degree of agreement with the item on a 5-point scale ranging from strongly disagree (1) to strongly agree (5). Fourteen of the 24 items are reverse scored. Scores can be computed for each scale and for the instrument as a whole. Higher total scores are postulated to indicate higher degrees of surveillance, body shame, and agreement with control beliefs. The items for the three subscales can be seen in Appendix A.

McKinley and Hyde (1996) found that in several samples of college undergraduate women, surveillance and body shame had significant negative correlations with body esteem. Body esteem refers to positive feelings towards one’s body, and was measured by the Body Esteem Scale (BES; Franzoi & Shields, 1984). This scale lists 35 aspects of the body and participants rate each item on a 5-point scale from “have strong negative feelings” to “have strong positive feelings.” McKinley and Hyde (1996) found that among a sample of middle-aged women, only body shame had a significant negative correlation with body esteem.

McKinley and Hyde (1996) found control beliefs to be significantly positively correlated with body esteem among young women but not among middle-aged women. Control beliefs were found to be related to frequency of restricted eating in all samples. “Restricted eating” was measured with an item asking, “How often do you restrict what you eat to control or maintain your weight?” with a 5-point response scale from “never” to “almost always or always”. Participants were also asked to indicate how often they dieted, how often they shaved, wore makeup, wore nail polish, permed, dyed, or bleached their hair, chose clothes on the basis that they made them “look thinner”, or exercised to shape their body or control weight. In addition, participants indicated if they were
currently dieting or restricting their intake or if they had done so in the past 6 months. Control beliefs were found to be significantly positively correlated with dieting, exercising to control weight, choosing clothes that made them "look thinner", and wearing make-up.

Internal consistency reliabilities have been found to range from .76 to .89 for the Surveillance Scale, from .70 to .84 for the Body Shame Scale, and from .68 to .76 for the Control Beliefs Scale (McKinley & Hyde, 1996). Test-retest reliabilities over a 2-week period were adequate: .79 for the SS, .79 for the BSS, and .73 for the CBS (McKinley & Hyde, 1996). Factor analyses among two different samples found that a 3-factor model was a significantly better fit than either the two-factor or single-factor models. Construct validity for the Surveillance Scale is provided by a strong positive correlation with the Public Self-Consciousness Scale (Fenigstein, Scheier, & Buss, 1975) (convergent validity) and no significant relationships with either private self-consciousness or social anxiety (divergent validity). Further, the Surveillance Scale had a strong positive correlation with both the Appearance Orientation Scale of the Multidimensional Body-Self Relations Questionnaire (MBSRQ; Cash, 1994) and with the Public Body Consciousness Scale of the Body Consciousness Questionnaire (BCQ; Miller, Murphy & Buss, 1981). None of the three OBC Scales were found to be significantly correlated to the Dislike of Fat People or the Willpower Subscales of the Antifat Attitudes Questionnaire (AAQ; Crandall, 1994), but both surveillance and body shame had strong positive correlations with the Fear of Fat Subscale (McKinley & Hyde, 1996). Construct validity for the Control Beliefs Scale was demonstrated with its positive correlation with increased dieting and restricted eating. The Body Shame Scale was validated as a
measure of internalization of cultural standards for beauty by a positive correlation between personal endorsement of cultural standards and body shame (McKinley & Hyde, 1996).

**Spheres of Control.** As described in Chapter 3, the Spheres of Control Scale (SOC) is a locus of control measure developed by Paulhus (1983). While Rotter's (1966) Internal-External (I-E) Locus of Control Scale has been the more widely used and cited measure in the locus of control literature, the SOC has certain advantages over Rotter's I-E Scale, which have already been detailed in Chapter 3, along with reliability and validity information. For the purposes of this study, only the Personal Efficacy and Interpersonal Control subscales will be used, referring respectively to perceived control in the nonsocial environment in situations of personal achievement, and to perceived control in the sphere of interactions with others in dyads or group situations. Sample items include "When I make plans I am almost certain to make them work" for the former scale and "I'm not good at guiding the course of a conversation with several others" for the latter. Items are rated on a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). Half of the items on each scale are keyed in opposite directions and are intermixed in the inventory. Higher scores indicate a more internal locus of control.

**Instrumentality Scale.** As described in Chapter 3, the Instrumentality Scale, derived partly from the work of Klein Voyten (1997), was devised as an alternative measure of instrumentality to the more commonly used Bem Sex-Role Inventory
Masculinity Scale (Bem, 1974) or the Personal Attributes Questionnaire (PAQ) (Spence, Helmreich, & Stapp, 1974). Sample items include: “I know if I try things will come out well” and “When something goes wrong, I can usually think of something to do to make it better.” Participants indicate their degree of agreement with such statements on a 5-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (5). Six of the twenty items are reverse scored. Higher total scores reflect a stronger sense of instrumentality.

**Skills Confidence Inventory.** Betz, Harmon, and Borgen (1996) developed the Skills Confidence Inventory (SCI) to measure self-efficacy for each of the six Holland themes (RIASEC). The SCI consists of 60 items, 10 for each Holland theme. For the Activities items (e.g. “build a doll house”), respondents are asked to indicate their degree of confidence in their ability to perform that activity or task; responses are obtained on a 5-point scale ranging from “No Confidence At All” (1) to “Complete Confidence” (5). For the School Subjects items (e.g., Algebra, Botany), respondents are asked to indicate their degree of confidence in completing the course successfully. Responses are obtained using the same 5-point continuum used with the Activities items. Scores can be computed for each scale and for the instrument as a whole. Higher total scores indicate higher degrees of self-efficacy.

For the purposes of this study, only four of the six scales were used, those for the themes of Realistic, Investigative, Social, and Enterprising. The scales for the themes of Artistic and Conventional were not included for two reasons. First, the themes of Realistic, Investigative, Social, and Enterprising are the themes on which typically the
largest gender differences are found among college students (Betz, Borgen, & Harmon, 1996a). The Realistic, Investigative, and to a lesser extent, Enterprising themes are themes for which college undergraduate men typically indicate higher confidence than college women, while the reverse is true for the Social theme. Therefore, these themes were included in order to see if participation in stereotypically "masculine" sports generalizes to greater confidence in other stereotypically "masculine" domains. In particular, the behavioral domain of the Realistic theme can be seen as conceptually related to sports participation— for example, using tools, liking to be outdoors, and using the physical body to achieve things. Second, sports participation or physical activity participation were not seen as likely to have an effect on strengthening self-efficacy in the behavioral domains of either the Artistic theme or the Conventional theme in any direct way. In contrast, more direct links can be postulated for the behavioral domains of the Social and Enterprising themes and sports participation, especially team sport participation.

Adequate internal consistency reliability has been demonstrated for these scales, with values of coefficient alpha ranging from .84 to .88. Test-retest correlations over a three-week period ranged between .83 and .87 (Parsons & Betz, 1997). Validity evidence has been obtained from a study demonstrating that employed adults reported higher confidence scores than did college students (Betz, Harmon, & Borgen, 1996). Also, statistically significant and moderately sized correlations between interest and confidence with respect to the same Holland theme and low correlations between interests and confidence in different themes have been found (Betz et.al, 1996).
**Bem Sex-Role Inventory.** The Bem Sex-Role Inventory (BSRI) (Bem, 1974) was designed to measure degree of masculinity and femininity using two 20-item scales. The Masculinity scale has frequently been used to obtain a measure of instrumentality in research on androgyny (Cook, 1987; Sharpe & Heppner, 1991). Responses are obtained using a 5-point continuum to rate personality characteristics from “Never or Almost Never True” (1) to “Almost Always or Always True” (5). Examples of the Masculinity scale characteristics include: “dominant”, “self-reliant”, and “strong personality”. Examples of the Femininity scale characteristics include: “gentle”, “soft-spoken”, and “sensitive to the needs of others”. Total scores are obtained by averaging the responses for each scale. The resulting total score can range from 1 to 5. These scales have been found to be highly reliable. Values of coefficient alpha have been found to range from .86 to .90 (Bem, 1974).

**Activities Participation Questionnaire.** This questionnaire was developed specifically for this study in order to measure extent and nature of sports participation and physical activity participation (See Appendix H). Participants were asked to give information regarding five areas of activities: school organizations/clubs, sports, exercise/physical fitness activities, employment activities, and hobbies/leisure activities. Participants were asked to list their activities within each area, and to indicate which years that they participated (out of their sophomore, junior, and senior years of high school.) Qualitative data was gathered by asking about the significance of participation for each area, for example: “What was most important to you about participating in each
of these organizations?” and “What was most important to you about participating in each of these sports?”

Analysis of Data

Descriptive statistics and alpha reliabilities were computed for all measures (except the activities participation measure, for which descriptive statistics only were computed). In order to assess the nature of the relationships existing among all the variables, a correlational analysis was performed using Pearson Product Moment correlations.

In order to see whether the athletic sample is significantly different overall from a less athletic sample, t-tests were employed for three measures (IS, SOC, BSRI) using samples from Study I and Study II. T-tests were also employed in comparing the women who had participated in sports during high school to the women who had not participated in any sports on all the measures.

Another statistical analysis strategy employed in this study was several analyses of variance (ANOVAs). Post-hoc tests were computed to address specific hypotheses.

The height and weight statistics were used to calculate the body mass index (BMI), using the formula weight/height² (kg/m²). This statistic was included in analyses with self-objectification.

82
Results

Descriptive Statistics and Alpha Reliabilities

Due to the method of collection of data, this group of 437 first year female college students was not a representative sample of first year female students. Rather, there were a higher percentage of athletes among them than among first year female students at the university in general. In order to ensure the presence of enough women who had participated in high school sports to conduct the analyses, half of the sign-up sheets posted for the study requested athletes only. This method actually overshot the mark resulting in a smaller group of nonathletes than was perhaps ideal. Data are provided by Table 4.1 (p. 95) on the number of women reporting participation in each sport. Frequencies of number of sports played are displayed in Table 4.2 (p. 96). Among the total group, 15.3% (67) reported playing no sports in high school, 32% (140) reported playing one sport. 31.1% (136) reported playing two sports. 16.9% (74) reported playing three sports. 3.9% (17) reported playing four sports. .5% (2) reported playing five sports and .2% (1) reported playing eight sports. Table 4.3 (p. 97) provides data on the frequencies of number of sports seasons reported by participants; the range over a three-year period (i.e. during 10th, 11th, and 12th grades) was 0 to 12. For example, a participant could report eight sports seasons if she had played 2 sports all three years, and a third for 2 years.

Descriptive statistics for all the different activities measured for this study are provided in Table 4.4 (p. 98). Relationships among these activity measures are shown in Table 4.5 (p. 99). As would be expected, there are high correlations between the number
of school organizations and that number of years of school organization participation, the number of sports played and number of sports seasons participated in, and the number of jobs held and the number of years of jobs held. There are no other significant correlations among these measures except for small, but significant, correlations between the average number of hours per week of physical activity and the number of years of organization participation, the number of sports played, the number of years of sports participation, and the number of years of jobs held.

Means, standard deviations, and internal consistency reliabilities for all measures but the activity measures are provided in Table 4.6 (p. 100). All alpha reliabilities are high (> .80); except the Personal Efficacy subscale of the SOC (.65) and the Control Beliefs subscale of the OBCS (.62). The SOC shows slightly lower although adequate alphas in general, .79 overall, and .73 for Interpersonal Control.

The Objectified Body Consciousness Scale

Pearson product moment correlations among the three subscale scores and the total scores are shown in Table 4.7 (p. 101). A moderately high correlation (.60) was found between the Surveillance and the Body Shame scores, as would be expected, but no correlations at all are found between the Control Beliefs and either Surveillance or Body Shame scores. While both Surveillance and Body Shame scores correlated highly with the total score (.84 and .82 respectively), the Control Beliefs scores had a much lower correlation with the total score (.32).

Correlations between the three subscale scores and the total score of the Objectified Body Consciousness Scale and scores from measures of instrumentality,
locus of control, and self-efficacy are displayed in Table 4.8 (p. 102). Significant moderate to low negative correlations (ranging from -.14 to -.27) are present between Surveillance and all the measures except the Personal Efficacy scale and the BSRI Masculinity and Femininity scales. Similarly, significant moderate to low negative correlations are found between the Body Shame scale and all the other measures except the BSRI Masculinity and Femininity scales (ranging from -.16 to -.35). However, the correlations found between the Control Beliefs scale and all the other measures are significant, moderate to low, and positive (ranging from .10 to .30).

This pattern of correlations both within the Objectified Body Consciousness Scale and between its subscales and other measures indicates that the three subscales of the OBCS are not measuring three aspects of the same thing; at least, it does not make sense to combine them into a total score, as they behave so differently. Therefore, in discussing the rest of the results of this study, the three subscales of the OBCS will be reported separately and not combined into a total score.

Instrumentality, Self-Efficacy, and Locus of Control Measures

Table 4.9 (p. 103) displays the pattern of correlations among the measures of instrumentality, self-efficacy, and locus of control, as well as the BSRI-Femininity measure. The two subscales of the Spheres of Control scale, Personal Efficacy and Interpersonal Control, correlate moderately with each other (.46) and highly with the Spheres of Control total (.82 and .88, respectively.) As would be expected, the Interpersonal Control scale correlates moderately highly with the Enterprising and Social subscales (.53 and .56) and much less with the Realistic and the Investigative subscales.
The difference between the correlation of the Interpersonal Control Scale with the Enterprising Scale (.53) and the correlation of the Interpersonal Scale with the Investigative Scale (.29) is significant at the $p<.001$ level. Interestingly, both the Personal Efficacy and the Interpersonal Control scales correlate moderately highly with the BSRI Masculinity scale (.42 and .50) and less so with the BSRI Femininity scale (.13 and .15). Although all these correlations are significant at the $p<.001$ level, the difference between the correlation of the Personal Efficacy Scale with the BSRI Masculinity Scale (.42) and the correlation of the Personal Efficacy Scale with the BSRI Femininity Scale (.13) is also significant at the $p<.001$ level.

The Instrumentality scale correlates highly with both of the Spheres of Control subscales (.62 and .61, respectively) and with the total score (.72). The Instrumentality scale correlates moderately with all of the SCI subscales and total scores, with $r$'s ranging from .29 to .53. The Instrumentality scale shows a moderately high correlation with the BSRI Masculinity scale (.53) and a significantly lower correlation ($p<.001$) with the Femininity scale (.19).

The Skills Confidence Inventory subscales (Enterprising, Social, Realistic, and Investigative) have significant moderate to high relationships with each other (from .26 between Social and Realistic, to .63 between Realistic and Investigative). This is the pattern of relationships that would be predicted both by Holland's theory and previous research (Betz et al., 1996). These SCI subscales all have moderate to high correlations with the BSRI Masculinity scale (from .30 to .62). Low correlations are seen between the SCI scales and the BSRI Femininity scale, (ranging from .07 to .11), except for the Social subscale, which has a moderately high relationship with the Femininity scale (.42).
Overall, correlations between the BSRI Masculinity scale and all the other measures range from moderate (.30) to moderately high (.62); correlations between the BSRI Femininity scale and all the other measures (with the exception of Social self-efficacy) range from .07 to .22.

Comparisons Between Women Athletes and Non-Athletes

For the purpose of classifying the participants from Study 2 into “athletes” versus “non-athletes,” “athlete” was defined as a female who had played at least one sport for at least 2 years during high school. This definition was arrived at after noting a pattern in the data, whereby many of the women who indicated that they had played one sport for one year during high school indicated that it was during their first year of high school (thus 3 years earlier than the time of data collection.) It was assumed that their discontinuation, for whatever reason, (lack of enjoyment, success, time, etc.) indicated that the sport had not been an important part of their lives for some time, and therefore, it would not be appropriate to include them in the group of athletes.

Several significant differences were found when the sample of women from Study 1 (not selected as athletes; some may have been involved in sports in high school) was compared to the sample of women who had participated in high school sports from Study 2. The results of t-tests comparing the athletes from Study 2 and the women from Study 1 on the Spheres of Control scales, the Instrumentality scale, and the BSRI Masculinity and Femininity scales can be seen in Table 4.10 (p. 104). Significant differences were found on the Personal Efficacy, Interpersonal Control, and the Spheres of Control Total measures, with the athletes obtaining higher scores (more internal locus of control) than...
the non-athletes. Also the athletes had a significantly higher average score on the BSRI Masculinity scale than the non-athletes.

The results of comparisons made of the athletes (as defined above) to the non-athletes from the sample from Study 2 are shown in Table 4.11 (p. 105). Again, significant differences were found on the Personal Efficacy, Interpersonal Control, Spheres of Control Total, and the BSRI Masculinity scale, with athletes obtaining higher scores on all those measures. Of the three OBCS subscales, a significant difference was found only on the Body Shame scale, with the athletes obtaining higher scores (contrary to prediction.) No significant differences were found on the Surveillance scale, the Control Beliefs scale, the Instrumentality scale, or the BSRI-Femininity scale.

**Analyses of Variance**

In Study One, an index of self-objectification context was empirically derived from the perceptions of 196 college students. This index indicated that the sports perceived as most feminine for female athletes, involving the greatest focus on appearance, included synchronized swimming, gymnastics, dance team, and cheerleading. These sports were classified as “3”s. In contrast, the sports perceived as least feminine, involving the least focus on appearance, included golf, lacrosse, crew, field hockey, basketball, soccer, and softball. These sports were classified as “1”s. Intermediate in perceptions were sports such as tennis, track, and volleyball; these sports were classified as “2”s. This index was combined with the number of years of participation in different sports in order to provide a metric with which to gauge the self-
objectification context of a woman’s sports participation. For example, if a participant in
the study indicated that she had participated in 3 years of soccer and 1 year of
cheerleading, a calculation was made as follows: (3 * 1) = 3 + (1 * 3) = 6/4 (years of
sports) = 1.5. Thus, each participant was assigned a number ranging from 1 to 3, which
provided a numerical way to describe the context of her sports participation from low
self-objectification to high self-objectification.

An initial analysis divided the participants into three groups: those whose
objectification rating fell between 1 and 1.5 (116), those between 1.51 and 2.5 (156), and
those from 2.51 to 3.0 (54). A one-way MANOVA across measures revealed no
significant effects. Another analysis was done using the “pure” “ones”, “twos” and
“threes” (i.e., those who had participated only in sports rated as ones, or twos, or threes.)
Women who had played no sports formed a fourth group. A one-way MANOVA across
measures again failed to find any significant effects.

Analyses of variance using the number of sports participated in as independent
variables and the measures as dependent variables indicated several significant
differences. Table 4.12 (p. 106) provides the results of the ANOVA’s, as well as the
results of Tukey HSD (Honestly Significant Differences) tests of those means for which
significant ANOVA’s were found. As shown in Table 4.12, the means for Body Shame
were significantly greater for those who had participated in 2 or more versus no sports,
though neither of these groups differed from those who had participated in only one
sport. Similarly, the means for Personal Self-Efficacy were also significantly greater for
those who had participated in 2 or more sports versus no sports, and neither of these
groups differed significantly from those who had participated in one sport. The same
pattern of significant differences is found for the Spheres of Control Total mean scores for the three groups. The mean scores for the BSRI Masculinity Scale were significantly greater for those who had participated in 2 or more sports versus those who had participated in one sport or no sports, which did not differ significantly from each other.

Analyses of variance using amounts of average weekly physical activity (examples of walking, jogging, biking, and aerobics were given in the questionnaire, see Appendix H) as independent variables and all measures as dependent variables indicated several significant differences. As the dataset provided average weekly physical activity as a continuous variable, the dataset was divided into thirds in order to analyze it. Table 4.13 (p. 107) provides the results of the ANOVA’s, as well as the results of Tukey HSD (Honestly Significant Differences) tests of those means for which significant ANOVA’s were found. As shown in Table 4.13, the only significant difference found among the three self-objectification measures was found for the Body Shame Scale. The means for Body Shame were significantly greater for those in the upper third of average weekly physical activity, in other words, for those who exercised more than 7 hours per week on average, than for those in either the lower third (0 to 1.17 hours/week) or the middle third (1.33 to 6.83 hours/week). The means for the Personal Self-Efficacy were significantly greater for those in the upper third of average weekly physical activity than for those in the lower third, with no significant differences between lower and middle thirds, or middle and upper thirds. The means for Interpersonal Control, Spheres of Control Total, and for Instrumentality all follow the same pattern in which means are significantly greater for those in both the middle and the upper thirds of average weekly physical activity (which do not differ significantly from each other) than for those in the lower.
third (little to no average weekly physical activity.) Finally, the means for the BSRI-Masculinity Scale are significantly higher for those in the upper third of average weekly physical activity as opposed to those in the middle or lower thirds.

Using the formula weight/height$^2$, the Body Mass Index was derived from the weight and height data from the participants. For women of this age group, a BMI less than 20.80 indicates underweight, and a BMI greater than 25.85 indicates overweight (Must, Dallal, & Dietz, 1991). These cutoffs were used to classify 174 participants as underweight, 189 participants as normal weight, and 38 participants as overweight. However, since this is all self-report data, caution needs to be used in interpreting the reliability of this data. Analyses of variance using these weight categories as independent variables and the three self-objectification measures as dependent variables indicated several significant differences, as would be expected. Table 4.14 (p. 108) provides the results of these ANOVA's, as well as the results of Tukey HSD tests of those means for which significant ANOVA's were found. As shown in Table 4.14 (p. 108), the means for Surveillance were significantly greater for participants of normal weight than for those underweight, but not significantly different from those overweight, nor were means for underweight and overweight categories significantly different from each other. The means for Body Shame were significantly less for those participants who were underweight, as opposed to either normal weight or overweight, which were not significantly different from each other. The means for Control Beliefs were significantly less for those participants who were overweight, as opposed to those of normal weight, but not from those underweight, and the means for underweight and normal weight did not significantly differ from each other.
Qualitative Data

After listing sports participated in and years of participation as part of the Activities Participation Questionnaire, participants were asked to indicate what was most important to them about participating in each of these sports (Appendix H). These responses were first listed. Some responses were commonly given by many of the participants, and these were counted. These listed responses were categorized into themes by the author, although some responses were ambiguous as to their meaning. For example, the phrases “keeping in shape” and “physically fit” are both somewhat ambiguous; as they could either refer to physical health or to staying thin to meet societal expectations. This will be further discussed in the discussion chapter. Out of 441 total participants, 363 responded to this question. (Note that totals do not equal 363, as many participants gave several responses that fell into different categories.) Table 4.15 (p. 109) provides the thematic categories and the numbers of responses in each. A full listing of the responses given can be seen in Appendix I.

Thematic categories included: fun/enjoyment, achievement/mastery, teamwork/leadership, competition/winning, social needs, physically active/health, kept/getting/being in shape, school spirit/involvement, stress/anger release, and miscellaneous. A total of 131 participants indicated that fun and enjoyment were important, with answers such as “having fun” or “enjoyed playing.” A total of 110 participants indicated that the experience of achievement or mastery was important, with answers such as “sense of accomplishment” or “challenging myself.” A total of 97 participants indicated that the experience of being part of a team was important, with answers such as “work as a team” and “learn leadership.” A total of 91 participants
indicated that the experience of competition was important, with answers such as "competition" or "winning". A total of 66 participants indicated that social needs were important, with answers such as "meet new people" and "be with friends." Fifty-six participants indicated that physical fitness/health was important, with answers such as "being physically active" and "maintain health." Another 44 indicated that being, keeping, or getting in shape was important. A total of 20 participants indicated that school spirit was important, with answers such as "school involvement" or "representing my school." A total of 8 participants indicated that stress or anger release was important to them, with answers such as "release energy and anger" or "help get my aggression out." There were 18 miscellaneous responses, such as "got to travel" "liked the coach" or "showing off."

Similarly, after indicating what exercise or physical fitness activities they participated in and the amount of time they spent engaged in these activities as part of the Activities Participation Questionnaire, participants were asked to indicate what was most important to them about participating in each of these activities (Appendix H). These responses were listed, and again there was much repetition in the responses across participants, and the very-similar-to-identical responses were counted. These listed responses were categorized into themes by the author. Out of 441 participants, 324 responded to this question. (Note that totals do not equal 324, as many participants gave several responses that fell into different categories.) Table 4.16 (p. 110) provides the thematic categories and the number of responses in each.

Thematic categories included: losing weight/improving looks, physical fitness/health, psychological benefits, fun/enjoyment, stress relief, improving physical
skills, and miscellaneous. A total of 181 participants indicated that improving looks were important, with answers such as “getting in shape” or “weight loss.” A total of 96 participants indicated that physical fitness or health was important, with answers such as “physically fit” or “feel healthy.” A total of 91 participants indicated that psychological benefits were important, with answers such as “feeling good about myself” or “energy booster.” A total of 29 participants indicated that fun or enjoyment was important, with answers such as “have fun” and “enjoyed it.” A total of 27 participants indicated stress relief was important, with answers such as “relieves stress” or “thinking time.” A total of 24 participants indicated that improving physical skills were important, with answers such as “build strength” and “become a better athlete.” A total of 5 participants indicated that social needs were important, with answers such as “be with friends.” There were 14 miscellaneous responses, such as “being outdoors” “it was required” or “the burn! endorphins rush.”

Summary

Overall, the predicted pattern of correlations was evidenced in the data. Two of the three subscales of the OBCS, Surveillance and Body Shame, were moderately inversely related to measures of instrumentality, locus of control, and self-efficacy expectations. However, findings for the third subscale, Control Beliefs, were not consistent with this pattern of correlations, instead the scale was moderately positively related to the same measures.

As hypothesized, women who had been involved in sports during high school obtained significantly higher scores on the Personal Efficacy, Interpersonal Control,
Spheres of Control Total, and the BSRI-Masculinity scales than women who had not. However, scores obtained on the Instrumentality scale did not fit into this pattern. Contrary to theoretical supposition, women who had been involved in sports also had significantly higher scores on the Body Shame Scale of the OBCS (but not on Surveillance or Control Beliefs).

No significant differences in self-objectification were found among women who had participated in more “feminine” sports versus women who had participated in more “masculine” sports. Neither were significant differences found on the Realistic subscale of the Skills Confidence Inventory between these two groups. These findings will be further discussed in the next chapter.
<table>
<thead>
<tr>
<th>Sport</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track (all track &amp; field events)</td>
<td>107</td>
</tr>
<tr>
<td>Volleyball (includes badminton)</td>
<td>106</td>
</tr>
<tr>
<td>Cheerleading (includes pom pom &amp; kick squad)</td>
<td>89</td>
</tr>
<tr>
<td>Softball (includes soft pitch)</td>
<td>88</td>
</tr>
<tr>
<td>Basketball</td>
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<td>Soccer</td>
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<tr>
<td>Tennis</td>
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<tr>
<td>Swimming</td>
<td>36</td>
</tr>
<tr>
<td>Cross Country Running</td>
<td>26</td>
</tr>
<tr>
<td>Dance Team (includes drill team)</td>
<td>13</td>
</tr>
<tr>
<td>Gymnastics (all events)</td>
<td>11</td>
</tr>
<tr>
<td>Field Hockey (and ice hockey)</td>
<td>9</td>
</tr>
<tr>
<td>Lacrosse</td>
<td>7</td>
</tr>
<tr>
<td>Golf</td>
<td>6</td>
</tr>
<tr>
<td>Crew</td>
<td>5</td>
</tr>
<tr>
<td>Diving</td>
<td>5</td>
</tr>
<tr>
<td>Synchronized Swimming</td>
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Table 4.1. Number of Women Participating in Each Sport.
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<tr>
<th>No. of Sports</th>
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<th>%</th>
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<tr>
<td>8</td>
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Table 4.2. Number of Sports In Which College Women Participated As High School Students.

*Within a three-year period (i.e., 10th, 11th, and 12th grades.)*
<table>
<thead>
<tr>
<th># of Seasons</th>
<th>N</th>
<th>%</th>
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<tbody>
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<td>1</td>
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<td>12</td>
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</tr>
</tbody>
</table>

Table 4.3. Number of Seasons of Participation

*a Within a three-year period (i.e., 10th, 11th, and 12th grades.) For example, if a student had participated in 3 sports for all 3 years, she would have played 9 seasons. If a student had participated in 1 sport for all 3 years, another sport for 1 year, and another for 2 years, she would have played 6 seasons.*
<table>
<thead>
<tr>
<th>Measure</th>
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<th>Median</th>
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<th>M</th>
<th>SD</th>
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<tbody>
<tr>
<td>Total No. of School Organizations Joined(^a)</td>
<td>0-8</td>
<td>4</td>
<td>4</td>
<td>3.63</td>
<td>1.76</td>
</tr>
<tr>
<td>No. of Years of Participation in School Org.(^b)</td>
<td>0-22</td>
<td>7</td>
<td>3</td>
<td>7.47</td>
<td>4.29</td>
</tr>
<tr>
<td>Total No. of Sports Participated In(^a)</td>
<td>0-8</td>
<td>2</td>
<td>1</td>
<td>1.65</td>
<td>1.12</td>
</tr>
<tr>
<td>No. of Seasons of Participation in Sports(^b)</td>
<td>0-12</td>
<td>3</td>
<td>3</td>
<td>3.53</td>
<td>2.54</td>
</tr>
<tr>
<td>Average No. of Hours of Physical Activity/Week</td>
<td>0-41.5</td>
<td>4</td>
<td>4</td>
<td>5.79</td>
<td>6.68</td>
</tr>
<tr>
<td>Total No. of Jobs Held(^a)</td>
<td>0-5</td>
<td>2</td>
<td>2</td>
<td>1.95</td>
<td>1.11</td>
</tr>
<tr>
<td>No. of Years of Jobs Held(^b)</td>
<td>0-12</td>
<td>3</td>
<td>3</td>
<td>3.46</td>
<td>2.05</td>
</tr>
</tbody>
</table>

Table 4.4. Descriptive Statistics for Activities Measures. (N=437).

\(^a\) Within a 3-year period, (i.e., 10\(^{th}\), 11\(^{th}\), and 12\(^{th}\) grades.)

\(^b\) Within the same 3-year period.
<table>
<thead>
<tr>
<th>Measure</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No. of School Organizations(^a)</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. No. of Years of Organization Participation(^b)</td>
<td>.89(^{**})</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. No. of Sports</td>
<td>.04</td>
<td>.06</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. No. of Years of Sports Participation</td>
<td>.05</td>
<td>.10(^*)</td>
<td>.84(^{**})</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Average No. of Hours/Week of Physical Activity</td>
<td>.03</td>
<td>.10(^*)</td>
<td>.13(^{**})</td>
<td>.17(^{**})</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>6. No. of Jobs Held</td>
<td>.07</td>
<td>.04</td>
<td>.00</td>
<td>.00</td>
<td>.08</td>
<td>-</td>
</tr>
<tr>
<td>7. No. of Years of Jobs</td>
<td>.07</td>
<td>.08</td>
<td>.02</td>
<td>.01</td>
<td>.11(^*)</td>
<td>.79(^{**})</td>
</tr>
</tbody>
</table>

\(^{*}\)p<.05; \(^{**}\)p<.01.

\(^a\) Other than sports.
\(^b\) In school organizations other than sports.

<table>
<thead>
<tr>
<th>Measure</th>
<th>No. of items</th>
<th>M</th>
<th>SD</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spheres of Control Total</td>
<td>20</td>
<td>3.81</td>
<td>.43</td>
<td>.79</td>
</tr>
<tr>
<td>Personal Efficacy</td>
<td>10</td>
<td>3.96</td>
<td>.46</td>
<td>.65</td>
</tr>
<tr>
<td>Interpersonal Control</td>
<td>10</td>
<td>3.65</td>
<td>.56</td>
<td>.73</td>
</tr>
<tr>
<td>Instrumentality</td>
<td>20</td>
<td>3.80</td>
<td>.50</td>
<td>.85</td>
</tr>
<tr>
<td>SCI Total a</td>
<td>40</td>
<td>3.52</td>
<td>.53</td>
<td>.92</td>
</tr>
<tr>
<td>SCI – Enterprising</td>
<td>10</td>
<td>3.40</td>
<td>.70</td>
<td>.86</td>
</tr>
<tr>
<td>SCI – Social</td>
<td>10</td>
<td>3.88</td>
<td>.62</td>
<td>.85</td>
</tr>
<tr>
<td>SCI – Realistic</td>
<td>10</td>
<td>3.41</td>
<td>.73</td>
<td>.85</td>
</tr>
<tr>
<td>SCI – Investigative</td>
<td>10</td>
<td>3.39</td>
<td>.78</td>
<td>.87</td>
</tr>
<tr>
<td>BSRI b – Masculinity</td>
<td>20</td>
<td>3.70</td>
<td>.47</td>
<td>.86</td>
</tr>
<tr>
<td>BSRI – Femininity</td>
<td>20</td>
<td>3.80</td>
<td>.40</td>
<td>.81</td>
</tr>
<tr>
<td>OBCS c Total</td>
<td>24</td>
<td>3.14</td>
<td>.48</td>
<td>.81</td>
</tr>
<tr>
<td>Surveillance</td>
<td>8</td>
<td>3.44</td>
<td>.74</td>
<td>.84</td>
</tr>
<tr>
<td>Body Shame</td>
<td>8</td>
<td>2.56</td>
<td>.79</td>
<td>.81</td>
</tr>
<tr>
<td>Control Beliefs</td>
<td>8</td>
<td>3.42</td>
<td>.54</td>
<td>.62</td>
</tr>
</tbody>
</table>

a Skills Confidence Inventory  
b Bem Sex-Role Inventory  
c Objectified Body Consciousness Scale

Table 4.6. Descriptive Statistics and Alpha Reliabilities for All Measures (N=423-431).
<table>
<thead>
<tr>
<th>Measure</th>
<th>M</th>
<th>SD</th>
<th>Pearson r</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Surveillance</td>
<td>Body Shame</td>
<td>Control Beliefs</td>
</tr>
<tr>
<td>Surveillance</td>
<td>3.44</td>
<td>.74</td>
<td></td>
<td>.60**</td>
<td></td>
</tr>
<tr>
<td>Body Shame</td>
<td>2.56</td>
<td>.79</td>
<td></td>
<td></td>
<td>-.09</td>
</tr>
<tr>
<td>Control Beliefs</td>
<td>3.42</td>
<td>.54</td>
<td>-.00</td>
<td>-.09</td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
<td>3.14</td>
<td>.48</td>
<td>.84**</td>
<td>.82**</td>
<td>.32**</td>
</tr>
</tbody>
</table>

** p<.001

Table 4.7. Descriptive Statistics and Correlations for the Objectified Body Consciousness Scale Scores and Total Score (N=437).
### Objectified Body Consciousness Scale

<table>
<thead>
<tr>
<th>Measure</th>
<th>Surveillance</th>
<th>Body Shame</th>
<th>Control Beliefs</th>
<th>OBCS Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Efficacy</td>
<td>-.09</td>
<td>-.16**</td>
<td>.28**</td>
<td>-.03</td>
</tr>
<tr>
<td>Interpersonal Control</td>
<td>-.14**</td>
<td>-.26**</td>
<td>.23**</td>
<td>-.13**</td>
</tr>
<tr>
<td>Spheres of Control Total</td>
<td>-.14**</td>
<td>-.25**</td>
<td>.30**</td>
<td>-.10*</td>
</tr>
<tr>
<td>Instrumentality</td>
<td>-.27**</td>
<td>-.35**</td>
<td>.28**</td>
<td>-.23**</td>
</tr>
<tr>
<td>Skills Confidence Inventory Total</td>
<td>-.18**</td>
<td>-.19**</td>
<td>.16**</td>
<td>-.14**</td>
</tr>
<tr>
<td>BSRI – Masculinity</td>
<td>-.08</td>
<td>-.07</td>
<td>.10*</td>
<td>-.04</td>
</tr>
<tr>
<td>BSRI – Femininity</td>
<td>-.01</td>
<td>-.05</td>
<td>.10*</td>
<td>.00</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01

Table 4.8. Pearson Product Moment Correlations for Instrumentality, Locus of Control, and Self-Efficacy Measures with the Objectified Body Consciousness Measures (N=437).
Table 4.9. Pearson Product-Moment Correlations among the Instrumentality, Locus of Control, and Self-Efficacy Subscale and Total Scale Scores (N=437).
<table>
<thead>
<tr>
<th>MEASURE</th>
<th>Sample from Study I (N=100)</th>
<th>Women Athletes from Study II (N=326)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Efficacy</td>
<td>3.77 .53</td>
<td>4.00 .45</td>
<td>3.93***</td>
</tr>
<tr>
<td>Interpersonal Control</td>
<td>3.57 .55</td>
<td>3.68 .54</td>
<td>1.77*</td>
</tr>
<tr>
<td>Spheres of Control Total</td>
<td>3.67 .53</td>
<td>3.86 .54</td>
<td>2.93**</td>
</tr>
<tr>
<td>Instrumentality</td>
<td>3.73 .47</td>
<td>3.81 .50</td>
<td>1.46</td>
</tr>
<tr>
<td>Bem Sex-Role Inventory - Masculinity</td>
<td>3.56 .51</td>
<td>3.73 .46</td>
<td>2.98**</td>
</tr>
<tr>
<td>Bem Sex-Role Inventory - Femininity</td>
<td>3.77 .41</td>
<td>3.79 .41</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001

Table 4.10. Means, Standard Deviations, and t-tests for the Spheres of Control Scale, Instrumentality Scale, and Bem Sex-Role Inventory, Comparing Scores from the Sample of Women from Study I to the Sample of Women Athletes from Study II.
<table>
<thead>
<tr>
<th>MEASURE</th>
<th>Women Non-Athletes (N=111)</th>
<th>Women Athletes (N=326)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveillance</td>
<td>3.38 .75</td>
<td>3.46 .74</td>
<td>.98</td>
</tr>
<tr>
<td>Body Shame</td>
<td>2.38 .76</td>
<td>2.63 .79</td>
<td>2.89**</td>
</tr>
<tr>
<td>Control Beliefs</td>
<td>3.39 .47</td>
<td>3.43 .56</td>
<td>.75</td>
</tr>
<tr>
<td>Personal Efficacy</td>
<td>3.85 .47</td>
<td>4.00 .45</td>
<td>3.00**</td>
</tr>
<tr>
<td>Interpersonal Control</td>
<td>3.56 .58</td>
<td>3.68 .54</td>
<td>1.96*</td>
</tr>
<tr>
<td>Spheres of Control – Total</td>
<td>3.70 .45</td>
<td>3.84 .42</td>
<td>2.86**</td>
</tr>
<tr>
<td>Instrumentality</td>
<td>3.75 .47</td>
<td>3.81 .50</td>
<td>1.15</td>
</tr>
<tr>
<td>Skills Confidence Inventory – Total</td>
<td>3.56 .51</td>
<td>3.51 .54</td>
<td>.87</td>
</tr>
<tr>
<td>Bem Sex-Role Inventory – Masculinity</td>
<td>3.63 .51</td>
<td>3.73 .46</td>
<td>1.96*</td>
</tr>
<tr>
<td>Bem Sex-Role Inventory – Femininity</td>
<td>3.81 .38</td>
<td>3.79 .41</td>
<td>.53</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01

Table 4.11. Means, Standard Deviations, and t-tests for All Measures, Comparing Women Who Had Participated in Sports to Those Who Had Not.
<table>
<thead>
<tr>
<th>Measure</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>0 Sports (N=67)</th>
<th>1 Sport (N=140)</th>
<th>2 or more Sports (N=230)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveillance</td>
<td>.03</td>
<td>2</td>
<td>.970</td>
<td>3.46 (SD=.69)</td>
<td>3.44 (SD=.79)</td>
<td>3.44 (SD=.73)</td>
</tr>
<tr>
<td>Body Shame</td>
<td>4.29</td>
<td>2</td>
<td>.014</td>
<td>2.37* (SD=.72)</td>
<td>2.49&lt;sup&gt;ab&lt;/sup&gt; (SD=.85)</td>
<td>2.66&lt;sup&gt;b&lt;/sup&gt; (SD=.79)</td>
</tr>
<tr>
<td>Control Beliefs</td>
<td>.39</td>
<td>2</td>
<td>.675</td>
<td>3.39 (SD=.50)</td>
<td>3.40 (SD=.49)</td>
<td>3.44 (SD=.57)</td>
</tr>
<tr>
<td>Personal Efficacy</td>
<td>3.75</td>
<td>2</td>
<td>.024</td>
<td>3.88&lt;sup&gt;a&lt;/sup&gt; (SD=.46)</td>
<td>3.91&lt;sup&gt;ab&lt;/sup&gt; (SD=.48)</td>
<td>4.02&lt;sup&gt;b&lt;/sup&gt; (SD=.46)</td>
</tr>
<tr>
<td>Interpersonal Control</td>
<td>1.35</td>
<td>2</td>
<td>.259</td>
<td>3.57 (SD=.61)</td>
<td>3.62 (SD=.55)</td>
<td>3.69 (SD=.54)</td>
</tr>
<tr>
<td>SOC Total</td>
<td>3.12</td>
<td>2</td>
<td>.045</td>
<td>3.72&lt;sup&gt;a&lt;/sup&gt; (SD=.47)</td>
<td>3.77&lt;sup&gt;ab&lt;/sup&gt; (SD=.44)</td>
<td>3.85&lt;sup&gt;b&lt;/sup&gt; (SD=.41)</td>
</tr>
<tr>
<td>Instrumentality</td>
<td>2.03</td>
<td>2</td>
<td>.132</td>
<td>3.77 (SD=.44)</td>
<td>3.74 (SD=.55)</td>
<td>3.84 (SD=.47)</td>
</tr>
<tr>
<td>BSRI - Femininity</td>
<td>.02</td>
<td>2</td>
<td>.652</td>
<td>3.79 (SD=.39)</td>
<td>3.80 (SD=.43)</td>
<td>3.80 (SD=.38)</td>
</tr>
<tr>
<td>BSRI - Masculinity</td>
<td>3.79</td>
<td>2</td>
<td>.023</td>
<td>3.65&lt;sup&gt;ab&lt;/sup&gt; (SD=.49)</td>
<td>3.63&lt;sup&gt;a&lt;/sup&gt; (SD=.54)</td>
<td>3.76&lt;sup&gt;b&lt;/sup&gt; (SD=.42)</td>
</tr>
</tbody>
</table>

<sup>a</sup>Means sharing the same subscript are not significantly different according to Tukey (HSD) at a significance level of p>.05.

Table 4.12. Analysis of Variance for Number of Sports on Scores for All Measures Except the Skills Confidence Inventory.
<table>
<thead>
<tr>
<th>Measure</th>
<th>$F$</th>
<th>df</th>
<th>$p$</th>
<th>Lower third (N=142)</th>
<th>Middle third (N=143)</th>
<th>Upper third (N=149)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveillance</td>
<td>1.00</td>
<td>2</td>
<td>.37</td>
<td>3.37 (SD=.71)</td>
<td>3.45 (SD=.78)</td>
<td>3.49 (SD=.73)</td>
</tr>
<tr>
<td>Body Shame</td>
<td>3.89</td>
<td>2</td>
<td>.02</td>
<td>2.47 (SD=.73)</td>
<td>2.49 (SD=.79)</td>
<td>2.71 (SD=.84)</td>
</tr>
<tr>
<td>Control Beliefs</td>
<td>1.87</td>
<td>2</td>
<td>.16</td>
<td>3.35 (SD=.48)</td>
<td>3.45 (SD=.59)</td>
<td>3.46 (SD=.53)</td>
</tr>
<tr>
<td>Personal Efficacy</td>
<td>4.15</td>
<td>2</td>
<td>.02</td>
<td>3.89 (SD=.51)</td>
<td>3.96 (SD=.55)</td>
<td>4.04 (SD=.41)</td>
</tr>
<tr>
<td>Interpersonal Control</td>
<td>7.07</td>
<td>2</td>
<td>.001</td>
<td>3.51 (SD=.58)</td>
<td>3.72 (SD=.55)</td>
<td>3.72 (SD=.52)</td>
</tr>
<tr>
<td>SOC Total</td>
<td>7.17</td>
<td>2</td>
<td>.001</td>
<td>3.70 (SD=.47)</td>
<td>3.84 (SD=.44)</td>
<td>3.88 (SD=.38)</td>
</tr>
<tr>
<td>Instrumentality</td>
<td>5.30</td>
<td>2</td>
<td>.005</td>
<td>3.69 (SD=.52)</td>
<td>3.82 (SD=.39)</td>
<td>3.87 (SD=.48)</td>
</tr>
<tr>
<td>BSRI-Masculinity</td>
<td>8.23</td>
<td>2</td>
<td>.000</td>
<td>3.59 (SD=.49)</td>
<td>3.68 (SD=.46)</td>
<td>3.82 (SD=.46)</td>
</tr>
<tr>
<td>BSRI- Femininity</td>
<td>2.28</td>
<td>2</td>
<td>.10</td>
<td>3.74 (SD=.38)</td>
<td>3.82 (SD=.39)</td>
<td>3.82 (SD=.42)</td>
</tr>
</tbody>
</table>

Means sharing the same subscript are not significantly different according to Tukey (HSD) at a significance level of $p<.05$.

Table 4.13. Analysis of Variance for Amount of Average Weekly Physical Activity on Scores for All Measures Except the Skills Confidence Inventory. “Lower Third” = 0-1.17 Hours/Week, “Middle Third” = 1.33-6.83 Hours/Week, “Upper Third” = 7.0-41.5 Hours/Week.
Means sharing the same subscript are not significantly different according to Tukey (HSD) at a significance level of $p<.05$.

<table>
<thead>
<tr>
<th>Thematic Categories</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fun/enjoyment</td>
<td>131</td>
</tr>
<tr>
<td>Achievement/mastery</td>
<td>110</td>
</tr>
<tr>
<td>Teamwork/leadership</td>
<td>97</td>
</tr>
<tr>
<td>Competition/winning</td>
<td>91</td>
</tr>
<tr>
<td>Social needs</td>
<td>66</td>
</tr>
<tr>
<td>Physically active/health</td>
<td>56</td>
</tr>
<tr>
<td>Kept/getting/being in shape</td>
<td>44</td>
</tr>
<tr>
<td>School spirit/involvement</td>
<td>20</td>
</tr>
<tr>
<td>Stress/anger release</td>
<td>8</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>18</td>
</tr>
</tbody>
</table>

Table 4.15. Thematic Categories for Responses to “What was most important to you about your sports participation?”
<table>
<thead>
<tr>
<th>Thematic Categories</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Losing weight/improving appearance</td>
<td>181</td>
</tr>
<tr>
<td>Psychological benefits</td>
<td>120</td>
</tr>
<tr>
<td>Physical fitness/health</td>
<td>96</td>
</tr>
<tr>
<td>Stress relief</td>
<td>27</td>
</tr>
<tr>
<td>Improving physical skills</td>
<td>24</td>
</tr>
<tr>
<td>Social needs</td>
<td>5</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 4.16. Thematic categories for Responses to “What was most important about your participation in physical activities?”
CHAPTER 5
DISCUSSION

The primary purposes of this study were to explore the relationship of sports participation during high school to the development of self-objectification and instrumentality among girls, and to explore the possibility that different sports might impact the development of self-objectification and instrumentality in different ways. Another question addressed in this study concerned whether the experience of participation in more traditionally “masculine” sports would generalize to a greater sense of self-efficacy in other stereotypically masculine domains. Additionally, the relationship of instrumentality to self-objectification was examined, and qualitative data about the importance of participation in sports or physical exercise to the participants was summarized.

Major findings will be briefly summarized and then discussed further in the review to follow. In all the findings discussed, the definition used for “having participated in sports” was participation in more than one season of sports during high school, while those who were defined as non-participants were those who indicated one season or less of sports participation during high school. Sports definition was defined this way for two reasons: 1) an examination of the data revealed that many of those who
only indicated one sport season of participation had done so in their first year of high school, 3 years prior to the collection of data; and 2) a larger percentage of study participants than expected had participated in some sports, so in order to have a large enough group of non-participants for analytic purposes, those who had only played one season were included in that group.

Contrary to theoretical prediction, no significant differences were found between the groups of women who did or did not participate in sports on levels of self-objectification. Again contrary to theoretical prediction, the group of women who had participated in sports indicated significantly higher levels of body shame than the group of women who had not. No differences were found in either self-objectification or body shame based on the differing emphasis on appearance and perceived femininity of different sports.

Findings supported the notion that sports participation may be related to higher levels of instrumentality for girls. As predicted, instrumentality and self-objectification measures were inversely related. Participation in more stereotypically masculine sports was not found to be related to higher levels of self-efficacy in other stereotypically masculine domains.

After discussing these findings in greater detail, limitations of the current study will be discussed, followed by possible directions for future research. Finally, implications for counselors, parents, and coaches who work with young women athletes will be presented.
Self-Objectification and Sports Participation

The measure of self-objectification used for this study was one of the subscales of the Objectified Body Consciousness Scale (McKinley & Hyde, 1996), the Surveillance Scale. The other two subscales of this instrument were the Body Shame Scale and the Control Beliefs Scale. These subscales were not summed for a single score, as the correlational pattern that emerged among these three scales suggested that they were not measuring three aspects of the same psychological entity or dimension (see below for further discussion of the OBCS).

Self-objectification theory suggests that the active use of the body in activities such as sports or physical exercise might counteract or buffer the internalization of objectification for girls; since such activities involve a valuing of the body for what it can do as opposed to what it looks like. However, the results of this study revealed no significant differences in self-objectification as measured by the Surveillance Scale on either sports participation or physical exercise. Contrary to prediction, significant differences were found in levels of body shame as measured by the Body Shame Scale, suggesting that sports participation and physical exercise may be associated with increased levels of body shame. There were no significant differences found on the measure of Control Beliefs for either sports participation or physical exercise, which measured strength of belief in one's ability to control one's appearance.

There were no differences found on the Surveillance Scale between a group of first year college women who had participated in sports during high school and a group who had not; nor were there differences based on the number of sports participated in. There were also no differences found on this scale between three groups of women, one
that exercised very little (0-1.17 hours per week), one that exercised moderately (1.33-6.83 hours per week), and one that exercised quite a lot (7.0-41.5 hours per week). This suggests that sports participation or physical exercise at the high school level does not counteract the process of internalizing objectification for young women; at least, not in a way that is measurable with this scale.

Fredrickson and Roberts (1997) theorized body shame to be one of several consequences of self-objectification (i.e. observing one's body from the perspective of an onlooker and comparing it to cultural body standards), whereas McKinley and Hyde (1996) conceptualized body shame as part of an overall objectified body consciousness. Both theories would predict less body shame accompanying less self-objectification accompanying sports participation or physical exercise. This study found increased levels of body shame with both sports participation and physical exercise. The level of body shame was found to be significantly higher in the group of first year college women who had played any sports during high school for more than one year than in the group who had participated in no sports or who had participated in sports for one year or less. When the number of sports participated in was analyzed, it was found that there were no significant differences in body shame between either having participated in no sports or having participated in one sport, and no significant differences between having participated in one sport and having participated in two or more sports. There was, however, a significant difference between having participated in no sports and having participated in two or more sports, with higher levels of body shame indicated by those who had participated in two or more sports. This suggests that there may be something about the context of sports participation that actually intensifies the comparison of one's
body to cultural ideals for girls, leading to increased body shame. Possible explanations for this include increased opportunities to compare one’s body negatively to other bodies (for example, in the locker room), increased attention to or focus on the physical self/body regardless of the sport, negative messages about one’s body received from coaches or team members, or the nature of “team cultures” (similar to “sorority cultures”). Further studies are needed to explore why the number of sports participated in is significant in this relationship.

In terms of physical exercise, while no significant differences in levels of body shame were found between the “none to almost none” exercise group and the “moderate” exercise group, both of those groups differed from the “high” exercise group, which had significantly higher levels of body shame. Rather than feeling better about their bodies, this group appears to feel worse. It could be that higher levels of body shame motivates this group to exercise more, alternatively, more exercise could increase their awareness of any actual/ideal body discrepancy, leading to feelings of body shame. Also, since many college women with eating disorders exercise excessively as a way of “purging,” this may inflate the body shame scores of this group. It may be that this group would also have had a higher mean on a measure of disordered eating.

The above findings on the relationships of self-objectification and body shame with sports participation and physical exercise must be interpreted with caution. Normative data for the subscales of the OBCS do not yet exist. In a previous study by McKinley and Hyde, 1996, means obtained from a group of 121 undergraduate women (mean age 20 years) were reported as follows: Surveillance 3.51, Body Shame 2.71, and Control Beliefs 3.27 (after transforming the 6-point scale used in that study to a 5-point
Means for the Surveillance Scale found in this study were very similar to the mean found in that study. However, while the means found for the Body Shame Scale in this study for women who had participated in sports or in a lot of physical exercise were very similar to that found by McKinley and Hyde, the means found for the women who had not participated in these things were significantly lower. This is difficult to interpret, as it is not known whether the women in McKinley's study had participated in sport or physical activity or not.

Another issue that must be considered when interpreting these mean scores on the Body Shame Scale is what they signify in a more absolute sense. Although the women who had played sports or participated in a lot of physical activity indicated significantly more body shame than those who did not, they are still not endorsing high agreement with body shame statements on average. The 5-point scale used for this measure ranges from "1" (Strongly disagree) to "5" (Strongly agree). The means found in this study range between "2" (Moderately disagree) and "3" (Neutral), and so are still on the "disagree" side of the scale.

**Instrumentality and Sports Participation**

As hypothesized, significant differences as a function of sport participation were found on almost all the measures of instrumentality and locus of control, suggesting that a greater sense of instrumentality and a more internal locus of control are experienced by first year college women who have participated in sports during high school than those who have not. Obviously, the causal direction of this relationship is not known, although it is likely to be a reciprocal relationship, in which people with higher instrumentality and
internal locus of control gravitate towards sports participation, and sports participation
strengthens the sense of instrumentality and internal locus of control. In the samples
from both Study 1 and Study 2, women who had participated in high school sports versus
those who had not indicated significantly higher scores on the Personal Efficacy Scale,
the Interpersonal Control Scale, the Spheres of Control Total, and the BSRI-Masculinity
Scale. Although all of these measures were found to be moderately to highly positively
related to the Instrumentality Scale, no differences between the athletic group versus the
non-athletic groups were found on the latter measure. This measure is a new measure
and may still need further refinement. As would be predicted, no differences were found
on the BSRI-Femininity Scale.

In terms of the physical exercise analysis, significantly higher scores on Personal
Efficacy were indicated by the high exercise group than the little-to-no exercise group
(the moderate exercise group did not differ significantly from either); significantly higher
scores on Interpersonal Control, the Spheres of Control Total, and the Instrumentality
Scale were indicated by both the moderate and high exercise groups as compared to the
little-to-no exercise group; and significantly higher scores on the BSRI-Masculinity Scale
were indicated by the high exercise group as compared to both the little-to-no exercise
group and the moderate exercise group. Again, it is possible that persons with a more
internal locus of control and a greater sense of instrumentality are more likely to exercise;
or that exercise increases a sense of control and instrumentality, or both.
"Feminine" versus "Masculine" Sports

Contrary to prediction, the results of the analyses did not indicate significant differences in self-objectification or instrumentality among women who had participated in more "feminine" sports versus women who had participated in more "masculine" sports. Possibilities for this lack of findings include: there may be a substantial difference, but the methodology used in this study was faulty; there may be a small effect, with too many other factors obscuring it; or there may be no differences in the effects of different sports on the development of self-objectification or instrumentality.

Another possible reason for the lack of findings on this question may be the population that was used in terms of the elite/nonelite athlete dimension. High school girls have many different motivations for participating in sports, which include having fun, making or keeping friends, team atmosphere, physical fitness, and other miscellaneous reasons, as well as mastery, competition, or skill improvement (Sewell, 1992). The majority of high school girls participate in sports at nonelite levels. As athletes get to more elite levels of sports participation in college, the motivations for competition and mastery become relatively more important (LeUnes & Nation, 1996). It may be that only at this elite level do differences in the nature of the sport in terms of requiring a focus on appearance have an impact. Indeed, the meta-analysis by Smolak, Murnen, and Ruble (2000) suggests that elite athletes, especially in sports emphasizing thinness, were most at risk for eating disorders while nonelite athletes, especially in high school, had a reduced risk of eating problems. Future studies could contrast the same sport on the elite versus nonelite dimension.
It is possible that the methodology used for this study failed to capture differences between sports. The methodology used, based on the empirical results of ratings on "femininity" and "focus on (the athlete's) appearance" in different sports from 198 first-year students, classified the different sports into one of three categories: low ("1"), moderate ("2"), or high ("3") self-objectifying context. Many, if not most, of the athletes had participated in more than one sport. The data revealed no particular patterns in the combinations of sports that girls had chosen to play, but could be any combination of sports rated as "1"s, "2"s, or "3"s. In order to assign their overall participation in sports a self-objectifying context rating, the category numbers of each sport played, weighted by the number of years in that sport, were combined to produce a number ranging from 1 to 3. Something about this transformation process may have lost information. A possibly better procedure may have been to ask them to identify which sport was the most important sport to their self-identity, and to use that as a basis for analysis.

Another analysis compared women who had participated only in sports categorized as a low self-objectifying context to those who had participated only in sports categorized as a high self-objectifying context, for example, someone who had only played basketball and soccer or only cheerleading and gymnastics. However, this analysis also failed to find differences between the groups. It may be that what is needed is to compare single sports, such as basketball versus cheerleading.

Alternatively, it may be that existing confounds obscure any possible differences. For example, the experience of sexual abuse or assault, which is all too prevalent among high school girls, and which can profoundly alter people's relationships to their bodies, may outweigh any possible effects of participation in different sports. Another possible
confound is the influence of "team culture." There is anecdotal evidence that if several individuals on a team are extremely conscious of how their bodies appear, then that consciousness will permeate the team, regardless of how "masculine" or "feminine" the sport. However, team participation might also have the reverse effect, as there is less focus on each individual on a team. It would be important to examine differences between individual versus team sports in the future.

As previously mentioned, the individual's motivation for participating in a particular sport or sports can be an important factor to consider. There is probably a self-selection that occurs, for example, it may be that individuals who choose to participate in cheerleading or gymnastics tend to fit (or perceive themselves to fit) cultural prescriptions for their appearance. It could be that girls who tend to go into or remain in cheerleading tend to feel confident about their bodies and like to be looked at. Thus what would be a context that increases self-objectification and body shame for some girls might not be so for girls who feel able to meet societal expectations successfully. In summary, it is difficult to draw any definitive conclusions from the results of this study in terms of differences between participation in "feminine" versus "masculine" sports, as there are so many other dimensions to be taken into account. Future studies might employ qualitative methods of research which might help to clarify the relevant variables to be studied.

**Self-Efficacy Expectations**

No significant differences of any kinds were found on the subscales of the Skills Confidence Inventory (SCI) or on the total score between the groups of women who
participated in sports and those who did not. Neither were there significant differences between those who participated in more “masculine” sports versus more “feminine” ones. It appears that the development of self-efficacy in one stereotypically masculine domain such as field hockey does not generalize to greater self-efficacy in another stereotypically masculine domain such as that defined by Holland’s Realistic career theme (Holland, 1973, 1997), even though the Realistic theme is conceptually related to sports participation (i.e., liking to be outdoors, being action oriented.) It may be, however, as Betz (1997) has suggested, that the development of self-efficacy in several stereotypically masculine domains would contribute to a greater sense of instrumentality for women. It seems that this development would have to occur specifically within each domain.

**Objectified Body Consciousness Scale (OBCS)**

McKinley and Hyde (1996) developed the Objectified Body Consciousness Scale (OBCS) in order to have a measure of objectified body consciousness. Objectified body consciousness is theorized to have three components: body surveillance (equivalent to self-objectification), internalization of cultural body standards resulting in shame about one’s body, and beliefs about appearance control (i.e., given enough effort, one’s body and appearance can be made to conform to cultural standards.)

Compared to previously studied groups of young women, some similarities and some differences were found in the pattern of correlations among the subscales of the OBCS in this sample of young women. While Surveillance and Body Shame have consistently demonstrated moderately strong positive correlations with each other, the correlations with Control Beliefs have not been consistent. For example, in a similar
sample of 121 undergraduate women recruited from introductory psychology classes, with a mean age of 20 and 85% European-American (McKinley & Hyde, 1996), the correlation between Surveillance and Body Shame was .66 ($p<.001$), and in the sample used in the current study ($N=437$) the correlation was .60 ($p<.001$). However, while McKinley & Hyde found correlations between Control Beliefs and Surveillance and Control Beliefs and Body Shame to be .30 and .23 respectively, with a significance level of $p<.01$; in the current study, these correlations were found to be .00 and -.09 respectively. Similarly, Control Beliefs was not found to be significantly related to Surveillance or Body Shame in a second sample used by McKinley and Hyde for their Study 2 (1996). This suggests that the measures of the OBCS require further refinement and validation, and because of this, for the purpose of this study, the three subscales of the OBCS were not combined into a single score, but were analyzed separately.

**Relationships between “Instrumentality” measures and OBCS**

Overall, the predicted pattern of correlations was evidenced in the data. As predicted, two of the three subscales of the OBCS, Surveillance and Body Shame, were moderately inversely related to measures of instrumentality, locus of control, and self-efficacy expectations. However, the third subscale, Control Beliefs, was not consistent with this pattern of correlations, and instead, was moderately positively related to measures of instrumentality, locus of control, and self-efficacy expectations. This provides further evidence that this subscale does not function in the same way as the others do.
Even though there are many aspects of appearance that in reality cannot be controlled, there are potential benefits to women to believing that they can control their appearance. Working to control one's appearance is one way to resolve the cultural contradiction between being feminine and being instrumental. When people believe that they are in control, even when they are not, their psychological and physical well-being is enhanced. Taylor (1989) has shown that even an illusory control belief can help people to handle stressful circumstances and to persist in pursuing goals. Therefore, for women to believe that they can control their appearance may relieve some of the stress that accompanies body surveillance and internalization of impossible cultural body standards and may lead to more positive psychological outcomes, which would account for the positive relationship between control beliefs and a sense of instrumentality and internal locus of control. Unfortunately, such control beliefs can also lead to practices of restricted eating and put women at risk for disordered eating.

Additional Findings

The body mass index was calculated for those participants who reported both their height and weight (N=401). For women of this age group, a BMI less than 20.80 indicates underweight, and a BMI greater than 25.85 indicates overweight (Must, Dallal, & Dietz. 1991). These cutoffs were used to classify participants as underweight, normal weight, or overweight. Analyses indicated that the women of normal weight engaged in body surveillance significantly more than the underweight women (but not the overweight women). Women in both normal weight and overweight categories indicated significantly more body shame than did the women in the underweight category. It
makes intuitive sense that the overweight women would indicate greater body shame given the societal pressures on young women to be thin, and the fact that the normal weight women also indicated greater body shame is perhaps a testimony to women’s “normative discontent” (Polivy & Herman, 1987). Women in the underweight and normal weight categories indicated stronger control beliefs than did women in the overweight category, which also makes sense given that the latter have probably not experienced success in efforts to control their weight, and so may have given up their control beliefs to some extent. However, it is especially important to retain caution in interpreting these findings due to the self-report nature of the data, and the possibility that this data may be therefore skewed.

Qualitative Findings

After listing sports participated in and years of participation as part of the Activities Participation Questionnaire, participants were asked “What was most important to you about participation in these sports?” (Appendix H). These responses were not rigorously analyzed; however, the author created a number of categories in an attempt to classify the large number of responses given to this question. The categories created were, in order of number of responses: fun/enjoyment (131), achievement/mastery (110), teamwork/leadership (97), competition/winning (91), social needs (66), physically active/health (56), kept/getting/being in shape (44), school spirit/involvement (20), stress/anger release (8) and miscellaneous (18). A complete list of the responses is included in Appendix I.
These results are comparable to a study conducted by the Athletic Footwear Association (AFA) in 1990 (LeUnes & Nation, 1996). Ten thousand young people from the ages of 10 to 18 from 11 different states completed questionnaires assessing their motivations for sports participation. Factors found to be predictive of continuation in sport, in order of importance, were having fun, skill improvement, fitness benefits, social reasons, and many other miscellaneous variables. Other studies have also found that having fun is ranked as the most important reason to participate in sports among this age group (Sapp & Haubenstricker, 1978; Gould, Feltz, Weiss, & Petlichkoff, 1982.) This latter study of 365 swimmers from ages 8-19 years old found that girls rated having fun as significantly more important than did boys.

Because the qualitative responses in this study were not rigorously analyzed, and because of their ambiguity in terms of their meaning (for example, the phrases “keeping in shape” and “physically fit” could both refer either to physical health or to staying thin to meet societal expectations), no conclusions can currently be drawn from this data. However, it is included in order to give the reader a flavor of the subjective importance to the girls of their sport participation. A few of their responses are included in the next paragraph.

Many participants gave responses indicating that many different things were important to them about their sports participation, for example “To be competitive, stay in shape, meet people and have fun” or “It took my mind off of my troubles and let me concentrate on one thing. It also gave me time with friends and the chance to meet other people of my school as well as other people from other schools.” One girl, who played both soccer and cheerleading for three years, wrote, “I was able to interact with others,
learn how to be a team, make new friends, be physically active (got in shape), learned
time management skills, discipline, responsibility, and had a lot of fun!” Another girl,
who played both volleyball and softball for three years, wrote “Volleyball was a break for
me – from softball. Otherwise, I practiced all year round. I really love softball – I was
our pitcher – I liked being in control – most of the time.”

Many girls wrote of enjoying the experience of competency, for example
“I was the fastest girl on my team.” Others wrote of enjoying being part of a team.
Examples of the latter include: “I love being part of a team. One that counts on your
every move. No matter if you win or lose,” and “It was fun. We all got to know each
other. It’s like a family,” and “I liked the closeness of our team.”

In contrast, the preponderance of responses to the question asked about what was
most important about participation in physical activities such as running, walking,
aerobics or biking focused on losing weight or improving appearance. The most common
response to this question was either “staying/being/getting/keeping/feeling in shape” (129
responses!) A few women were very explicit in their feelings about their bodies, for
example, “I don’t want to be fat and unattractive,” and “I was really obsessed with my
looks and body. I noticed at an early age that my older sister gained weight once in high
school, I didn’t want that to be me.”

Again, the responses to this question were not rigorously analyzed; however, the
author created a number of categories in an attempt to classify the large number of
responses given to this question. The categories created were, in order of number of
responses: losing weight/improving appearance (181), psychological benefits (120),

127
physical fitness/health (96), stress relief (27), improving physical skills (24), social needs (5), and miscellaneous (14). A complete summary of responses is found in Appendix J.

Limitations of the Study

When interpreting the results of the present study, certain limitations must be considered. These limitations include: 1) generalizability of results based on the nature of the sample; 2) reliance on self-report inventories; 3) problems with instrumentation; and 4) the correlational nature of the study. Due to these limitations, results of the current study should be interpreted with care.

The samples used in the present study are from a population predominantly comprised of white girls who are attending college. The generalizability of the current findings to other groups of girls may be limited. Additionally, this study utilized only self-report measures and questionnaires to measure the constructs studied. Because these inventories are vulnerable to socially desirable responding, their use is inherently limiting.

A related limitation is the difficulty in attaining valid and accurate instruments. There are possible measurement problems for both the constructs of self-objectification and instrumentality. As previously noted, there are problems with the traditional measurement of instrumentality using the Bem Sex-Role Inventory (Bem, 1974) or the Personal Attributes Questionnaire (Spence, Helmreich, & Stapp, 1977) because of their origins as measures of "masculinity" or "femininity." One problem involves the inclusion of personality attributes associated with stereotypical masculinity of a more socially negative type, such as aggressiveness or dominance. The definition of
instrumentality preferred herein is not assumed to necessitate dominance or aggressiveness. Another problem is that these instruments may be tapping into an individual's concept of his or her self as "feminine" or "masculine" rather than into her/his ability to take action on his/her own behalf and to feel a sense of control.

Given these limitations of traditional measures of instrumentality, the question becomes how best to measure instrumentality: as several distinct separate constructs, such as internal locus of control, problem-solving skills and orientation, and optimism, or as one global measure. The Instrumentality Scale was a beginning attempt to create a global measure, however more work needs to be done psychometrically in terms of its test-retest reliability and construct validity.

Another question is how best to measure self-objectification. Given the new status of the OBCS for which normative data has not yet been obtained, a wider range of instruments to measure self-objectification and body shame may have increased the investigator's ability to determine the effects of sports participation on participants.

In terms of conceptual limitations, the issue of causal direction is not resolved. Interpretations of causality in the relationships among sports participation, self-objectification, and instrumentality cannot be made. Any effects cannot be separated from self-selection.

**Directions for Future Research and Implications for Counseling**

As previously mentioned, further research needs to be done on the measurement of self-objectification and body shame. Associations between Noll and Fredrickson's (1998) Self-Objectification and Body Shame Questionnaires and McKinley and Hyde's
Objectified Body Consciousness Scale, along with other related constructs and measures, need to be further examined. Also, potential variations in self-objectification and its consequences (including body shame) need to be examined across diverse subgroups of women, including variations in ethnicity, sexual orientation, and socioeconomic class.

Given that the current study is one of the first to consider the interaction of sports participation and physical exercise with self-objectification and body shame, more research is needed to determine if these findings can be replicated. The relationship between sports participation and self-objectification needs to be further explored and understood. Other dimensions of sport such as individual versus team sports, "weight control" (such as crew, gymnastics, and long distance running) versus non-"weight control" sports, or elite versus nonelite sports may be informative to examine. Differences between high school girls and college women may be another important variable. Given the complexities of the variables to be studied, the methodology of in-depth qualitative interviewing may help to clarify the important dimensions that need to be considered.

Although the results of this study support the idea that sports participation is positively related to the development of personal efficacy and instrumentality for girls, they also suggest that increased body shame may be associated with sports participation. This suggests a more complex picture of the possible effects of sports participation than simply "empowering" on all dimensions. It may be that while some girl athletes benefit from the experience of increased bodily competence and become more attuned to physical health and their bodies’ needs; other girl athletes with more perfectionistic
characteristics may turn their drive and discipline towards achieving an extremely lean body, using whatever means are available, whether to gain a competitive edge or to have the right appearance. The contradictory demands and expectations placed on young girls to both compete in a “man’s world” and to comply with cultural standards of femininity can be played out in her relationship to her body.

Because of the complex and contradictory pressures that girls experience, it is important for both parents and coaches to be aware of the messages that they give to girls about their bodies, and to give positive feedback on their body competencies, rather than their body appearance. It is important to endeavor to create positive supportive team cultures in which taking good care of the body is emphasized. It is hoped that the current study will assist mental health professionals who study and/or work with young women, as well as parents and coaches, to become more aware of the complex relationships among sports participation, self-objectification, and instrumentality in this population.
APPENDIX A: OBJECTIFIED BODY CONSCIOUSNESS SCALE ITEMS

Surveillance Scale
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.*

Body Shame Scale
1. When I can’t control my weight, I feel like something must be wrong with me.
2. I feel ashamed of myself when I haven’t made the effort to look my best.
3. I feel like I must be a bad person when I don’t look as good as I could.
4. I would be ashamed for people to know what I really weigh.
5. I never worry that something is wrong with me when I am not exercising as much as I should.*
6. When I’m not exercising enough, I question whether I am a good enough person.
7. Even when I can’t control my weight, I think I’m an okay person.*
8. When I’m not the size I think I should be, I feel ashamed.

Control Beliefs Scale
1. I think a person is pretty much stuck with the looks they are born with.*
2. A large part of being in shape is having that kind of body in the first place.*
3. I think a person can look pretty much how they want to if they are willing to work at it.
4. I really don’t think I have much control over how my body looks.*
5. I think a person’s weight is mostly determined by the genes they are born with.*
6. It doesn’t matter how hard I try to change my weight, it’s probably always going to be about the same.*
7. I can weigh what I’m supposed to when I try hard enough.
8. The shape you are in depends mostly on your genes.*

Note: *Reverse score item. Items are rated on a scale from (1) strongly disagree to (5) strongly agree.
APPENDIX B: ATTITUDES TOWARDS SPORTS
Part I

Directions: Part I deals with attitudes of college students towards sports. Please think about each of the following women's sports in terms of how much emphasis is usually placed on the female athlete's appearance and body. Please rate them on a scale from 1 to 5 with 1 being little or no focus on appearance and 5 being a strong focus on appearance. There are no right or wrong answers. Please use the following key.

<table>
<thead>
<tr>
<th>Little focus on appearance</th>
<th>Moderate focus on appearance</th>
<th>Strong focus on appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

1. Volleyball
2. Cheerleading
3. Basketball
4. Softball
5. Cross Country
6. Track
7. Tennis
8. Dance Team
9. Swimming
10. Lacrosse
11. Gymnastics
12. Field Hockey
13. Diving
14. Soccer
15. Synchronized Swimming
16. Golf
17. Crew
Directions: Please think about the following sports in terms of how feminine you consider them to be and rate them on a scale from 1 (least feminine) to 5 (most feminine). There are no right or wrong answers. Please use the following key.

<table>
<thead>
<tr>
<th></th>
<th>Not Feminine</th>
<th>Moderately Feminine</th>
<th>Very Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

18. Volleyball
19. Cheerleading
20. Basketball
21. Softball
22. Cross Country
23. Track
24. Tennis
25. Dance Team
26. Swimming
27. Lacrosse
28. Gymnastics
29. Field Hockey
30. Diving
31. Soccer
32. Synchronized Swimming
33. Golf
34. Crew

PLEASE CONTINUE TO PART II
APPENDIX C: SPHERES OF CONTROL ITEMS

Scale 1: Personal Efficacy Scale

1. When I get what I want it’s usually because I worked hard for it.
2. When I make plans I am almost certain to make them work.
3. I prefer games involving some luck over games requiring pure skill.*
4. I can learn almost anything if I set my mind to it.
5. My major accomplishments are entirely due to hard work and intelligence.
6. I usually don’t make plans because I have a hard time following through on them.*
7. Competition encourages excellence.
8. The extent of personal achievement is often determined by chance.*
9. On any sort of exam or competition I like to know how well I do relative to everyone else.
10. Despite my best efforts I have few worthwhile accomplishments.*

Scale 2: Interpersonal Control Scale

1. Even when I’m feeling self-confident about most things, I still seem to lack the ability to control interpersonal situations.*
2. I have no trouble making and keeping friends.
3. I’m not good at guiding the course of a conversation with several others.*
4. I can usually establish a close personal relationship with someone I find sexually attractive.
5. When being interviewed, I can usually steer the interviewer toward the topics I want to talk about and away from those I wish to avoid.
6. If I need help in carrying out a plan of mine, it’s usually difficult to get others to help.*
7. If there’s someone I want to meet I can usually arrange it.
8. I often find it hard to get my point of view across to others.*
9. In attempting to smooth over a disagreement I usually make it worse.*
10. I find it easy to play an important part in most group situations.

Note: *Reverse score item. Items are rated on a scale from (1) strongly disagree to (5) strongly agree.
APPENDIX D: INSTRUMENTALITY SCALE ITEMS

1. When something goes wrong, I can usually think of something to do to make it better.
2. I feel that I have some control over important areas of my life.
3. I have very few personal goals in my life.*
4. I feel I have little control over the events in my life and many things happen by chance.*
5. I view most problems as personal challenges.
6. I know if I try things will turn out well.
7. I frequently feel overwhelmed by the things that happen in my life.*
8. I regularly engage in activities that I enjoy.
9. Often I know what I want but feel unable to get it.*
10. I think I am good at taking care of myself.
11. When faced with a difficult situation, I usually feel like I can handle it.
12. I often have trouble expressing my opinion.*
13. Events in my personal life often interfere with my performance at work.*
14. If I can't do a job the first time, I keep trying until I can.
15. I enjoy a challenge.
16. I view myself as my own best friend.
17. I like to try new things.
18. I can usually tell people what I think.
19. I'm one of those people who just keeps going no matter what happens.
20. I can rely on myself.

Note: *Reverse score item. Items are rated on a scale from (1) strongly disagree to (5) strongly agree.
## APPENDIX E: MASCULINITY AND FEMININITY ITEMS FROM THE BSRI

<table>
<thead>
<tr>
<th>Masculinity Items</th>
<th>Femininity Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-reliant</td>
<td>Yielding</td>
</tr>
<tr>
<td>Defends own beliefs</td>
<td>Cheerful</td>
</tr>
<tr>
<td>Independent</td>
<td>Shy</td>
</tr>
<tr>
<td>Athletic</td>
<td>Affectionate</td>
</tr>
<tr>
<td>Assertive</td>
<td>Flatterable</td>
</tr>
<tr>
<td>Strong personality</td>
<td>Loyal</td>
</tr>
<tr>
<td>Forceful</td>
<td>Feminine</td>
</tr>
<tr>
<td>Analytical</td>
<td>Sympathetic</td>
</tr>
<tr>
<td>Has leadership abilities</td>
<td>Sensitive to the needs of others</td>
</tr>
<tr>
<td>Willing to take risks</td>
<td>Understanding</td>
</tr>
<tr>
<td>Makes decisions easily</td>
<td>Compassionate</td>
</tr>
<tr>
<td>Self-sufficient</td>
<td>Eager to soothe hurt feelings</td>
</tr>
<tr>
<td>Dominant</td>
<td>Soft-spoken</td>
</tr>
<tr>
<td>Masculine</td>
<td>Warm</td>
</tr>
<tr>
<td>Willing to take a stand</td>
<td>Tender</td>
</tr>
<tr>
<td>Aggressive</td>
<td>Gullible</td>
</tr>
<tr>
<td>Acts as a leader</td>
<td>Childlike</td>
</tr>
<tr>
<td>Individualistic</td>
<td>Does not use harsh language</td>
</tr>
<tr>
<td>Competitive</td>
<td>Loves children</td>
</tr>
<tr>
<td>Ambitious</td>
<td>Gentle</td>
</tr>
</tbody>
</table>

*Note: Items are intermixed in the BSRI and are rated on a scale from (1) Never True (of oneself) to (5) Always True (of oneself).*
APPENDIX F: DEBRIEFING STATEMENT
Dear Students:

Thank you so much for participating in our experiment. We are interested in college women's beliefs about various aspects of their self-confidence and attitudes towards their bodies and how these are related to their experiences with sports and athletic activities. The first measure that you responded to concerned your attitudes to your physical self. The second questionnaire pertained to your beliefs about your ability to control what happens in your life and your belief in your coping skills. The third questionnaire was a measure of your confidence in several areas that can be applied to career interests. The last questionnaire assessed the extent of your experience with athletics and other physical activities.

What we hope to learn from this study is some of the factors that influence college women to feel good about their physical selves and to feel a sense of control in their lives. We hope to use this information to better design counseling interventions to help women have a positive body image and to prevent eating disorders.

If in the course of this experiment, you have developed any concerns or uncertainties about your self-confidence or your body image, you may wish to seek counseling. If you wish to do this, you might be able to find counseling here in Townshend Hall at the Psychological Services Center (please call Dr. Richard Russell at 292-0533). In addition, The Ohio State University Counseling and Consultation Services located on the 4th Floor of the Ohio Union is open 9 hours a day for appointments and, if needed, on an emergency basis. If you need counseling services through the Counseling and Consultation Services, please call 292-5766. If you have any other questions about this study or would like additional counseling referrals, please call Dr. Nancy Betz at 292-4166.

Again, thank you for assisting us with this research. We hope that it will eventually be used to help people like yourself.
APPENDIX G: FOUR SUBScales OF THE SKILLS CONFIDENCE INVENTORY
Directions: Please read each statement carefully. Then indicate how much confidence you have that you could accomplish each of these tasks by marking your answer according to the key. Mark your answer by filling in the correct circle on the answer sheet.

<table>
<thead>
<tr>
<th>No confidence</th>
<th>Little confidence</th>
<th>Moderate confidence</th>
<th>Much confidence</th>
<th>Complete confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

HOW MUCH CONFIDENCE DO YOU HAVE THAT YOU COULD:

1. Be elected to an office in an organization. (E)
2. Comfort a patient experiencing extreme pain. (S)
3. Work on commission, with pay based on the amount you sell. (E)
4. Do research work. (I)
5. Teach or tutor children. (S)
6. Express your ideas publicly. (E)
7. Talk someone out of suicide. (S)
8. Hike and camp in the wilderness. (R)
9. Teach adults. (S)
10. Solve abstract puzzles. (I)
11. Meet new people. (S)
12. Repair a clock. (R)
13. Perform a scientific experiment. (I)
14. Learn to perform basic auto maintenance. (R)
15. Learn to repair electrical wiring. (R)
16. Ride a horse. (R)
17. Run a political campaign for someone whose views you respect. (E)
18. Build a doll house. (R)
19. Sell a product to a customer. (E)
20. Solve anagrams and other word problems. (I)
21. Start a business. (E)
22. Help others solve their problems. (S)
23. Write up the results of a chemistry experiment. (I)
24. Study a difficult topic for hours at a time. (I)
25. Counsel an unhappy couple. (S)
26. Develop a marketing plan. (E)
27. Help a troubled teenager. (S)
28. Improve racial understanding. (S)
29. Lead other people. (E)
30. Prepare successful advertisements. (E)
31. Hang wall paper. (R)
32. Successfully complete a course in Agriculture. (R)
33. Successfully complete a course in Astronomy. (I)
34. Successfully complete a course in Calculus. (I)
35. Successfully complete a course in Carpentry. (R)
36. Successfully complete a course in Chemistry. (I)
37. Successfully complete a course in Counseling Methods. (S)
38. Successfully complete a course in Industrial Arts. (R)
39. Successfully complete a course in Public Speaking. (E)
40. Successfully complete a course in Zoology. (I)

Note: R=Realistic, I=Investigative, E=Enterprising, S=Social Subscale Items
APPENDIX H: ACTIVITIES PARTICIPATION QUESTIONNAIRE
Part V
Directions: Last, we'd like to know about your activities participation in high school. Please leave blank any questions that do not apply to you. Questions are asked for sophomore, junior, and senior years of high school only.

1a. What organizations or clubs did you participate in during high school? (e.g., chess, debate, girl scouts, band/choir, 4-H club, etc.). Please list each activity. then circle the years that you participated (sophomore, junior, senior).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Soph (10)</th>
<th>Junior (11)</th>
<th>Senior (12)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>11</td>
<td>12</td>
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<td></td>
<td>10</td>
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<td>12</td>
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<td>12</td>
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<td></td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>

1b. What was most important to you about participating in each of these activities?

2a. What (if any) junior varsity or varsity sports did you participate in during high school? Please list each sport you participated in and circle whether it was a junior varsity (JV) or a varsity (V) team. Then, circle years of participation and, for each year, indicate whether you lettered or not.

<table>
<thead>
<tr>
<th>Sport</th>
<th>Grade</th>
<th>Lettered</th>
<th>Grade</th>
<th>Lettered</th>
<th>Grade</th>
<th>Lettered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(JV/V)</td>
<td>10</td>
<td>Y/N</td>
<td>11</td>
<td>Y/N</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>(JV/V)</td>
<td>10</td>
<td>Y/N</td>
<td>11</td>
<td>Y/N</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>(JV/V)</td>
<td>10</td>
<td>Y/N</td>
<td>11</td>
<td>Y/N</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>(JV/V)</td>
<td>10</td>
<td>Y/N</td>
<td>11</td>
<td>Y/N</td>
<td>12</td>
</tr>
</tbody>
</table>

145
2b. What was most important to you about participating in each of these sports?

3a. Did you actively participate in exercise/physical fitness activity during high school? If so, please list activity (e.g., jogging, biking, aerobics, etc.), circle years of participation, and estimate the average number of hours you spent per week doing this activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Years of Participation</th>
<th>Hours / Week</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 11 12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 11 12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 11 12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 11 12</td>
<td></td>
</tr>
</tbody>
</table>

3b. What was most important to you about engaging in these activities?

4a. Did you have a part-time job during high school? (e.g., baby-sitting, grocery store clerk/bagperson, fast food worker, lawn care, etc.) If so, again, please list and circle years of participation (including summer jobs.)

<table>
<thead>
<tr>
<th>Work Activity</th>
<th>Years of Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 11 12</td>
</tr>
<tr>
<td></td>
<td>10 11 12</td>
</tr>
<tr>
<td></td>
<td>10 11 12</td>
</tr>
<tr>
<td></td>
<td>10 11 12</td>
</tr>
</tbody>
</table>

4b. What was most important to you about these jobs?
5a. What other hobbies/leisure activities did you engage in during high school? (e.g., reading, volunteer activity, etc.). Again, please list and circle years of participation.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Years of Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 11 12</td>
</tr>
<tr>
<td></td>
<td>10 11 12</td>
</tr>
<tr>
<td></td>
<td>10 11 12</td>
</tr>
<tr>
<td></td>
<td>10 11 12</td>
</tr>
</tbody>
</table>

5b. What was most important to you about these activities?

THANK YOU VERY MUCH FOR YOUR PARTICIPATION.
WE REALLY APPRECIATE IT!
APPENDIX I: RESPONSES TO QUESTION 2b: “WHAT WAS MOST IMPORTANT TO YOU ABOUT PARTICIPATING IN EACH OF THESE SPORTS?”
Fun/Enjoyment: Total: 131
- Having fun: 107
- Liked/enjoyed playing: 19
- Do what I love: 5
- I love to run and tumble: 1

Achievement/Mastery: Total: 110
- Exceed personal limits/challenging myself: 25
- Success (something I’m good at, being good at them, doing well): 19
- Doing my best/personal best/be the best athlete I could be: 16
- Setting/accomplishing/living up to goals: 10
- Improve skills/learn new skills/test my skills/learned techniques of sport: 9
- Responsibility/dedication/discipline: 8
- Time management: 5
- Learned confidence: 4
- Power/sense of accomplishment: 3
- Working hard: 2
- Learn assertiveness: 2
- Self-esteem: 2
- Learned good sportsmanship: 1
- Liked being in control: 1
- I was the fastest girl on my team: 1
- Made me feel good that I had athletic talent: 1
- Being well-rounded player: 1

Teamwork/Leadership: Total: 97
- Work as a team (be part of a team, closeness of our team): 77
- Learn leadership (my ability to be captain, being a leader): 20

Competition/Winning: Total: 91
- Competition: 79
- Winning: 12

Social Needs: Total: 66
- Be with friends: 20
- Make friends (friendships made, made lifelong friends, forming bonds): 18
- Meet new people: 13
- Interacting with people, being social: 10
- It’s like a family, togetherness: 4
- Fit in: 1

Physically active/health: Total: 56
- Being/staying physically active: 23
- Great exercise: 20
- Maintain health/have healthier body: 6
Physically fit 4
Working out 1
Body felt best when exercising 1
Stronger 1

**Kept/getting/being in shape: Total: 44**

**School Spirit/Involvement: Total: 20**
- School involvement 9
- Being role model 5
- School spirit/pride 3
- Representing my school 3

**Stress/Anger Release: Total: 8**
- Stress release 1
- Run wild 1
- Release energy and anger 1
- Pumped adrenaline 1
- To help get my aggression out 1
- Able to be aggressive 1
- Took my mind off my troubles 1
- Allowed self to concentrate 1

**Miscellaneous: Total: 18**
- Be in front of people/get audience excited 5
- Really didn’t enjoy 2
- Got to travel 1
- Scheduled me 1
- Improved grades 1
- Something to do 1
- Liked the coach 1
- Showing off 1
- Really hated softball 1
- Not screwing up 1
- Kept me from things that would harm my body 1
- Matured 1
- Making it to practice 1

The two categories that contained the most ambiguous responses were the “physically active/health” and the “kept/being/getting in shape” categories. For example, the phrases “keeping in shape” and “physically fit” could refer either to physical health or to staying thin to meet societal expectations. Responses such as “physically fit,” “feeling fit,” and “keeping fit” were arbitrarily assumed by the author to refer more to physical health, whereas responses such as “keeping/being/getting/feeling in shape” were assumed to refer more to physical appearance. However, either type of response could refer to either physical health or physical appearance, or both.
APPENDIX J: RESPONSES TO QUESTION 3b: "WHAT WAS MOST IMPORTANT TO YOU ABOUT ENGAGING IN THESE (PHYSICAL) ACTIVITIES?"
<table>
<thead>
<tr>
<th>Losing Weight/Improving Appearance: Total: 181</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staying/being/getting/keeping/feeling in shape</td>
</tr>
<tr>
<td>Look my best/better/good</td>
</tr>
<tr>
<td>Weight loss</td>
</tr>
<tr>
<td>Weight maintenance</td>
</tr>
<tr>
<td>Self-confidence in my looks</td>
</tr>
<tr>
<td>Stay small</td>
</tr>
<tr>
<td>Obsessed with looks/body</td>
</tr>
<tr>
<td>Developing curves</td>
</tr>
<tr>
<td>I don’t want to be fat and unattractive</td>
</tr>
<tr>
<td>It made me feel good about my body</td>
</tr>
<tr>
<td>Burning calories</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Psychological Benefits: Total: 120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feel better/good</td>
</tr>
<tr>
<td>Feeling better/good about myself</td>
</tr>
<tr>
<td>Fun/enjoyed</td>
</tr>
<tr>
<td>Staying energetic/more energy/energy booster</td>
</tr>
<tr>
<td>Self-satisfaction</td>
</tr>
<tr>
<td>Concentration and focus</td>
</tr>
<tr>
<td>Feel nicer/friendlier</td>
</tr>
<tr>
<td>Patience</td>
</tr>
<tr>
<td>Determination</td>
</tr>
<tr>
<td>Fulfilling</td>
</tr>
<tr>
<td>Motivation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical Fitness/Health: Total: 96</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feel healthy/keep me healthy/good for my health</td>
</tr>
<tr>
<td>Physically fit/feeling fit/keeping fit</td>
</tr>
<tr>
<td>Need to exercise/exercise</td>
</tr>
<tr>
<td>Feel/stay active</td>
</tr>
<tr>
<td>Getting a good workout</td>
</tr>
<tr>
<td>Gain muscle</td>
</tr>
<tr>
<td>Good for my heart</td>
</tr>
</tbody>
</table>
Stress Relief: Total: 27

- Relieves stress/calming down/relaxing: 19
- Thinking time/time for myself: 8

Improving Physical Skills: Total: 24

- Improved skills: 7
- Challenge/achievement: 5
- Become a better athlete: 4
- Feel strong/build strength: 3
- Endurance: 3
- Speed: 1
- Flexible and supple: 1

Social Needs: Total: 5

- Be with friends: 5

Miscellaneous: Total: 14

- Something to do: 4
- It was required: 3
- Being outdoors: 2
- Want to be a dancer: 1
- Doing something positive with energy: 1
- I hated all these activities but had to do them: 1
- The burn! Endorphins rush: 1
- Portray story (creative dance): 1
LIST OF REFERENCES


161


