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The Total and Specific Dimensions of Self Concept Related To Female Participation In Collegiate Athletics

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The University of Southern Mississippi

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Abstract of a Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
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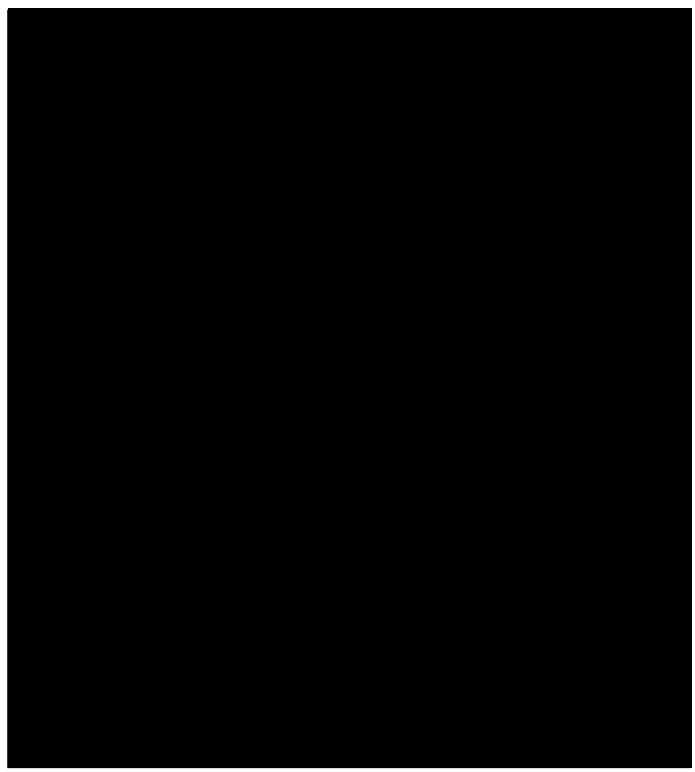

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ABSTRACT

THE TOTAL AND SPECIFIC DIMENSIONS OF SELF CONCEPT RELATED TO FEMALE PARTICIPATION IN COLLEGIATE ATHLETICS

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The purpose of this study was to determine if differences exsisted between female collegiate sport participation and non-participation, as well as female collegiate individual and team sport participation on the total, the specific dimensions of self-concept and supplementary scores as rendered by the Tennessee Self Concept Scale Second Edition TSCS:2 (Fitts & Warren, 1996). A subject pool of N=190 participants was used. All subjects included in data analysis were female undergraduate students.

A multivariate analysis of variance (MANOVA) was utilized to evaluate effects of sport participation versus non-participation and individual versus team sport participation on self-concept. On sport participation versus non-participation, a statistically significant difference was found on the variables of physical self-concept (M=55.75), family self-concept (M=52.19), and supplementary scores of satisfaction (M=51.80) and behavior (M=52.56). No statistically significant difference was found regarding individual versus team sport participation.

Ancillary repeated measures analysis of variance of sport participants and non-sport participants self-concept scores rendered by the TSCS:2 was statistically significant on both independent variables. Multivariate pair-wise comparisons based on estimated marginal means yielded profiles for the groups of sport participants and non-sport participants. Both profiles fell into the normal range with sport participants exhibiting a mild deviation in physical self-concept (M=55.75) and moral self-concept (M=45.64). For non-sport participants a relatively "flat" profile was observed with only a mild deviation in the conflict score (M=52.66).

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A countless number of people have contributed their distinctive talents and perspectives along my journey toward the goal of obtaining a Doctor of Philosophy degree. However, there are some special individuals who, through their encouragement, and constructive presence in my life, I am compelled to thank individually.

Dr. Dennis Phillips my committee chair has been an inspirational role model. Through his mentorship, I have learned that intuitively adversity fosters character in which there is always opportunity for personal growth and that all goals require dedication. I am truly grateful for the chance to benefit from his vast experience both in the field of human performance and life.

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CHAPTER I

INTRODUCTION

Background and Importance of the Study

"Anima Sana In Corpore Sano." Juvenalis

The quotation beginning this manuscript, paraphrased from Bartlett's familiar quotations, is Latin and translates as "sound mind in a sound body" (Juvenalis). Successful athletic participation may often involve both physiological and psychological variables. This research studied these factors and focused on sport participant's success both on and off the field. In 1965 at the players entrance to Lambeau field Vince Lombardi posted a sign which read "Any mans' finest hour, his greatest fulfillment, to all he holds dear-is that moment when he has worked his heart out in a good cause and lies exhausted on the field of battle-victorious" (Lombardi, 1965). It is evident from his statement that Coach Lombardi recognized the importance of incorporating both physical and mental training into his coaching philosophy. His notice combines both physiological and psychological traits of an athlete to determine success. Successful sport participation, the underlying principle of this research as paraphrased from Webster's New World Dictionary, is defined as the athlete turning out as was intended or hoped for (Guralink, 1982).

It is assumed that physiological traits have been used almost exclusively to predict sport participation and athletic competency. However, coaches and teachers should

utilize all available means to become more effective as educators and mentors of young adults in the development of psychological strategies towards evaluation, reinforcement, praise and rewards concerning student athletes. From 1988-89 to 2001-02, National Collegiate Athletic Association member institutions have added 1,852 sport teams for women (National Collegiate Athletic Association Sports Sponsorship, 2001-2002). Therefore the female athlete is a viable and important group which merits research. This study examines the psychological construct of self-concept and the potential benefits of this variable on female sport participants.

Despite their importance, coaches may not take into account the psychological traits that significantly impact their athlete's performance. Coaches may be missing out on the potential benefits of assessing the self-concept of their athletes to better understand them and encourage improved athletic performance as well as their overall success and health as human beings. Coaches are responsible for the successful athletic performance as well as the overall mental health of their athletes. Enhanced knowledge of the self-concept of their athletes is an important tool that can be used by coaches as mentors of young adults.

The use of self-concept measures is also beneficial to the athletes themselves. Ogilvie (1968) described the successful athlete as emotionally mature, and capable of objectively assessing reality, as well as having a strong super ego, well established self-control, low anxiety level, and a strong need for achievement. This description focuses on particular psychological attributes that may contribute to successful sport participation. Sport is where boys have traditionally learned about teamwork, goal-setting, the pursuit of excellence in performance and other achievement-orientated

behaviors-critical skills necessary for success in the workplace (Benefits- Why Sports Participation for Girls and Women: The Foundation Position, 2000). Biles (1968) and Williams (1970) found that female athletes were independent and exhibited high need for achievement. Mushier (1972) described female athletes as intelligent, independent, aggressive, and suspicious.

According to The Women's Sports Foundation, women's sports & fitness facts and statistics updated (June 1, 2004), the benefits of participation for female student athletes include higher graduation rates, healthier lifestyles, and overall better mental health. For example, of the female student athletes that entered NCAA Division I programs on scholarships in 1995, 69% graduated within six years of enrollment. This is eight percent higher than the overall rate for female students (61%) and 15% higher than the overall rate for male student athletes (54%) (Graduation-Rates Report for NCAA Division I Schools, 2002). Teenage female athletes are less likely to smoke or use marijuana, cocaine, or other illicit drugs, less likely to be suicidal, and more likely to have positive body images than female non-athletes (Health Risks and the Teen Athlete, March 2001). Teenage female athletes are less than half as likely to get pregnant as female non-athletes (5% and 11 % respectively), more likely to report that they had never had sexual intercourse than female non-athletes (54% and 41% respectively), and more likely to experience their first sexual intercourse later in adolescence than female non-athletes (Sport and Teen Pregnancy, May 1998). Half of all girls who participate in some kind of sports experience higher than average levels of self-esteem and less depression (Colton & Gore, 1991).

One measure which has been found to relate to sport participation in males and females is sex-role identity as determined by self-report questionnaires such as the Bem Sex Role Inventory (Bem, 1974). Psychological analysis illustrates that the similarity propagates typical cultural stereotypes of women sport participants. In a study by Birtsch (2001), female adolescent sport participants were above the mean on masculine gender role identity and were categorized as masculine or androgynous. As a result of participation females reported the positive outcomes of feeling stronger and better about themselves on Harter's (1988) Self-Perception Profile for Adolescents when self-concept was assessed. However, Parsons & Betz (2001) found that young women's participation in sports and/or physical activity was associated with higher scores on the body shame sub-scale of body objectification, which reflects greater internalization of cultural standards of female beauty.

For every 20 television shows on men's sports, there will be one on women's sports (Lopiano, 2000). Subsequently, female sports participants have lacked a reference point, besides male role models, by which to compare themselves. In a qualitative investigation by Martin (2000) the interview transcripts of four intercollegiate female athletes addressed gender issues, stereotypes, eating disorders, the coaching styles of men and women, and the difference between team and individual sports. More importantly, she pointed to the female athlete's childhood and the people who influenced them, taught them to compete, and instilled in them a love of sport. These findings are contrasted with the way the media universally portrays women in sports. The majority of media coverage of female sports often focuses on the primary feminine characteristics of the female athletes, rather than highlighting the abilities and performances of the participants.

"An individual strives to excel at that which he values and to value that at which he excels" (Rosenburg, 1979). Physically, academically, socially, and in a variety of other domains, female collegiate sport participants' self-perceptions, formed through experiences with the environment, may differ from the customary female university student. Notably, these self-perceptions are especially influenced by evaluations of significant others, reinforcements, and attributes for one's own behavior and accomplishments (Marsh, Perry, Horsely, & Roche, 1995). For the purpose of this discussion, self-concept is defined as an organized configuration of perceptions of self which are admissible to awareness (Rogers, 1950). In addition, total self-concept and self esteem will be considered synonymous since the clarification of these constructs has not been clearly established (Byrne, 1996). Self-concept is a construct which is influenced by three factors: The first of these factors involve social relationships which include social status, membership in groups, labels, derived status rooted in history or biography, social types based on syndromes of characteristics and habits. The second factor includes the self the self-perceptions of an individual's abilities, traits, values, habits, and preferences. Physical characteristics which including height, weight, and body build comprise the third factor (Rosenburg, 1979).

The focus of the present study is to compare female collegiate sport participants and non-sport participants on various measures of self-concept. These include a total measure as well as the specific dimensions of physical, moral, personal, family, social, and academic self-concept. In addition, the supplementary scores of identity, satisfaction, and behavior of female collegiate sport participants and non-sport

participants were compared and analyzed. The subjects participating in this study were obtained as volunteers.

Purpose of the Study

The purpose of the study was to examine the relationship between female collegiate individual and team sport participants versus female collegiate non-sport participants on the variables of total self-concept and the specific dimensions of physical, moral, personal, family, social and academic self-concept, as well as the supplementary scores of identity, satisfaction and behavior, to determine if differences exist regarding these variables. The psychological construct of self-concept may be able to assist in facilitating the successful participation of female student athletes and establishing interventions designed towards increasing their performance on and off the field. Coaches and educators can benefit from the development of effective psychological strategies and tools for evaluation, reinforcement, praise, and rewards of female athletes that result from research into the construct of a female collegiate sport participant's conception of self.

Hypotheses

1. There were no significant differences between female sport participants and non-sport participants on total self-concept and the specific dimensions of physical, moral, personal, family, social and academic self-concept scores as well as the supplementary scores of identity, satisfaction and behavior.
2. There were no significant differences between female individual and team sports participation on total self-concept and the specific dimensions of physical, moral,

personal, family, social and academic self-concept scores, as well as the supplementary scores of identity, satisfaction and behavior.

Limitations

The limitations of this study included the following:

1. Findings and conclusions to this research were limited to the specific groups tested and cannot be generalized to a different or larger population.

Delimitations

The delimitations of this study included the following:

1. Subjects of the study were delimited to female undergraduate students at The University of Southern Mississippi.
2. The variables were limited to total self-concept, the specific dimensions of physical, moral, personal, family, social, and academic self-concept, the supplementary scores of identity, satisfaction, and behavior, and female collegiate team or individual sport participation and non-sport participation.
3. The self-concept scores were limited to total and the specific dimensions of physical, moral, personal, family, social, and academic self-concept as well as the supplementary scores of identity, satisfaction, and behavior raw scores and *T*-scores rendered by the TSCS:2.
4. All conditions, subjects, and variables not specified were considered beyond the scope of this study.

Assumptions

The assumptions of this study included the following:

1. It is assumed that all subjects in this study could read and understand the questions asked in the TSCS:2. The adult form items have been rated at a third-grade reading ability (Frye, 1972; Thomas, Hartley, & Kincaid, 1975).
2. It is assumed that all subjects in this study answered the survey questions honestly. As with all self-report measures, the validity and reliability of the instruments are influenced by the subject's accuracy and consistency of reporting. The validity scores of inconsistent responding, self-criticism, faking good, and response distribution were designed for and used to identify any atypical or distorted response patterns.

Definition of Terms

For the purpose of this study the following terms have been defined as follows:

Participants

1. Female sport participant: a person currently registered as a female undergraduate college student and participating in an NCAA sanctioned sport.
2. Female non-sport participant: a person currently registered as a female undergraduate college student, who does not participate in an NCAA sanctioned sport, university sponsored intramural or independent club sport.
3. Individual sport participant: any female university student participating in NCAA Division I women's golf, women's tennis, and track and field.

4. Team sport participant: any female university student participating in NCAA Division I women's basketball, women's soccer, women's softball, and women's volleyball.

Measure

5. Self-concept: an organized configuration of perceptions of the self, which are admissible to awareness (Rogers, 1950).

Instrument

6. Tennessee Self Concept Scale Second Edition (TSCS:2): an updated and streamlined instrument that is simple for the respondent, broadly applicable, and multidimensional in its description of self-concept (Fitts & Warren, 1996).

Validity Scores

7. Validity scores: items designed to identify defensive, guarded, socially desirable, or other unusual or distorted response patterns (Fitts & Warren, 1996).
8. Inconsistent responding (INC): indicates whether there is an unusually wide discrepancy in the individual's responses to pairs of items with similar content (Fitts & Warren, 1996).
9. Self-criticism (SC): scores derived from items that are mildly derogatory statements or common frailties that most people would admit to when responding candidly (Fitts & Warren, 1996).
10. Faking good (FG): the scale is an indicator of the tendency to project a falsely positive self-concept (Stanwyck & Garrison, 1982).

11. Response distribution (RD): calculated by the number of extreme responses, highly correlated with the pattern of the individual's responses as distributed across all five response options (Fitts & Warren, 1996).

Summary Scores

12. Summary scores: which include Total self-concept that reflects the individual's overall self-concept and Conflict that compares the extent to which an individual differentiates his or her self-concept (Fitts & Warren, 1996).
13. Total self-concept score (TOT): a reflection of the subjects overall self-concept and associated level of self-esteem (Fitts & Warren, 1996).
14. Conflict score (CON): compares the extent to which a subject differentiates his or her self-concept by assertion through agreement with positive items, or by negation though disagreement with negative items (Fitts & Warren, 1996).

Self-Concept Scales

15. Physical self-concept score (PHY): presents the subject's view of their body, state of health, physical appearance, skills, and sexuality which is highly associated with global self-esteem across the life span (Fitts & Warren, 1996).
16. Moral self-concept score (MOR): describes the self from a moral-ethical perspective through the examination of moral worth, feelings of being a "good" or "bad" person, and satisfaction with one's religion or lack of it (Fitts & Warren, 1996).
17. Personal self-concept score (PER): reflects the subject's sense of personal worth, feeling of adequacy as a person, and self-evaluation of the personality apart from the body or relationships to others (Fitts & Warren, 1996).

18. Family self-concept score (FAM): reflects the subject's feelings of adequacy, worth, and value as a family member (Fitts & Warren, 1996).
19. Social self-concept score (SOC): reflects a general description of the subject's sense of adequacy and worth in social interaction with other people (Fitts & Warren, 1996).
20. Academic self-concept score (ACA): a measure of how subjects perceive themselves in school settings, and of how they believe others see them in those settings (Fitts & Warren, 1996).

Supplementary Scores

21. Supplementary scores: a combination of items from the basic self-concept scales that reflect the original theoretical thrust of measures items with which the individual describes his or her basic identity (Fitts & Warren, 1996).
22. Identity score (IDN): measures items with which the individual describes his or her basic identity (Fitts & Warren, 1996).
23. Satisfaction score (SAT): describes how satisfied the individual feels with his or her perceived self-image, this score reflects the level of self-acceptance (Fitts & Warren, 1996).the test, identity (IDN), satisfaction (SAT), and behavior (BHV) (Fitts & Warren, 1996).
24. Behavior score (BHV): measures the individual's perception of his or her own behavior or the way he or she functions (Fitts & Warren, 1996).

Summary

At present, much of the results of research on self-concept and female sport participation are problematic at best, because of discrepancies regarding definitions and

measurement problems (Marsh & Peart, 1988; Marsh & Jackson, 1986; Wylie, 1979, 1989). Furthermore, a supplement in the body of knowledge is needed to determine if differences exist between female collegiate sport participants versus non-sport participants and individual versus team sports. This study focused on measures of total self-concept as well as specific dimensions, including, physical, moral, personal, family, social, and academic self-concept. In addition, supplementary scores measuring identity, satisfaction, and behavior were obtained and analyzed. This research will hopefully facilitate a new direction for future studies into total and specific psychological constructs that coaches and educators could use to better guide the overall development of female student athletes, implement psychological strategies towards effectively facilitating successful sport participation, and establish relevant interventions concerning their students.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Branden (1994) has noted that teachers have been more receptive to the importance of self-concept than any other professional group. However, Hattie (1992) has found that teachers may not be effective agents for increasing this construct among students. Notably, these self-perceptions are especially influenced by evaluations of significant others, reinforcements, and attributes for one's own behavior and accomplishments (Marsh, Perry, Horsely, & Roche, 1995).

The psychological construct of self-concept may be able to assist in facilitating the participation of female student athletes and establishing interventions designed towards their specific requirements. Coaches and educators can benefit by the development of more effective psychological strategies towards evaluation, reinforcement, praise, and rewards for female athletes by research into the construct of a female collegiate sport participants conception of self. The primary purpose of the following review of literature is to provide results from a broad range of research into total and specific dimensions of self-concept that contain important implications for coaches and educators who are attempting to facilitate student athletes' personal growth through participation in sport.

As previously stated, the literature supplies a considerable amount of research covering sport and self-concept. Much of this research has focused on the developmental self-concept of children and adolescents. However, regarding this research (Marsh & Peart, 1988; Marsh & Jackson, 1986; Wylie, 1979, 1989) claim that definition and measurement problems complicate the interpretation of many of these studies. There is no reliable theoretical or empirical answer to the question of the direction of causal flow in the hierarchy of the dimensions of self-concept (Harter, 1999). The hierarchical nature of self-concept clearly remains a mystery (Kowalski, Crocker, Kowalski, Chad, & Humbert, 2003). Considering these factors, the review of research for this study concentrates on self-concept developmental perspectives, multidimensional models of self-concept, hierarchal models of self- concept, and self-concept and athletic participation.

Self-Concept Developmental Perspectives

The importance of the self-image as a major determinant of human behavior has long been recognized in the literature (Allport, 1937; James, 1890; Maslow, 1954; Mead, 1934). Studies have demonstrated that the structural design of self-theory is functional across the life span. The development of self-relevant scripts provides children with a predictive structure (Harter, 1999). At least three researchers evaluating attachment theory (Bretherton, 1991; Cassidy, 1990; Stroufe, 1990) have focused on how models of the self have organizational significance, providing infants and young children with a set of expectations that allows them to more effectively guide their behavior. In addition, the appearance of autobiographical memories, framed by the

descriptive co-construction of the self, serves to define the self and strengthen social bonds (Crittenden, 1994; Fivush, 1987; Hudson, 1990; Nelson, 1993; Snow, 1990).

Contemporary Issues

A considerable amount of speculation has focused upon the role of sport participation in the development of competence perceptions. As a result research into self-concept has become popular in recent years because of its functional role in development. Regarding children and adolescents, self-structures serve to shape goals (Dweck, 1991; Ruble & Frey, 1991). Furthermore, they provide self-guides that aid in appropriate social behaviors and self-regulation (Higgins, 1991). Positive self-affects, i.e. pride, serve to promote an emotional investment in one's competencies and motivate one toward further accomplishments. Whereas negative self-conscious emotions, i.e. guilt, promote behaviors directed towards making amends, and the preservation of emotional attachments (Barrett, 1995; Tangney & Fischer, 1995).

It cannot be overstressed that there is no single self-concept held by any person (Gordon, 1976). The majority of theorists have forwarded the tenet of multiple self-conceptions. Psychologists such as Gergan (1971), Gorden (1976), and Stryker (1968) view self-concept as a variety of multiple self-systems that need to be treated exclusively. These self-systems are predominantly referred to as role identity. Rosenburg (1979) postulates that role identities are derived from structural social identities, dispositions, and physical characteristics. Rosenburg's position is that the components of self-concept are of unequal centrality to the concerns of the individual, and are hierarchal organized. Therefore, both total and specific dimensions of self-concept should be studied. Thus, it can be inferred that total self-concept is mediated by the specific judgmental criteria of

the individual. Therefore, it should not be surprising for a group of individuals in a structured social setting to all possess favorable total self-concept attained by a variety of different criteria.

Brown, Morrow, & Livingston (1982) view self-concept as a relatively stable construct once an individual reaches adulthood, and the construct of self-concept will remain constant excluding a significant life-changing event. Therefore, it should be noted that the construct of self-concept is rather resistant to change. However researchers who examine adult self-processes have found a number of functions comparable to children's and adolescents development of self-structures. According to Markus and associates (Markus & Kityama, 1991; Markus & Nurius, 1986; Markus & Wurf, 1987; Oyserman & Markus, 1993) the self organizes, interprets, provides meaning to experience, regulates, and motivates action by supplying incentives, standards, plans, and scripts for behavior. In addition, the formation of future possible selves (Markus & Nurius, 1986) organizes behavior and motivates the individual to pursue selected goals.

Self-image disparity is the discrepancy between the individual's current view of self (real self) and the ideal person they would like to be (ideal self). Rogers (1951) and Rogers & Dymond (1954) postulated congruence between real and ideal self-images. They interpreted self-image as indicating positive self-regard and assumed it to be linearly related to social and personal adjustment. Therefore, a large disparity is viewed as a sign of maladjustment (Scott, 1958). Conversely, the cognitive-developmental interpretation of self-image disparity was first created and tested with adults by Achenbach & Zigler (1963). More recently Zigler & Levine (1981) examined two

types of self-image disparity: 1) the disparity between the individual's real and ideal self-image and 2) the disparity between the individual's real and social self-image. Social self-image was defined by Brownfain (1952) as "the self as one believes others see it". Zigler & Levine's (1981) primary hypothesis was that individuals of high social competence would show more disparity between real and ideal self-images, due to the greater differentiation and the greater internalization of societal standards associated with higher maturity levels. The hypothesis was confirmed. Research into this developmental interpretation of self-image disparity has led to modifications of their original formulation. Discrepancies have been found between real and ideal self-concepts that can motivate the individual to achieve their goals regarding self-improvement (Banaji & Prentice, 1994; Bandura, 1991; Oosterwegel & Oppenheimer, 1993; Rogers, 1951).

Epstein and associates identify four basic needs that promote the construction of self. To promote the construction of self the individual needs (1) to maintain a favorable sense of their attributes, (2) to maximize pleasure and minimize pain, (3) to develop and maintain a coherent picture of the world, and (4) to maintain relatedness with others (Epstein, 1991; Epstein & Morling, 1995). Festinger (1954), in an early formulation of social comparison theory, proposed that people respond to social comparison needs by either changing others or changing themselves. Within the constructive social comparison process individuals devise estimates of consensus that bolster self-esteem (Goethals, Messick & Allison, 1991). Other researchers have concentrated on more specific motives. Leary and Downs (1995) have identified the social function, and avoidance of social exclusion. They postulated that behaviors that

preserve self-esteem decrease the probability that one will be ignored or rejected by other people. Nevertheless, it can be stated focusing on various stages of development and the functions of numerous self-representations has become a worthy area of study.

Furthermore, the construct of self-concept is situation specific. People who were asked to describe themselves to other individuals use more than 50% of responses specific to the situation (Block, 1952). The situation specificity of self-concept coincides with generally accepted personality/behavior relationships. A person's behavior is seen to occur as a result of an interaction between central traits and the setting (situation) in which the behavior occurs (Bowers, 1973; Magusson & Endler, 1977). Hence, it is relevant to study self-conceptions within an individual or team setting to offer a more complete explanation of a female athlete's motivation towards sport participation.

Definitions of Self

Much of the research into self-concept is problematic because of inconsistencies regarding self terminology. For example, self terminology such as self-concept, self-esteem, self-worth, self-evaluations, self-perceptions, self-representations, self-schemas, self-affects, and self-efficacy have been used synonymously in the literature. Several researchers have argued that the plethora of terminology and contradictory definitions, both conceptual and operational, have rendered much of the literature un-interpretable (Marsh & Peart, 1988; Marsh & Jackson, 1986; Wylie, 1979, 1989). Given the varying conceptualizations that describe the examination of the self, and the possible confusion in how terms are interpreted, it is important to clarify the terminology used.

At least two researchers (Gordon, 1968; McGuire & McGuire, 1980) have argued the distinction between self-descriptions, "what I am" and self-evaluations,

"how good I am". One possible reason for this distinction is the use of different methodologies. Several instruments designed to measure self-concept require subjects to respond to statements in the form of judgments about whether they are viewed favorably or unfavorably, i.e. "I am an attractive person," or "I am a bad person." Gordon (1968) and McGuire & McGuire (1980) utilized the qualitative process of asking subjects to define themselves in terms of the open-ended question, "Who am I?" The characteristics that subjects report through this methodology are viewed as self-descriptions rather than self-evaluations. Conversely, quantitative instruments that focus on self-evaluations use measures that expressly require subjects to report whether they view themselves positively or negatively. Therefore, a subject was forced to report on whether they see themselves as a good or bad person, or as an attractive person or a person with no sex appeal.

Unfortunately, the distinction between self-descriptions and self-evaluations is somewhat subjective. The self-system is affectively charged in that it represents those characteristics that allow subjects to make meaning of their personal transactions with their social and physical environment (Emde, 1994). Therefore, the majority of this meaning is a result of the formation of self-representations that are judged to be favorable or unfavorable. Osgood, Suci, and Tannebaum (1971) found that in making meaning out of a linguistic concept, evaluation is the most potent dimension. Specifically, subjects arrange concepts, in terms of judgments that are positive versus negative. In addition, Osgood, Sluci, and Tannebaum (1971) found that this dimension operates across numerous content categories. For example, judgments can be academically evaluative, athletically evaluative, socially evaluative, morally evaluative,

and emotionally evaluative. Finally, this evaluative dimension was considered to be primary in human thinking, because it was supported in instrument responses of adults. For the aforementioned reasons researchers should concentrate on judgments in the form of self-evaluations, instead of the more general term of self-descriptions in assessing the self-concept of individuals.

Total Versus Specific Dimensions

Research has supported the distinction between self-evaluations that correspond to the total characteristics of subjects, i.e. "I am a decent kind of person" and those that reflect the subjects sense of adequacy across specific domains such as a subjects athletic ability i.e. "I am not good at games and sports", social competence i.e. "I am no good at all in social situations", academic ability i.e. "I do well at math", et cetera (Epstein, 1990; Harter, 1986, 1997; Marsh, 1986, 1987; Rosenberg, 1979). Unidimensional instruments that combine domain specific self-evaluations into a single score (Coopersmith, 1967; Piers-Harris, 1969) have been found inadequate in that they ignore the meaningful distinctions between a subjects' sense of adequacy across domains. Regrettably, neither the Piers-Harris self-concept scale: first edition or the Coopersmith Self-Esteem Inventory can determine much about the role of specific dimensions of self-concept. Therefore, the separation of subjects' total self-concept from more domain specific attributes affords researchers the ability to acquire a more complete understanding of the effects of multiple dimensions of self-concept on total self-concept as well as the ability to develop hierarchical models of the relationships between these self-constructs, which will be addressed in a subsequent section of the literature review.

Concerning the terminology, self-evaluations have characteristically been referred to as "self-esteem" (Rosenberg, 1979), "self-worth" (Harter, 1982, 1993) "general self-concept" (Marsh, 1986, 1987) or "total self-concept" (Fitts, 1965). In each of these cases, the focus is on the total assessment of a subjects worth or value as a person. Therefore, the term "self-concept" should be primarily reserved for evaluative judgments of attributes within specific domains such as cognitive ability, physical ability, social acceptance, et cetera. It is suggested by Sonstroem (1982) that an abundance of new information awaits those investigators who work with narrow and more specific self-concepts, and who assess the centrality of pertinent self-perceptions across independent variables such as age, sex, athletic background, physical fitness, and exercise participation. In addition, Harter (1999) cites two primary advantages in employing a multidimensional assessment of self-concept, (1) it allows the investigator to construct a profile of self-evaluations across domains for individuals or for particular subgroups of interest, and (2) the separation of self-esteem or self-worth from domain-specific evaluations allows one to address the issue of whether evaluations in some domains are more predictive of self-esteem than are others.

Multidimensional Models of Self-Concept

The multidimensionality of self-concept has been supported in the literature (Marsh & Shavelson, 1985). Total and specific domains of self-concept vary across individuals. Each domain can be further differentiated into distinct but interrelated sub-domains with individual experiences at the base of the hierarchy (Hattie & Marsh, 1996). However, the question arises as to an authoritative hierarchy of the total and

specific dimensions of conceptions of self, and the rank of saliency of those domains. Important information can be obtained regarding females athletic participation by evaluating the total as well as the more specific conceptions of self. Therefore, it may be inveterate that an abundance of new information awaits those investigators who work with narrow and more specific self-concepts, and who assess the centrality of pertinent self-perceptions across independent variables such as age, sex, athletic background, physical fitness, and exercise participation (Sonstroem, 1982).

Shavelson, Hubner, & Stanton (1976 Model

The organization of specific self-structures under the umbrella of total self-concept is strongly supported in the literature by multidimensional models, and is distinguished from objective indicators that are one basis of forming self-conceptions. Shavelson, Hubner, & Stanton (1976) developed a multidimensional, hierarchical model of the construct of self-concept. In the theoretical model advocated by Shavelson et al. (1976) total self-concept is represented at the peak of their model. The subsequent levels of their model then divide specific self-structures into academic domains that correspond to particular school subjects and nonacademic domains. For example, a level of the academic domain is represented by classroom subjects such as mathematics and English, whereas the nonacademic domains of self-concept are separated into social, physical, and emotional dimensions. At each successive level of the model, specific self-structures are further delineated into more domain-specific components of self-concept. Regrettably no instrument described in the Shavelson et al. (1976) review was able to categorize the broad academic, social, and physical dimensions hypothesized in the model.

Marsh (1990, 1993a) specifically designed three sets of Self-Description Questionnaires (SDQI, SDQII, SDQIII) to assess the predictive strength of the Shavelson et al. (1976) model for preadolescents, adolescents, and young adults respectively. The psychometric properties of the Self-Description Questionnaire instruments are strong, responses are reliable, and factor analysis consistently identifies the scales that the instruments are designed to measure. The construct validity of the three questionnaires was supported by both convergent and divergent validity. For example, the measures are most strongly related to which they are most logically related, and substantially less related to which they are not logically related, i.e. physical ability is substantially related to physical self-concept and for the most part unrelated to academic components of self-concept. In addition, academic achievement in particular school subjects is highly correlated with academic self-concept in the corresponding school subject i.e. mathematics achievement with math self-concept and English achievement with English self-concept.

Even though, research that utilized the Self-Description Questionnaire instruments has basically supported the Shavelson et al. (1976) model in all domains of self-concept (Marsh, 1990, 1993a; Marsh, Byrne, & Shavelson, 1988), findings have demonstrated self-concept to be considerably more differentiated and much less hierarchically organized. However, research using the Self-Description Questionnaire instruments has consistently demonstrated support for the Shavelson et al. (1976) model in the physical domain of self-concept.

Marsh (1990) found a significant distinction between responses to the Physical Ability and Physical Appearance dimensions and from academic, general, and

additional nonphysical dimensions of self-concept. In addition, Marsh and Jackson (1986) and Jackson and Marsh (1986) found that athletic participation was significantly related to Physical Ability self-concept, but was not significantly correlated with other nonphysical areas of self-concept. Furthermore, Marsh and Peart (1988) found that physical fitness was significantly related to the Physical Ability self-concept dimension, moderately related to Physical Appearance self-concept dimension, and unrelated to additional areas of self-concept. Marsh, Richards, and Barnes (1986) found that participation in Outward Bound, a recreation based physical challenge program, had significant effects on those aspects most relevant to the program-particularly Physical Ability self-concept. Collectively, these studies support the multidimensionality of the construct of self-concept, particularly in the physical domain.

(Fox, 1990; Fox & Corbin, 1989) Model

In addition to the prior investigations, researchers have developed additional instruments to measure specific dimensions of self-concept that are loosely based on theoretical models such as the Shavelson et al. (1976) model, and used factor analysis to confirm these specific dimensions, further supporting the multidimensionality of self-concept (Boersma & Chapman, 1979; Fleming & Courtney, 1984; Harter, 1982; Hattie, 1992; Soares & Soares, 1982). In particular, (Fox, 1990; Fox & Corbin, 1989) postulated a multidimensional, hierarchical model of physical self-concept based on his Physical Self-Perception Profile instrument (PSPP), his Perceived Importance Profile instrument (PIP), and predominantly the research of Harter (1985, 1986), Marsh and Shavelson (1985), and Shavelson, Hubner, and Stanton (1976). Fox (1990) hypothesized in the model the following five dimensions of physical self-concept:

- Sport: athletic ability, ability to learn sport, confidence in sport
- Condition: condition, stamina, fitness, ability to maintain exercise, confidence in exercise setting
- Body: attractive physique, ability to maintain an attractive body, confidence in appearance
- Strength: perceived strength, muscle development, confidence in situations requiring strength
- Global Physical Self-Worth (PSW): general feelings of pride, satisfaction, happiness and confidence in the physical self

Fox (1990), in an effort to validate his multidimensional, hierarchal model of physical self-concept, employed the Physical Self-Perception Profile instrument to assess the predictive strength of the model. He found that esteem was strongly correlated with the Global Physical Self Worth dimension, that the specific physical dimensions were more strongly correlated with the Global Physical Self Worth dimension than with esteem, and that correlations between the specific physical dimensions and esteem were significantly reduced when Global Physical Self Worth was removed from the analysis.

Subsequently, Fox (1990) utilized the Perceived Importance Profile instrument to determine the importance of each physical self-concept dimension and proposed that these importance ratings should be incorporated into Physical Self-Perception Profile instrument research. Fox described how the importance ratings of his specific physical dimensions of self-concept could be assessed based on a methodology adapted from Harter's (1985) theoretical model however the validity of his hypothesis was not established. Nevertheless, the following section discusses the validity of hierarchal

models of the self-concept and the saliency of specific dimensions of self-concept relevant to total self-concept.

Hierarchal Models of Self-Concept

Saliency of Dimensions

The saliency of specific dimensions of self-concept is based on the assumption that the contribution of a specific dimension of self-concept to total self-concept should be based on the importance of the specific dimension to a particular individual. Researchers have been interested in whether some specific dimensions are more predictive of total self-concept than others. Hagborg (1994) and Harter (1999) calculated the range of correlations and mean correlations from 13 U.S. samples of their work. In addition, they also calculated the range of correlations and mean correlations from 9 samples from European countries (Asendorpf & van Aken, 1993; Crocker & Ellsworth, 1990; Fox, Page, Armstrong, & Kirby, 1994; Granlese & Joseph, 1993; Maeda, 1997; Makris-Botsaris & Robinson, 1991; Pedrabissi, Santinello, & Scarpazza, 1988; Trent, Russell, & Cooney, 1994; Van Dongen-Melman, Koot, & Verhulst, 1993). The range of correlations and mean correlations were very similar in comparing the United States of America to European countries. Their findings were as follows: physical appearance correlated very highly with total self-concept; athletic competence had consistently the lowest relationship to total self-concept; and in between ranking from highest correlation to lowest were scholastic competence, social acceptance, and behavioral conduct, respectively.

Theorizing this predictive relationship of specific dimensions to total self-concept, Marsh (1986) developed his importance weighted-average model. The

conjectures implicit in the use of this weighted average approach are (1) correlations between the importance weighted average and total self-concept should be greater than correlations with an un-weighted average and total self-concept, and (2) the contribution of a particular dimension differs systematically with the importance placed on that dimension. Marsh (1986, 1993b, 1994) tested the validity of this model and found, importance weighted averages are often less correlated with total self-concept than the un-weighted averages, and the effect of each self-concept domain typically does not vary with the perceived importance of the domain.

Harter (1985, 1989) developed the self-concept importance discrepancy model where she proposed that total self-concept is a function of discrepancies between specific dimensions self-concept scores and importance scores. One problem inherit with the importance discrepancy model is that it fails to discriminate between the role of discrepancies in actual self-concept and discrepancies in ideal self-concept. Marsh (1993b) using multiple regression analysis, tested Harter's importance discrepancy model for discrepancies in actual self-concept. Marsh (1986, 1993b) found using an assortment of subject populations, based on a variety of self-perception measures, no empirical support for the self-concept importance discrepancy model.

Marsh's (1990, 1993a) and Harter's (1985, 1986, 1989) research both integrate total self-concept and specific dimensions of self-concept into a single model. However, the two models differ in the emphasis placed on the total and specific dimensions. Marsh's importance weighted-average model has received minimal empirical support, and as previously stated the un-weighted averages obtained in analysis correlate better than the weighted averages with total self-concept. Harter

(1986, 1989) signified specific self-concept domains by a single score defined as the mean self-concept importance discrepancy. Harter's importance discrepancy model is dependant on the assumption that the predictive power of specific dimensions of self-concept is mediated by total self-concept.

Fox (1990) based his model on the research of Harter (1985, 1986), Marsh & Shavelson (1985), and Shavelson, Hubner and Stanton (1976) for the development of his multidimensional, hierarchical model of physical self-concept. Theoretically a researcher could apply either Marsh's importance weighted-average approach or Harter's importance discrepancy model approach to Fox's model to test its predictive power. However, regardless of the approach utilized to evaluate Fox's model one would inherently encounter similar discourse in receiving empirical support as Marsh and Harter received. It should be noted that these three approaches are not mutually exclusive, and provide testable predictions. Therefore, it is important to consider which approach or possibly combination of approaches affords the most accurate prediction of the domain of self-concept being researched.

Mediated and Moderated Effects

In considering mediated effects, the influence of the specific dimensions of self-concept on external criteria are mediated by total self-concept i.e. Harter's (1985, 1989) model. To be precise, specific dimensions of self-concept affect total self-concept, which in turn influences behavior. Conversely, in considering moderated effects, the effects of a specific dimension of self-concept on total self-concept are moderated by the perceived importance of that domain i.e. Marsh's (1986) model. Therefore the relative influence of the specific dimension varies as a function of the perceived

importance of the specific dimension. To be precise, there is an interaction between the specific dimension and the perceived importance of that dimension.

Self-Concept and Sport Participation

One of the most prevalent changes in sports in the past three decades has been the increased participation of females in sport. One of the most significant reasons for the increase in sport participation among females has been the passage of Title IX in 1972. Title IX is federal legislation which prohibits gender discrimination in schools that receive funding from the federal government. Since the passage of Title IX in 1972 enforcement has met resistance by males and females alike. The effects of Title IX failed to be experienced until the mid-1980's, full compliance continues to evade many schools, although the number of female sport participants continues to grow exponentially. In 1972, the ratio for female sport participants was 1 in 27, thirty years later in 2002 the ratio was 1 in 3 (Adams-Blair, 2002).

Sport participation is related to three factors: 1) the person's abilities and characteristics; 2) the influence of significant others, including parents, siblings, teachers, and peers; and 3) the availability of opportunities to play and experience success in sports (Coakley, 2004). All three factors contribute to and affect the total and specific dimensions of self-concept of the individual sport participant.

A person with a positive self-concept develops confidence, independence, and satisfaction (Swartzwhold, 1979). The following studies have found that participation in physical activity has minimal effects on total self-concept (Ibrahim & Morrison, 1976; Kishton & Dixon, 2001; Snyder & Kivlin, 1975; Trujillo, 1983; Vincent, 1976; Young, 1981). However, at least three studies have found positive total self-concept

changes in females as a result of physical activity (Alfermann & Stoll, 1999; Brown & Harrison, 1986; Brown, Morrow, & Livingston, 1982). At least four studies have focused on the positive influence of sport activity on self-concept (Biles, 1968; Burhmann, 1972; Clifford & Clifford, 1967; Rothfarb, 1970). Vincent (1976), using the Tennessee Self-Concept Scale, found that female high school athletes and college physical education majors had significantly higher self-concept scores than non-athlete groups. Synder & Kivlin (1975) found female athletes had a higher general self-concept when compared to female non-athlete students. Conversely, Taylor (1981), in a study on the effects of mental fitness on athletic performance, found an individual with a negative self-concept is usually worried and prone to failure. In addition, Kane (1972) found a positive correlation between self-concept and motoric ability among adolescent girls. As previously stated, Marsh and Peart (1988) have postulated that certain domains of self-concept are more likely to be affected than other domains. Of principal interest to researchers have been the effects of athletic participation on physical self-concept.

Historically, the measurement of physical self-concept was primarily unidimensional (Feltz & Brown, 1984). In at least two studies (Ibrahim & Morrison, 1976; Young, 1981) found no differences on the physical scale of the Tennessee Self-Concept Scale (1965) instrument. One possible reason for these findings is that the Tennessee Self-Concept Scale instrument does not differentiate between specific dimensions of the physical self-concept domain such as the (Fox, 1990; Fox & Corbin, 1989) multidimensional, hierarchical model does. As previously stated the (Fox, 1990; Fox & Corbin, 1989) multidimensional, hierarchical model distinguishes between four

specific dimensions of physical self-concept (sport, condition, body, and strength), global self-concept, and further recognizes sub-sets of these dimensions. Several researchers have found athletes have higher self-concept than non-athletes in the physical domain of self-concept related to athletic identity, athletic competence, athletic ability and body image. A number of studies have evaluated various specific dimensions of physical self-concept as well as selected sub-sets of these specific dimensions, and have demonstrated the positive effects of athletic participation.

Athletic identity reflects the degree to which an individual's self worth is determined exclusively by their performance within the athletic role. At least two studies evaluated the athletic identity dimension of the physical self-concept domain. Wiechman & Williams (1997) in assessing athletic identity in relation to injury and mood disturbance found that regardless of gender, athletes who expected to participate in collegiate or professional sport, and athletes with greater sport experience had higher athletic identities. Furthermore, Ryska (2002) studying the singular and collective impact of athletic identification and motivational goals on self-perceptions found positive relationships between various dimensions of athletic identity and athletes adopting a high task-low ego goal perspective, and these relationships were either absent or negative among athletes with a high ego-low task goal perspective. It should be noted that both of the aforementioned studies were conducted using the population of secondary school student athletes.

At least two studies evaluated the athletic competence dimension of the physical self-concept domain (Miller & Heinrich, 2001; Miller & Levy, 1996). Miller & Levy (1996) examined the differences between athletic competence self-concept, body image

self-concept, and additional gender role, gender-typed characteristics, sport socialization variables of female athletes versus non-athletes. Their results found that female athletes possessed significantly more positive athletic competence self-concept and body image self-concept, than female non-athletes. Miller & Heinrich (2001) assessed the gender role conflict, instrumental and expressive attributes, physical appearance, athletic competence, body image, total self-concept, and parental athletic participation in middle school and college female athletes and non-athletes. Their results indicated that female athletes had significantly more positive athletic competence self-concept than female non-athletes. In addition, they found that subject's physical appearance, body image, and total self-concept were significantly and inversely related to their role conflict.

Furthermore, at least five studies test the validity of various physical self-concept instruments on sport participants. The scores of female athletes and non-athletes were evaluated on four SDQIII scales (Marsh and Jackson, 1986; Jackson & Marsh, 1986). Their results demonstrated that female athletes had substantially higher scores on physical ability and slightly higher scores on total self-concept. In addition, they found no significant differences on emotional and physical appearance self-concept. Marsh and Jackson (1986) also evaluated the differences of scores of female athlete versus female non-athlete on single-item rating scales for a variety of the self-concept domains. Once again they found large differences on the physical ability scale and no significant differences on physical appearance scale. Marsh (1993b) using a large sample of high school students evaluated the scores of junior and senior high school athletes and non-athletes on a variety of SDQIII scales. He found participation

had a significant effect on senior high school athlete's social self-concept, and academic self-concept, but no significant effect on total self-concept. In addition, the effect on academic self-concept mediated positive effects of participation in sport on academic outcomes, including educational aspirations, attendance, taking advanced classes, and university attendance. Marsh (1998) utilizing the Physical Self Description Questionnaire (PSDQ) instrument evaluated age and gender effects in physical self-concept scales for athletes and non-athletes. He found that across all physical self-concept dimensions substantial differences for athletes>non-athletes, males>females, and genderxgroup, athletes<non-athletes interactions. Bond and Nideffer (1992) tested the effects of gender and age response scores using the Test of Attentional and Interpersonal Style (TAIS). They found that responses to the TAIS Self-Esteem scale were more favorable for male athletes versus female athletes and the gender difference increased with age. Precisely, gender differences in males were not significant for three age groups of athletes (13-16, 17-18, and 19-24), but were significant for athletes older than 25.

Parsons and Betz (2001) proposed that different sports might be differently related to psychological variables according to the perceived stereotypical masculinity or femininity of the sport. Males are less confident than females on a perceived feminine task, and females are less confident than males on a perceived masculine task (Lirgg et al., 1996). This particular relationship is all or in part dependent on total and specific dimensions of self-concept of the individual participant, and how cultural standards have shaped one's view of themselves. Though males and females regard the sex-type of the task quite differently, motivation for participation across gender

appears to be similar. One measure which has been found to relate to sport participation in males and females is sex-role identity as determined by self-report questionnaires such as the Bem Sex Role Inventory (Bem, 1974). However, psychological analysis illustrates that the similarity propagates typical cultural stereotypes of women sport participants. In a study by Birtsch (2001), female adolescent sport participants were above the mean on masculine gender role identity and were categorized as masculine or androgynous. But, as a result of participation, females reported feeling stronger and better about themselves on Harter's Self-Perception Profile for Adolescents when self-concept was assessed. More notably Parsons & Betz (2001) found that young women's participation in sports and/or physical activity was associated with higher scores on the body shame sub-scale of body objectification, which indicates greater internalization of cultural standards of female beauty.

Within the construct of self-concept there are multiple dimensions that influence why females decide to participate in sports. In the past, female sports participants lacked a reference point, besides male role models by which to compare themselves. In a qualitative investigation by Martin (2000) the interview transcripts of four intercollegiate female athletes address gender issues, stereotypes, eating disorders, the coaching styles of men and women, and the difference between team and individual sports. More importantly, she points to the female athlete's childhood and the people who influenced them, taught them to compete, and instilled in them a love of sport. These findings are juxtaposed with the way the media universally portrays women in sports.

Summary

Sport participation by females may be one of the most beneficial activities in which they can be involved. Gill (1986) found females who initiate exercise and sport participation exhibited higher self-esteem, self-confidence, academic success, leadership ability, and achievement. However, self-concept research according to (Marsh & Peart, 1988; Marsh & Jackson, 1986; Wylie, 1979, 1989) may be problematic because definition and measurement disparities complicate the interpretation of many of the studies. Subsequently, the review of literature displays that there is no consistent theoretical or empirical answer to the question of the direction of causal flow in the hierarchy of the dimensions of self-concept (Harter, 1999). Furthermore, as shown many of the studies regarding self-concept and sport participation focus on the physical domain. It is the focus of the present study by examining the psychological construct of total and specific dimensions of self-concept to provide additional knowledge regarding student athletes' conception of self.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to examine the relationship between female collegiate individual, team sport participants and female collegiate non-sport participants on multiple measures of self-concept. The variables of total self-concept and the specific dimensions of physical, moral, personal, family, social, and academic self-concept were used to measure these relationships. In addition the supplementary scores of identity, satisfaction, and behavior obtained by the Tennessee Self-Concept Scale: Second Edition (TSCS:2) were also included in hypotheses testing. *T*-scores rendered by the instrument were utilized to determine if differences existed regarding these variables.

Subjects

Subject population consisted of university undergraduate female volunteers at The University of Southern Mississippi. A subject pool of 196 participants was obtained by following the Universities requirements for human subject research. In the control group 112 questionnaires were returned correctly completed. Six of the returned questionnaires were excluded from analysis due to research parameters defining non-sport participants, not involved in an NCAA sanctioned, university sponsored intramural or independent club sport, and within a currently ongoing undergraduate university class for a total of 106. The research groups consisted of seven university female sports. Sports included in the experimental groups were

women's basketball (n=6), soccer (n=15), softball (n=12), and volleyball (n=8) team sports; women's golf (n=6), women's tennis (n=7), and track and field (n=30) individual sports; for a total of 84 questionnaires returned correctly completed. The total number of questionnaires used in data analysis was 190.

Data Collection

Following Institutional Review Board (IRB) (Appendix A) approval, procedures included the administration of the TSCS:2 to volunteers. Data collection was anonymous, retained confidential and results not shared with teachers or coaches. Concurrent with submission of IRB approval, a request letter was sent to Western Psychological Services, requesting to utilize the instrument in scientific research (Appendix B). The TSCS:2 instrument can be easily administered to subjects individually or in groups, and can be completed in 10-15 minutes. Responses to the instrument are categorized on a five point Likert scale: Answer one if the statement is always false, Answer two if the statement is mostly false, Answer three if the statement is partly false and partly true, Answer four if the statement is mostly true, and Answer five if the statement is always true. The adult form items have been rated at a third-grade reading ability (Frye, 1972; Thomas, Hartley, & Kincaid, 1975).

In order to accommodate the completion of the TSCS:2 instrument for female collegiate sport participants, The University of Southern Mississippi's Faculty Athletics Representative coordinated team meetings with the basketball, golf, soccer, softball, tennis, track and field, and volleyball coaches respectively. During the meetings with coaches and before requesting access to their athletes, a description of the study's methodology was verbally provided along with the coaches consent letter (Appendix C).

At the agreed pre-arranged dates and times for sport participant data collection, the investigator entered the designated area, informed subjects of their rights as a volunteer, protocol for inclusion in data collection, explained the instruments instructions, and asked if any student felt they did not fit the protocols parameters for inclusion or felt uncomfortable completing the questionnaire. Also, for one group of subjects (track & field) the Faculty Athletics Representative entered the designated area, informed subjects of their rights as a volunteer, protocol for inclusion in data collection, explained the instruments instructions, and asked if any student felt they did not fit the protocols parameters for inclusion or felt uncomfortable completing the questionnaire. In order to maintain consistency in presentation of the demographic sheet and instrument across experimental groups during data collection of sport participants, the aforementioned procedures were preformed via the use of a data collection script (Appendix D).

Following the explanation of sport participant's rights as a volunteer, protocol for inclusion in data collection, and the instrument instructions, any volunteer which felt uncomfortable and requested was excluded from the data collection. However, no female student athlete asked to be excluded from the study. Subsequently, the student's consent letter (Appendix E), providing a brief description of the research and student's rights as a research volunteer, demographic sheet (Appendix F), and questionnaire were distributed to the subjects. The instrument was administered by the investigator with instructions to answer or return unanswered following distribution.

Consequently, to accommodate the completion of the TSCS:2 instrument for female collegiate non-sport participants, permission was obtained from the Chair of The School of Library & Information Science at The University of Southern Mississippi to

recruit volunteers from four class sections of library and information science, Introduction to Information Literacy (LIS 201), introduction to practical and theoretical aspects of information management, including skills in locating, retrieving, and using relevant, reliable information, and two class sections of library and information science, Literature and Related Media for Children (LIS 417), a survey of children's literature, traditional and modern, and other related materials for use by and with children grades 1-6. LIS 201 is an undergraduate class required of a degree for a major in The College of Arts & Letters as well as The School of Library & Information Science at The University of Southern Mississippi. LIS 417 is a class required of a degree for a major in Elementary Education as well as undergraduate licensure in The School of Library & Information Science (MS A Level) at The University of Southern Mississippi. Instructors were contacted, research protocol was reviewed, accepted, and dates and times were coordinated for administration of the instrument.

During the agreed pre-arranged dates and times for data collection, the investigator entered the class, informed students of their rights as a volunteer, explained the protocol for inclusion in data collection, and the instruments' instructions, and asked if any student felt they did not fit the protocols parameters for inclusion or felt uncomfortable completing the questionnaire. In order to maintain consistency across experimental groups during data collection the aforementioned procedures were preformed via the use of a data collection script (Appendix D). Following the explanation of student's rights as a volunteer, protocol for inclusion in data collection, and instrument instructions, any student which requested was excluded from the data collection. Furthermore, equal and optional credit incentives were provided by class

instructors to students, as an alternative to participation in the study. The student's cover letter (Appendix E), providing a brief description of the research and students rights as a research volunteer, demographic sheet (Appendix F), and questionnaire were distributed. The instrument was administered by the investigator with instructions to answer or return unanswered to the investigator following distribution.

Subjects were informed that participation in the study was important and encouraged, but purely voluntary. If, for any reason subjects were not comfortable completing the instrument, they were informed to simply return the incomplete questionnaire to the researcher. No subject failed to answer the questionnaire completely. Only the researcher viewed this information. No individual's questionnaire responses were reported. Only pooled data was reported. All data collected was destroyed following analysis.

The instrument was scored by hand and raw scores converted into *T*-scores. To calculate the raw scores the perforated strips along the upper, lower and right sides of the AutoScore ™ form were removed, and the carbonized tissue sheet discarded. The subject's responses on the outer pages were transferred via the carbonized tissue to the two-page Scoring Worksheet inside the AutoScore ™ form. Each item's response value was copied into the boxes in the corresponding row. The numbers were added in each column and the subtotals recorded and entered in the spaces provided at the bottom of each page. The column subtotals from the first page of the Worksheet were transferred to the designated spaces at the bottom of the second page. The two subtotals for each column were summed on the second page of the Worksheet to obtain the raw score for that particular scale. The spaces provided at the bottom of the second page of the

Worksheet were used to calculate the total self-concept raw score and the net conflict raw score. The total raw score is the sum of the physical, moral, personal, family, social, and academic raw scores. In order to calculate the net conflict raw score, the negative raw score was multiplied by two and subtracted from the total self-concept raw score. All raw scores were then transferred from the Worksheet to the spaces provided at the bottom of the age appropriate Profile Sheet. *T*-scores were then obtained by matching the raw score with the corresponding *T*-score for each row. *T*-scores are standard scores with a mean of 50, and a standard deviation of 10. Therefore, a *T*-score below 40 on any scale falls at least one standard deviation below the mean, and a *T*-score above 60 falls at least one standard deviation above the mean.

Instrumentation

The Tennessee Self-Concept Scale (TSCS) was first developed by W. H. Fitts (1965) to fill the need for an instrument that would be multidimensional in its description of self-concept. The TSCS has allowed for a vast amount of clinical and research knowledge about the relationship between self-concept and human behavior to be accumulated and tied together with a common instrument (Fitts & Warren, 1996). This can be demonstrated by the vast number of published references to the TSCS since its development in 1965. At the time the 1988 edition of the TSCS was published, the instrument averaged more than 200 references annually in a variety of journal publications including education, psychology, social and health sciences (Fitts & Warren, 1996).

The Tennessee Self Concept Scale Second Edition (TSCS:2) is described as an 82 item questionnaire which yields 15 scores: four validity scores for examining response

bias, two summary scores total self-concept and conflict, six self-concept scores: physical, moral, personal, family, social and academic, and three supplementary scores identity, satisfaction and behavior. TSCS:2 is an updated and streamlined instrument that is simple for the respondent, broadly applicable, and multidimensional in its description of self-concept (Fitts & Warren, 1996). Furthermore, the TSCS:2 includes an interpretative manual, various case studies, and simplified scoring procedures.

Validity Scores

The validity scores are designed to identify atypical or distorted response patterns. Provided in the instrument are the validity scores for inconsistent responding, self-criticism, faking good, and response distribution. However, before evaluating these scores it is useful to visually inspect the completed instrument for unusual response patterns. Below are a brief description of each sub-category and how the corresponding validity score should be interpreted.

Inconsistent Responding (INC)

The inconsistent responding (INC) score indicates whether there exists an abnormally large discrepancy in the subject's responses to pairs of items with comparable content. This type of discrepancy usually indicates haphazard or careless responding it may on the other hand indicate some peculiarity in the subject's life circumstances (Fitts & Warren, 1996).

Self-Criticism (SC)

The self-criticism (SC) score is influenced by statements within the instrument that are mildly derogatory and most subjects would admit to when responding honestly. If a subject's score falls between 40*T* and 70*T* it usually indicates a healthy

openness and capacity for self-criticism. A high SC score, near the upper boundary of the normal limits, may reflect an actual predominance of maladaptive behaviors, such as rudeness, lying, or excessive irritability, or may indicate the beginnings of a breakdown in typical defensive processes (Fitts & Warren, 1996).

Faking Good (FG)

The faking good score is an indicator of a subject's tendency to project a falsely positive self-concept. Developed by Stanwyck and Garrison (1982) the faking good (FG) score was created by requesting that college students deliberately "fake good" responses, to portray a favorable impression if applying for a fictitious job. Items that most distinguished between subjects within the faking good condition and subjects given standard instructions were used to determine the FG score (Fitts & Warren, 1996).

Response Distribution (RD)

The response distribution (RD) score is obtained by counting extreme responses by the subject. Subjects with an extremely high (RD) score have chosen a large number of "Always False" or "Always True" responses on the instrument. A high RD score ($\geq$ 60T) indicates that the respondent is very definite in describing himself or herself, whereas a low score ($\leq$ 40T) reveals the opposite (Fitts & Warren, 1996).

TSCS:2 Profile Patterns

The TSCS:2 scores for most individuals tend to fall between 40*T* and 60*T*. These relatively "flat" profiles indicate no disturbance or only mild disturbances in self-concept. It may nevertheless be extremely useful to examine with the individual those areas of relative strength or vulnerability represented in his or her TSCS:2

profile. In the absence of unusual validity scores, high scores between 60*T* and 70*T* on the TSCS:2 indicate areas of particular individual strength. Well-rounded individuals who are consistently self-confident and flexible obtain scores in this range on all TSCS:2 scales (Fitts & Warren, 1996).

Summary Scores

Total Self-Concept (TOT)

Individuals with high TOT scores (≥60*T*) tend to define themselves as generally competent and to like themselves. They feel that they are people of value and worth; they have self-confidence and they act accordingly. Such individuals can present a clear, well-articulated view of themselves. People with high TOT scores generally view themselves as having many positive aspects that can be called upon to compensate for threats or injury to specific aspects of their self-image, and they can view areas in which they are not competent as less valuable than those in which they are competent. They tend to take credit for their successes and to blame external factors for their failures. They tend to compare themselves with others who perform at a higher level in order to stimulate their own performance. When they fail at a task that appears ultimately solvable, their reaction is usually one of redoubled efforts to achieve their goal (Fitts & Warren, 1996).

Individuals with low TOT scores (≤40*T*) are doubtful about their own worth. They are less likely to say positive things about themselves without necessarily being more likely to say negative things or to be self-effacing. They often feel anxious, depressed, and unhappy, and exhibit little self-confidence. These individuals are likely to have a self-concept that varies from one set of circumstances to another.

Individuals with low TOT scores do not take risks. They avoid taking responsibility, expressing themselves, and other situations where they might experience failure or rejection. Faced with inconsistencies in their own behavior, these individuals expend energy to discover and adopt compensatory changes in attitude to rationalize the discrepancy and may have difficulty admitting to mistakes (Fitts & Warren, 1996).

Conflict (CON)

When the CON score is above average or high (≥60*T*), the individual is focusing more on assertion than negation, agreeing to many positive attributes, while at the same time admitting to rather than denying negative characteristics. This may indicate a balanced self-view or it may signal the presence of emergence of conflict. Very high CON scores (≥70*T*) are most likely to be associated with a high level of conflict or ambivalence. Individuals whose CON scores are low (≤40*T*) are focusing more on who they are not than on who they are. Such individuals are likely to be defensive. They may be concentrating on "eliminating the negative" (Fitts & Warren, 1996).

Self-Concept Scales

Physical Self-Concept (PHY)

High PHY scores (≥60*T*) are obtained by people with a positive view of how they look and of their health status. Such individuals are likely to use information about their appearance or their health status in a self-enhancing way. Low PHY scores (≤40*T*) indicate dissatisfaction with the body, which may reflect actual liabilities or may be a result of a distorted body image and unrealistic expectations about how one's body should look and function (Fitts & Warren, 1996).

Moral Self-Concept (MOR)

Individuals with high MOR scores (≥60*T*) are generally satisfied with their conduct and do not experience any great amount of dissonance between their ideal and actual personal ethics. Having internalized a consistent code of conduct, they are nonetheless flexible and forgiving of both themselves and others, and can make allowances for special circumstances. People who obtain low (≤40*T*) and very low (≤30*T*) MOR scores perceive in themselves an impulsivity that overrides moral considerations. This may indicate actual difficulty exercising an adequate level of impulse control, or it may reflect moral standards held by the individual or significant others that are unrealistically high (Fitts & Warren, 1996).

Personal Self-Concept (PER)

This score is a good reflection of overall personality integration, and particularly well adjusted individuals will obtain a high score on this scale. When the PER score is high (≥60*T*) for an individual and another Self-Concept score is not, the Self-Concept area where the low score is obtained may be relatively unimportant to him or her. When the PER score is low (≤40*T*), it is likely that the individual experiences a somewhat variable self-concept. In their self-definition and self-evaluation, individuals with low PER scores are particularly reactive to temporary circumstances and to the opinions and behavior of others, and are likely to avoid risky situations and challenges (Fitts & Warren, 1996).

Family Self-Concept (FAM)

The family self-concept score refers to the individual's perception of self in relation to his or her immediate circle of associates. Individuals with high FAM scores (≥60*T*) have expressed a sense of satisfaction with their family relationships. They have indicated that they derive a sense of support and nurturance in the context of their families. Individuals with low FAM scores (≤40*T*) have indicated a sense of alienation from or disappointment in their families (Fitts & Warren, 1996).

Social Self-Concept (SOC)

Like the FAM score, the SOC score is a measure of how the self is perceived in relation to others. It reflects in a more general way the individual's sense of adequacy and worth in social interaction with other people. The social self-concept tends to be associated with the physical self-concept for people of all ages. Individuals who obtain high SOC scores (≥60*T*) are usually viewed by both themselves and others as being friendly, easy to be with, and extroverted. Low SOC scores (≤40*T*) are a sign of social awkwardness related to a perceived lack of social skill. Individuals with low SOC scores may actually behave in a socially awkward manner, or they may have unrealistic expectations about how social interactions should unfold. They often feel isolated, but are hesitant to take the social risks involved in relieving their isolation (Fitts & Warren, 1996).

Academic Self-Concept (ACA)

People with high ACA scores (≥60*T*) feel confident and competent in learning and work situations. They are comfortable when approaching new tasks. They are not unduly disturbed by the early failures that usually accompany new learning or creative

activity, and they tend to seek out mentors, relevant information, and opportunities to practice new skills. People with low ACA scores ($\leq 40T$) have expressed difficulty performing in work or school settings. This difficulty may be related to actual performance levels or it may indicate the presence of unrealistic expectations about how they should perform. These individuals are cautious about accepting new tasks or responsibilities and tend to interpret early failures as indications that they are not competent to complete the task at hand (Fitts & Warren, 1996).

Supplementary Scores

The Supplementary scores are groups of TSCS:2 items from each self-concept subscale that have historically been classified as expressing one of three primary messages: (a) This is who I am, this is how I identify myself, or Identity (IDN): (b) This is how satisfied I am with myself, or Satisfaction (SAT); and (c) This is what I do, this is how I behave, or Behavior (BHV). These are scores that have been delineated on a theoretical basis only, and they are assumed to represent an internal frame of reference within which the individual describes himself or herself. As their name implies, the Supplementary scores are traditionally compared with each other and in an effort to supplement the interpretation of the TSCS:2 TOT score.

In addition, identifying the combination of lowest self-concept score and lowest Supplementary score for an individual may be clinically useful. For example, if PHY and BHV are the lowest scores within their scale groupings, the client may have particular concerns about some bodily characteristic or behavior related to physical performance. Another individual might show their lowest self-concept score on FAM and lowest Supplementary score on SAT. This could be interpreted, in the presence of

other higher Self-Concept scores, specifically as a desire to change one's family characteristics that really cannot be changed.

Identity (IDN)

The items that contribute to the Identity (IDN) score are the "who I am" items with which the individual describes his or her basic identity. Items such items as "I am a cheerful person" (positively scored) and "I am a bad person" (negatively scored) are used to determine the IDN score. If the IDN score is above 50*T* and is much higher than the Satisfaction score, it is an indication of a desire to change along with a self-view that can probably tolerate the challenges involved in transition. The realistic potential for change and the wisdom of pursuing the desired changes should be explored. When the IDN score is below 40*T*, it is an indication of an actively negative self-view. This may be present in spite of a generally positive self-concept, or it may contribute to the self-doubt suggested by a low TOT score (Fitts & Warren, 1996).

Satisfaction (SAT)

The satisfaction (SAT) score is derived from items such as "I look fine just the way I am" (positively scored) and "I should love my family more" (negatively scored), which describe how satisfied the individual feels with his or her perceived self-image. In general, this score reflects the level of self-acceptance. When the SAT score is above 60*T*, the individual may not be motivated to seek change in areas of disturbed self-concept. If the SAT score is high and the TOT score is low, there may be a defensive fatalism in the individual's outlook that must be addressed before movement toward change in specific areas of self-concept can be effective (Fitts & Warren, 1996).

Behavior (BHV)

The items that contribute to the Behavior (BHV) score are those that express "what I do" or "the way I act," such as "I take good care of my body" (positively scored) and "I fight with my family" (negatively scored). The BHV score is most revealing when it is below 40*T* and the other Supplementary scores are above 60*T*. In this case, impulse control may be a particular problem for the client, and his or her FAM and MOR scores are also likely to be low (Fitts & Warren, 1996).

Validity

The validity of the instrument determines the degree to which the test scores actually measure the characteristics that they claim to measure. Content validity is achieved when experts with knowledge of the scale being measured concur that the test items adequately measure that scale. Construct validity is achieved when a positive correlation exists between the scale being tested and another scale with similar characteristics, and a negative correlation exists between that scale and another scale intended to replicate significantly different characteristics. Presented are examples of expert analysis and applicable research which offers evidence for the presence of the content and construct validity of the TSCS:2.

Content Validity

The median correlation of scale scores between the TSCS 1988 edition developed by Fitts and the TSCS:2 1996 edition, an updated and streamlined version developed by Fitts and Warren is .94. The reliability and scale structure of both instruments was analyzed and revealed a solid correspondence. Therefore, researchers can draw upon existing literature on the TSCS to validate the content of the TSCS:2.

The TSCS was developed from an extensive group of items resulting from written self-descriptions of patients and non-patients, and from the research of Balester (1956), Engel (1956), and Taylor (1953). Following editing, a conceptual framework was developed into two dimensions represented by the self-concept scales and supplementary scores. Seven clinical psychologists were employed to judge and classify the items in agreement with the two-dimensional scheme. Regarding the academic self-concept scale added in the TSCS:2, four psychologists reviewed items and self-descriptions and their content validity was confirmed.

Construct Validity

Factor structure. Factor structure is of use in considering the construct validity of a test because items and scales should be observed through their factor structure to be consistently related to each other in ways that would be predicted based on the constructs they are supposed to represent (Fitts & Warren, 1996).

In at least two studies, McGuire & Tinsley (1981) and Walsh, Wilson, & McLellarn (1989) confirmatory methods on TSCS items have been used. As recommended by Gorsuch (1983), multiple-group factor analysis was employed in hypothesis testing to examine the existence of the self-concept and frame of reference aspect of the TSCS. The results demonstrated that 22% of the items were classified as expected to self-concept by frame of reference categories. However, 80% of the items were assigned to the appropriate self-concept category, and 79% of the items were assigned to the hypothesized frame of reference category. It was concluded that robust evidence existed for independent interpretation of the self-concept and supplementary scores.

Principal components factor extraction with varimax rotations were applied to TSCS:2 responses (Fitts & Warren, 1996). All items except the eight self-criticism items were included in the analysis. The results provided an apparent demonstration of the distinct contributions of positively worded and negatively worded test items to the performance of the TSCS:2. In addition, these results replicate the findings of Bolton's (1976) exploratory factor analysis reported on the TSCS 1988 edition. This provides strong evidence to the construct validity of the TSCS:2 instrument.

Psychometric Properties

Reliability

The reliability of the instrument determines the degree to which results are expected to remain stable from test to test. There are two types of reliability measures which have been calculated for the TSCS:2. The internal consistency and test-retest reliability scores are presented below. Internal consistency was obtained by calculating Cronbach's alpha (Cronbach, 1951). The greater the internal consistency estimate for a scale the more probable that the item responses are measuring the same underlying construct.

Internal Consistency

Table 1 on the following page presents the internal consistency estimates for the instrument scores, which range from .81 to .95 (median .85). The TSCS:2 internal consistency values are virtually identical to 1988 edition scale alphas, and they indicate adequate to quite good scale consistency for an instrument of this type (Battle, 1992; Bracken, 1992; Piers, 1991).

Table 1

Internal Consistency for the TSCS: 2

TSCS:2 Score	Age Level 19-90*
Total Self Concept	0.95
Physical Self Concept	0.83
Moral Self Concept	0.83
Personal Self Concept	0.81
Family Self Concept	0.84
Social Self Concept	0.84
Academic Self Concept	0.85
Identity	0.87
Satisfaction	0.85
Behavior	0.87

*N=754

Test-Retest Reliability

The test-retest reliability of the instrument was calculated by evaluating the responses of 145 high school students who took the Adult Form twice. The test-retest period for the students was one to two weeks. The results are presented on the following page in Table 2. The estimated test-retest reliabilities range from .47 for the inconsistent responding score to .82 for the total self-concept score (median .76).

Table 2

Test Retest Reliability for TSCS:2	
	Adult*
Validity Scores	
Inconsistent Responding	0.47
Self-Criticsm	0.67
Faking Good	0.71
Response Distribution	0.74
Summary Scores	
Total Self Concept	0.82
Conflict	0.62
Self Concept Scales	
Physical	0.79
Moral	0.77
Personal	0.73
Family	0.80
Social	0.76
Academic	0.76
Supplementary Scores	
Identity	0.69
Satisfaction	0.78
Behavior	0.75
*N=135 age 14-30	

Analysis of Data

SPSS, Windows Version 12.0 was used to perform the appropriate statistical operations to determine if differences exist between female sport participants and non-sport participants on the total self-concept scores and the specific dimensions of physical, moral, personal, family, social and academic self-concept scores as well as the supplementary scores of identity, satisfaction and behavior. Also, statistical analysis was used to indicate any significant differences between female individual and team sports participation on the total self-concept scores and the specific dimensions of physical,

moral, personal, family, social, and academic self-concept scores, as well as the supplementary scores of identity, satisfaction, and behavior are present within the sample.

T-scores obtained from scoring TSCS:2 instruments of subjects that qualified by definition as viable for inclusion in this research were used for test of hypotheses in data analysis. Hypotheses were examined using a multivariate analysis of variance (MANOVA). The $p \leq .05$ level of significance was used.

CHAPTER IV

ANALYSIS OF DATA

Introduction

This study was a quasi-experimental non-equivalent post-test only design. *T*-scores were used to test hypotheses in data analysis with a multivariate analysis of variance (MANOVA). The alpha level of significance was set at $p \leq .05$ for all statistical assessments. Preceding tests of hypothesis one and two, the validity scores of inconsistent responding, self-criticism, faking good, and response distribution were excluded from analysis by comparison of the non-valid protocols with the valid protocols on hypothesis variables using a MANOVA to determine if non-valid protocol variables differed substantially from valid protocol variables of interest in this study. Consequently, according to Fitts & Warren (1996) interpretation and application of TSCS:2 results for what is considered valid research and clinical scores, it is appropriate to include 190 returned questionnaires within research data analysis.

Description of Subjects

Demographic data was collected via a sheet attached to the instrument in an effort to describe the participant sample for the current study. The demographic sheet included the following six items: sex of respondent, age of respondent, marital status of respondent, number of children of respondent, academic classification of respondent and extracurricular activities of respondent. All subjects included in data analysis were

female undergraduate students at The University of Southern Mississippi. Subject's ages ranged from 18 years to 53 years, with a (median age= 21.62) years. Of the total of 190 subjects included in the analysis, 166 reported themselves as single, 20 married, and four divorced. Furthermore, 170 subjects included in the analysis reported having no children, whereas 20 subjects reported having at least one child. Regarding academic classification of subjects included in the analysis, 40 subjects were classified as freshman students, 57 subjects were classified as sophomore students, 63 subjects were classified as junior students, and 30 subjects were classified as senior students.

In addition, subjects were grouped into one of the following four categories to facilitate hypotheses testing: sport participants or non-sport participants and team or individual sport participants. Relating to the first grouping, sport participants or non-sport participants, sport participant subjects included in data analysis were (n=84) as opposed to (n=106) non-sport participant subjects. Integrated in the non-sport participant group, subjects reported being involved in the following extracurricular activities: 14 subjects participated in academic clubs at The University of Southern Mississippi, seven subjects were active in sororities at The University of Southern Mississippi, three subjects were resident assistants at The University of Southern Mississippi, two subjects were in The University of Southern Mississippi's marching band, and one subject reported being active in the Arts at The University of Southern Mississippi. In reference to the second grouping, team or individual sport participation, of the total 84 participants, there were (n=41) subjects active in team sports, while (n=43) subjects participated in individual sports.

Test of Hypothesis One

Hypothesis one was non-directional and stated in the null form. Hypothesis one stated that there were no significant differences between female collegiate sport participants and non-sport participants on the total self-concept scores and the specific dimensions of physical, moral, personal, family, social and academic self-concept scores as well as the supplementary scores of identity, satisfaction and behavior.

A review of means and standard deviations for sport versus non-sport participation differences on hypothesis one variables did demonstrate an observable trend (Sport Participant > Non-Sport Participant) and can be viewed in Table 3.

Table 3

Means and Standard Deviations of Sport vs. Non-Sport Participation Differences

Variable	Group	Mean	Std. Dev.
Total Self-concept	non-sport	48.04	10.42
	sport	50.65	10.57
Conflict	non-sport	52.66	15.10
	sport	50.18	16.88
Physical Self-Concept	non-sport	50.40	10.90
	sport	55.75*	9.53
Moral Self-Concept	non-sport	47.56	10.06
	sport	45.64	9.37
Personal Self-Concept	non-sport	48.19	11.55
	sport	48.68	9.41
Family Self-Concept	non-sport	48.75	11.19
	sport	52.19*	11.34
Social Self-Concept	non-sport	50.13	10.33
	sport	51.98	9.64
Academic Self-Concept	non-sport	48.58	9.40
	sport	49.46	9.91
Identity	non-sport	49.09	10.52
	sport	50.89	10.33

Table 3 (continued)

Satisfaction	non-sport	47.79	9.94
	sport	51.80*	10.09
Behavior	non-sport	46.59	10.98
	sport	52.56*	11.05

Sport n=84
Non-Sport n=106
N=190
* Significant variables

Following a review of means and standard deviations for sport versus non-sport participation differences on hypothesis one variables, a Pillai's Trace multivariate test of variance was performed, a statistically significant difference $F(11,178)=5.558$, $p<.001$ was found for the independent variables of sport participants and non-sport participants.

Considering the significant difference found using a Pillai's Trace multivariate test of variance, a univariate analysis of variance (ANOVA) was preformed using the $p\leq .05$ level of significance to determine which of the dependent variables of self-concept and supplementary scores were statistically significant. A statistically significant difference was found on the variables of physical self-concept (M=55.75), family self-concept (M=52.19), and supplementary scores of satisfaction (M=51.80) and behavior (M=52.56). The statistically significant results are displayed in Table 4 and F-ratios are reported as follows: physical self-concept $F(1,188)=12.602$, $p<.001$, family self-concept $F(1,188)=4.365$, $p<.038$, satisfaction $F(1,188)=7.504$, $p<.007$ and behavior $F(1,188)=13.755$, $p<.001$.

Table 4

Test of Between-Subjects Effects of Sport vs. Non-Sport Participation			
Variable	**Df**	**F**	**Sig.**
Total Self-Concept	1,188	2.92	0.089
Conflict	1,188	1.141	0.287
Physical Self-Concept	1,188	12.60*	<.001
Moral Self-Concept	1,188	1.80	0.181
Personal Self-Concept	1,188	0.099	0.753
Family Self-concept	1,188	4.37*	0.038
Social Self-Concept	1,188	1.58	0.21
Academic Self-Concept	1,188	0.393	0.531
Identity	1,188	1.392	0.24
Satisfaction	1,188	7.50*	0.007
Behavior	1,188	13.755*	<.001

* Significant Variables

Test of Hypothesis Two

Hypothesis two was also non-directional and stated in the null form. Hypothesis two stated that there were no significant differences between female collegiate individual and team sports participation on the total self-concept scores and the specific dimensions of physical, moral, personal, family, social and academic self-concept scores, as well as the supplementary scores of identity, satisfaction and behavior.

A review of means and standard deviations for individual sport versus team sport participation differences on hypothesis two variables did demonstrate a negligible observable trend (Individual Sport Participant > Team Sport Participant) but was not statistically significant and can be viewed in Table 5.

Table 5

Means and Standard Deviations of Team Sport vs. Individual Sport Participation Differences

Variable	Sport	Mean	Std. Dev.
Total Self-Concept	Team	49.76	10.93
	Individual	51.51	10.27
Conflict	Team	48.24	18.28
	Individual	52.02	15.42
Physical Self-Concept	Team	54.34	9.60
	Individual	57.09	9.38
Moral Self-Concept	Team	44.68	9.49
	Individual	46.56	9.27
Personal Self-Concept	Team	46.88	10.04
	Individual	50.4	8.52
Family Self-Concept	Team	51.63	11.44
	Individual	52.72	11.35
Social Self-Concept	Team	52.20	9.77
	Individual	51.77	9.63
Academic Self-Concept	Team	48.54	10.60
	Individual	50.35	9.25
Identity	Team	51.34	12.52
	Individual	50.47	7.82
Satisfaction	Team	51.68	10.61
	Individual	51.91	9.69
Behavior	Team	52.59	12.70
	Individual	52.53	9.38
	Team n=41		
	Individual n=43		
	N=84		

Though a review of means and standard deviations for individual sport versus team sport participation differences on hypothesis two variables was slight, a Pillai's Trace multivariate test of variance was performed and reported $F(11,72)=.997$, $p=.475$. No statistically significant difference for the independent variables of individual sport and team sport participation was found. Therefore a univariate analysis of variance (ANOVA) for dependent variables of self-concept dimensions and supplementary scores was considered unnecessary.

Ancillary Findings

A repeated measures analysis of variance was performed to determine the effects of sport participation on the dependent self-concept variables and supplementary scores, a statistically significant difference was found and is reported as $F(10, 74)= 11.606$, $p<.001$. Subsequently, multivariate pair-wise comparisons based on estimated marginal means was performed on sport participation variables and mean significant differences are reported as follows: Physical self-concept>Total self-concept, Conflict, Moral self-concept, Personal self-concept, Family self-concept, Social self-concept, Academic self-concept, Identity, Satisfaction, and Behavior; Behavior and Family self-concept> Academic self-concept, Personal self-concept, and Moral self-concept; Satisfaction, Social self-concept, and Total self-concept>Personal self-concept and Moral self-concept. A bar graph which provides a visual inspection of estimated marginal means of sport participation variables is presented in Figure 1. The estimated marginal mean of Physical self-concept (M=55.75) was found to be greater than all other variables in the analysis. Also the estimated marginal mean of Moral self-concept (M=45.64) was found to be less than all other variables in the analysis. Furthermore, sport participants were above the

mean on the scales of Total self-concept (M=50.65), Physical self-concept (M=55.75), Family self-concept (M=52.19), Social self-concept (M=51.98), and the summary scores of Identity (M=50.89), Satisfaction (M=51.8), and Behavior (M=52.56).

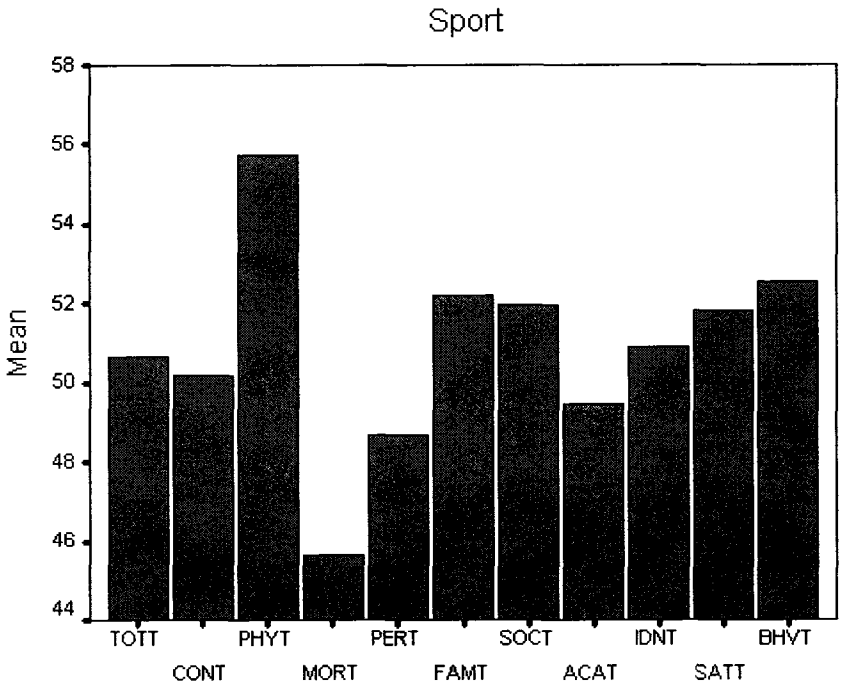

Figure 1. Multivariate Pairwise Comparisons of Sport Participation Variable Means, variables of Total self-concept (TOTT), Conflict (CONT), Physical self-concept (PHYT), Moral self-concept (MORT), Personal self-concept (PERT), Family self-concept (FAMT), Social self-concept (SOCT), Academic self-concept (ACAT), Identity (IDNT), Satisfaction (SATT), and Behavior (BHVT), are presented as T-scores, $p \leq .05$ level of significance.

A second repeated measures analysis of variance was performed to determine the effects of non-sport participation on the dependent self-concept variables and supplementary scores, a statistically significant difference was found and is reported as $F(10, 96) = 3.322$, $p = .001$. Consequently, multivariate pair-wise comparisons based on estimated marginal means was executed on non-sport participation variables and mean

significant differences are reported as follows: Conflict>Identity, Family self-concept, Academic self-concept, Personal self-concept, Total self-concept, Satisfaction, Moral self-concept, and Behavior; Physical self-concept and Social self-concept>Personal self-concept, Total self-concept, Satisfaction, Moral self-concept, and Behavior; Identity and Family self-concept>Behavior. A bar graph which provides a visual inspection of estimated marginal means of non-sport participation variables is presented in Figure 2. The estimated marginal mean of Conflict (*M*=52.66) was found to be greater than all other variables in the analysis. Additionally the estimated marginal means of non-sport participants were only slightly above the mean on the scales of Physical self-concept (*M*=50.4) and Social self-concept (*M*=50.13).

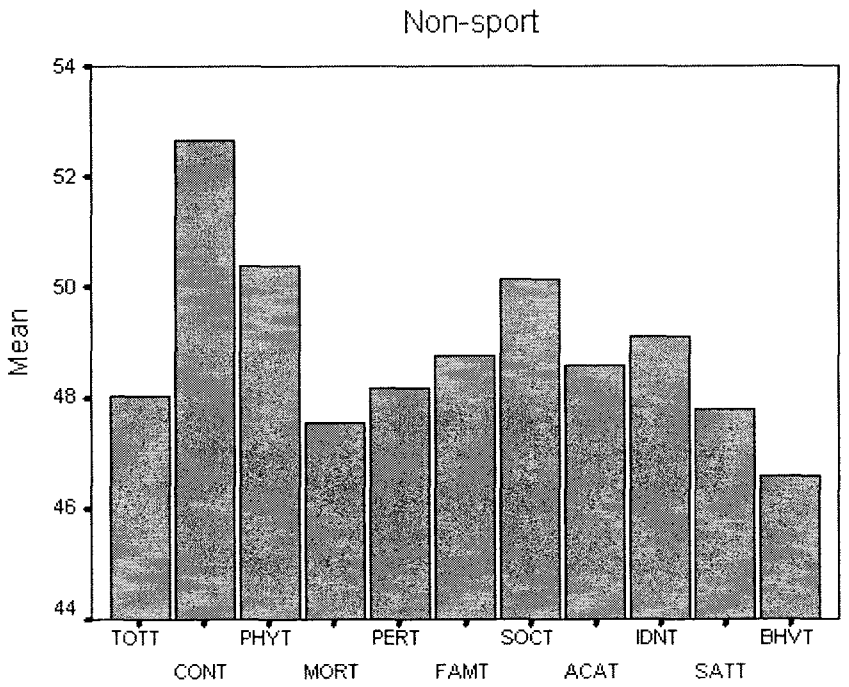

Figure 2. Multivariate Pairwise Comparisons of Non-sport Participation Variable Means, variables of Total self-concept (TOTT), Conflict (CONT), Physical self-concept (PHYT), Moral self-concept (MORT), Personal self-concept (PERT), Family self-

Figure 2. continued concept (FAMT), Social self-concept (SOCT), Academic self-concept (ACAT), Identity (IDNT), Satisfaction (SATT), and Behavior (BHVT), are presented as *T*-scores, p≤ .05 level of siginificance.

Figure 3 is a bar graph for both Sport and Non-Sport estimated marginal means. This graph provides a visual inspection of estimated marginal means of sport participants and non-sport participants mean T-scores for the comparison of groups tested.

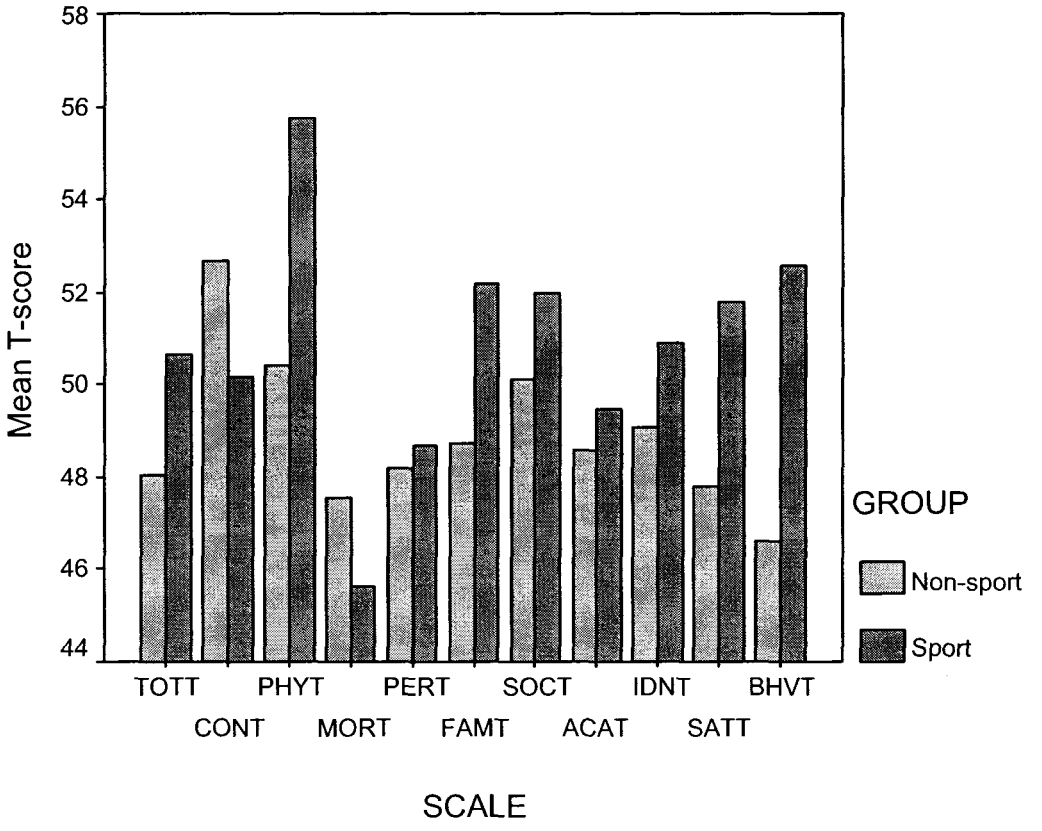

Figure 3.
Multivariate Pair-wise Comparisons of Sport and Non-Sport Participation Variable Means *T*-scores, variables of Total self-concept (TOTT), Conflict (CONT), Physical self-concept (PHYT), Moral self-concept (MORT), Personal self-concept (PERT), Family self-concept (FAMT), Social self-concept (SOCT), Academic self-concept (ACAT), Identity (IDNT), Satisfaction (SATT), and Behavior (BHVT), are presented as *T*-scores, p≤ .05 level of significance.

Conclusion

The testing of hypothesis one yielded statistically significant differences on the dependent variables of physical self-concept, family self-concept, as well as the supplementary scores of satisfaction and behavior. Sport participants' *T*-scores rendered by the TSCS:2 were statistically significantly higher on the dimensions of physical self-concept (M=55.75), family self-concept (M=52.19) as well as the supplementary scores of satisfaction (M=51.80) and behavior (M=52.56) as yielded by the TSCS:2.

Regarding hypothesis two, a slight trend (Individual Sport Participant > Team Sport Participant) was noted. A follow up multivariate test of variance was completed. No statistically significant differences between individual sport and team sport participation on the dependent variables of self-concept *T*-scores as rendered by the TSCS:2 was found. Consequently, no further analysis of hypothesis two variables was performed.

Results of Multivariate analysis for sport participant and non-sport participant variables on self-concept scores produced ancillary findings of statistical significance which are reported above. Bar graphs of estimated marginal means *T*-scores produced profiles for sport participants, non-sport participants and a combination of both. These bar graphs provide a visual inspection of how typical sport participants and non-sport participants are on each self-concept scale. For sport participants the estimated marginal mean of Physical self-concept (M=55.75) was found to be greater than all other variables in the analysis. Also the estimated marginal mean of Moral self-concept (M=45.64) was found to be less than all other variables in the analysis. For non-sport participants the estimated marginal mean of Conflict (M=52.66) was found to be greater than all other

variables in the analysis. The implications of these findings will be discussed in the following chapter.

CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Summary

This study used the Temessee Self-Concept Scale: second edition to study various dimensions of self-concept to better understand the psychological traits of sport participants. The purpose of this research was to compare female college students who participated in sports (individual vs. team) and those who did not. The total measure of self-concept showed no statistical differences so much of this discussion will center on the specific dimensions where differences were obtained. Specifically, significant differences were found regarding physical self-concept and family self-concept as well as supplementary scores of satisfaction and behavior when comparing female athletes vs. non-athletes. No difference was found regarding individual versus team sport participation. Ancillary repeated measures analysis of variance was statistically significant for both sport participants and non-sport participants. Multivariate pair-wise comparisons based on estimated marginal means yielded profiles for these groups. When profiles from both groups were compared, they fell in the normal range with sport participants exhibiting a mild deviation in physical self-concept and moral self-concept. For non-sport participants a relatively "flat" profile was observed with only a mild deviation in the conflict score. The conflict score compares the extent to which a subject differentiates their self-concept through agreement with positive items, or disagreement

with negative items. The current chapter discusses the results of the present study along with conclusions and recommendations.

Conclusions and Discussion

Hypothesis One

The initial objective of this research was to ascertain if significant differences between female collegiate sport participants and non-sport participants existed on the variables of total self-concept and the specific dimensions of physical, moral, personal, family, social and academic self-concept scores as well as the supplementary scores of identity, satisfaction and behavior. A review of means and standard deviations for sport versus non-sport participation differences on hypothesis one variables demonstrated a statistically significant difference on the variables of physical self-concept (M=55.75), family self-concept (M=52.19), and supplementary scores of satisfaction (M=51.80), and behavior (M=52.56). Similar to past studies this research demonstrated the dimension of physical self-concept is positively affected by sport participation.

In utilizing their Self-Description Questionnaires (SDQI, SDQII, SDQIII), Marsh and Jackson (1986) and Jackson and Marsh (1986) found that athletic participation was significantly related to physical ability self-concept, but was not significantly correlated with other nonphysical areas of self-concept. Furthermore, Marsh and Peart (1988) found that physical fitness was significantly related to the physical ability self-concept dimension, moderately related to the Physical Appearance self-concept dimension, and unrelated to additional areas of self-concept. Marsh, Richards, and Barnes (1986) found that participation in Outward Bound, a recreation based physical challenge program, had

significant effects on those aspects most relevant to the program; particularly physical ability self-concept.

The finding that sport participants scored significantly higher than non-sport participants on the physical self-concept scale of the TSCS:2 is important because it reinforced previous research using other instruments and populations. Fitts and Warren (1996) described the physical self-concept score on the TSCS:2 as representing the individual's view of their body, state of health, physical appearance, skills, and sexuality. Because it is always on display for evaluation, physical appearance is highly associated with global self-esteem across the life span. High physical self-concept scores are obtained by subjects with a positive view of how they look and of their health status. Such individuals are likely to use information about their appearance or their health status in a self-enhancing way.

Marsh & Jackson (1986), Jackson & Marsh, (1986) evaluated the scores of female athletes and non-athletes on four SDQIII scales. Their results demonstrated that female athletes had substantially higher scores on physical ability and slightly higher scores on total self-concept. In addition, they found no significant differences on emotional and physical appearance self-concept. Marsh and Jackson (1986) also evaluated the differences of scores of female athlete versus female non-athlete on single-item rating scales for a variety of the self-concept domains. Once again they found large differences on the physical ability scale and no significant differences on physical appearance scale. The dimensions of athletic identity, athletic competence, athletic ability and body image are sub-domains of physical self-concept. Because these factors are sub-domains of the

dimension of physical self-concept it is applicable to compare research in these sub-domains to the findings of the present study.

A unique feature of this research is the population studied. The majority of research (Marsh et al.1986, 1988) has focused on younger students and yet the results were consistent, physical self-concept is positively affected by sport participation. Another distinction of this research was the subjects were all female. This is considered important because of the emergence and growth of female athletic programs and the need for a better understanding of these young women. Using this approach with different age groups would be interesting to study the importance physical self-concept across the life span.

Studying the impact of sports participation in other cultures is another important area of research. Studies indicate that in European cultures physical self-concept is positively affected by sport participation. When comparing these measures in the United States of America to European countries, researchers found similar results. Physical appearance was highly correlated with total self-concept (Asendorpf & van Aken, 1993; Crocker & Ellsworth, 1990; Fox, Page, Armstrong, & Kirby, 1994; Granlese & Joseph, 1993; Maeda, 1997; Makris-Botasris & Robinson, 1991; Pedrabissi, Santinello, & Scarpazza, 1988; Trent, Russell, & Cooney, 1994; Van Dongen-Melman, Koot, & Verhulst, 1993). Also, athletic competence had consistently the lowest relationship to total self-concept; and in between ranking from highest correlation to lowest were scholastic competence, social acceptance, and behavioral conduct respectively.

Consistent with these findings numerous other studies which have examined the relationship between perceived physical appearance and self-worth have found that the domain of physical appearance was most highly correlated with self-worth. These finding are consistent with the current study in that sport participants possess higher levels of physical self-concept. At least five studies have focused on the positive influence of sport activity on self-concept using the Tennessee Self-Concept Scale and found female high school athletes and collegiate physical education majors had significantly higher self-concept scores than non-athlete groups (Biles, 1968; Burhmann, 1972; Clifford & Clifford, 1967; Rothfarb, 1970; Vincent, 1976). According to the findings of the current study and the research cited in this discussion, it appears that regardless of the subjects studied, instrument used for measurement, analysis employed, and interventions tested, physical activity and sport participation increases physical self-concept. This is relevant considering that within the dimension of physical self-concept, physical appearance is most highly correlated with self-worth and total self-concept. The TSCS:2 instrument like the original TSCS instrument does not differentiate between specific dimensions of the physical self-concept domain. In at least two studies (Ibrahim & Morrison, 1976; Young, 1981) found no differences on the physical scale of the Tennessee Self-Concept Scale (TSCS) Fitts (1965) instrument.

At least nine studies regarding self-concept have found that sport participation has minimal effects on measures of total self-concept. The following studies found female athletes had slightly higher scores on total self-concept than non-athletes (Ibrahim & Morrison, 1976; Snyder & Kivlin, 1975; Trujillo, 1983; Vincent, 1976; Young, 1981;

Kishton & Dixon, 2001). Marsh & Jackson (1986), Jackson & Marsh, (1986) also found female athletes had slightly higher scores on total self-concept than non-athletes.

In addition, (Ibrahim & Morrison, 1976; Kishton & Dixon, 2001; Snyder & Kivlin, 1975; Trujillo, 1983; Vincent, 1976; Young, 1981) found that participation in physical activity has minimal effects on total self-concept. Marsh (1993b) using a large sample of high school students evaluated the scores of junior and senior high school athletes and non-athletes on a variety of SDQIII scales found sport participation had no significant effect on total self-concept. The present study found that sport participation had minimal effects on total self-concept. However, at least three studies have found positive total self-concept changes in females as a result of physical activity (Alfermann & Stoll, 1999; Brown, Morrow, & Livingston, 1982; Brown & Harrison, 1986). Synder & Kivlin (1975) found female athletes had a higher general self-concept when compared to female non-athlete students.

Marsh (1993b) with a large sample of high school students evaluated the scores of junior and senior high school athletes and non-athletes on a variety of SDQIII scales. He found sport participation had a significant effect on senior high school athlete's social self-concept, and academic self-concept, but no significant effect on total self-concept. In addition, the effect on academic self-concept mediated positive effects of participation in sport on academic outcomes, including educational aspirations, attendance, taking advanced classes, and university attendance. These findings contradict the findings of the present study. Though the scores were above the mean on social self-concept (M=51.98), the present study found no significant effects for sport participation. Academic self-

concept (M=49.46) of sport participants in the current study were below the mean and minimal effects of sport participation on total self-concept (M=50.65) were found.

While the total measure of self-concept was not significantly different for the groups tested in the current study, some interesting differences were noted on some of the specific dimensions and supplementary scores. For example, the current study found that sport participants scored significantly higher on family self-concept than non-sport participants. This dimension of self-concept has been absent from the review of past literature. Additionally, this finding was considered important because family self-concept as defined by Fitts & Warren (1996) is the subject's feelings of adequacy, worth, and value as a family member. However, the interpretation of the family self-concept score according to Fitts & Warren (1996) has implications to the findings of this study. The family self-concept score refers to the individual's perception of self in relation to his or her immediate circle of associates. For students the family self-concept score may also reflect their relationships with their coaches or teachers. It is also strongly related to how they view their own conduct and to how they view their academic capabilities and performance. Also, subjects with high family self-concept scores have expressed a sense of satisfaction with their family relationships. They have indicated that they derive a sense of support and nurturance in the context of their families.

Finally, an effort was made to discuss similarities or differences of past studies with the significant supplementary scores of satisfaction and behavior. According to (Fitts & Warren, 1996) the supplementary scores are an amalgamation of items from the basic self-concept scales that reflect the original theoretical thrust of the test. As previously noted sport participants scored significantly higher on two supplementary

scores provided by the TSCS:2 but these measures have not been represented in the literature, adding a new dimension to this area of work. According to Fitts & Warren (1996), the supplementary score of satisfaction describes how satisfied the individual feels with his or her perceived self-image, this score reflects the level of self-acceptance. Also according to Fitts & Warren (1996), the supplementary score of behavior measures the individual's perception of his or her own behavior or the way he or she functions. A subject with a high supplementary score of behavior usually has control over impulses (Fitts & Warren, 1996).

Hypothesis Two

The second objective of this research was to ascertain if significant differences existed between females who participated in individual versus team sports on the total measure of self-concept as well as the specific dimensions of physical, moral, personal, family, social and academic self-concept scores. In addition, the supplementary scores of identity, satisfaction and behavior were compared. A review of means and standard deviations for individual sport versus team sport participation differences on hypothesis two variables did demonstrate a minor observable trend that individual sport participants scored higher than team sport participants. Multivariate analysis yielded no statistically significant differences for the independent variables of individual sport and team sport participation. Therefore, additional analysis of hypothesis two variables was deemed unnecessary. One possible reason for the lack of significance in analysis was that the subject population used may not have been large enough. With a greater number of participants included in analysis, results may have been different.

Much of the results of research on self-concept and female sport participation are problematic at best, because of discrepancies regarding definitions and measurement problems (Marsh & Peart, 1988; Marsh & Jackson, 1986; Wylie, 1979, 1989). Concerning hypothesis two obstacles were encountered regarding definitions for what is considered a team or individual sport and what dimension of self was measured. For example unlike prior research this study assessed the self-concept of the specific groups of female university students participating in NCAA Division I women's golf, women's tennis, track and field (individual sports) and women's basketball, women's soccer, women's softball, and women's volleyball (team sports). Colley, Roberts, & Chipps (1985) compared male and female participants in competitive team, individual, and non-sport participants. The individual sports for males included tennis, badminton, squash, canoe, athletics, table tennis, and cycle racing. The individual sports for females included table tennis, squash, badminton, tennis, and cycle racing. The team sports for males included rugby, hockey, football, basketball, and cricket. The team sports for females included lacrosse, volleyball, netball, basketball, hockey, and rugby. Also data from twelve other females who participated in the non-competitive individual sports of jogging, aerobics, and horse riding were included in the analysis.

The primary findings were that competitive sport participants were higher on extraversion and masculinity than non-sport participants. The comparison with female non-competitive sport participants with female competitive sport participants showed non-competitive sport participants to be lower on extraversion. Although sex-role identity is encompassed within the dimension physical self-concept, it would be difficult to form any conjecture from this research to the current study because of what were

considered team and individual sports and what dimension of self was being measured. Furthermore, as previously stated the results of the present study lend no weight to either individual or team sport participants possessing significantly higher total or specific dimensions of self-concept. Though, one can speculate that other variables considered beyond the scope of this study may be more important to a healthy conception of self.

Ancillary Findings

While not hypothesized, an additional repeated measures analysis of variance was done to determine the effects of sport participation on the dependent self-concept variables and supplementary scores. Results did demonstrate a statistically significant difference and is reported in the preceding chapter. Following this finding, multivariate pair-wise comparisons based on estimated marginal means was performed to determine the strength of these relationships. A profile for sport participants was created using *T*-score means. *T*-scores for the TSCS:2 are standard scores with a mean of 50, and a standard deviation of 10. Therefore a *T*-score below 40 on any scale falls at least one standard deviation below the mean, and a *T*-score above 60 falls at least one standard deviation above the mean. From visual inspection of the sport and non-sport participants profile in the prior chapter (*Figure 1*), one can obtain an instant view of how typical sport participants are on each scale and also on scale clusters. The estimated marginal mean of physical self-concept (M=55.75) was found to be greater than all other variables in the analysis. High physical self-concept scores are obtained by people with a positive view of how they look and their health status. They are the kind of individuals who are likely to use the information about their appearance or health status in a self-enhancing way. Also the estimated marginal mean of moral self-concept (M=45.64) was found to be less

than all other variables in the analysis. People who obtain low morality scores perceive in themselves an impulsivity that overrides moral considerations. This may indicate actual difficulty exercising an adequate level of impulse control, or it may reflect moral standards held by the subject or other significant others that are unrealistically high. This finding contradicts the premise that sport participation builds character. It appears to lend weight to the notion of win at any cost.

While the profile for sport participants fell into the normal range, notably the physical self-concept dimension and moral dimension exhibited a visually mild deviation. This mild deviation in both dimensions of self-concept may indicate an important area of concern. By interpreting the area(s) of vulnerability represented by the profile, coaches, teachers, and other relevant mentors may be able to better support, assist, counsel, and coach the meaningful development of their athletes. Furthermore, sport participants were also above the mean on the scales of total self-concept (M=50.65), family self-concept (M=52.19), social self-concept (M=51.98), and the summary scores of identity (M=50.89), satisfaction (M=51.8), and behavior (M=52.56).

A second ancillary repeated measures analysis of variance was done to determine the effects of non-sport participation on the dependent self-concept variables and supplementary scores. The results of a multivariate test of variance did demonstrate a statistically significant difference and is reported in the previous chapter. Subsequently, multivariate pair-wise comparisons based on estimated marginal means was performed to determine the strength of these relationships. A profile for non-sport participants was created using T-score means. From visual inspection of the non-sport participants profile in the previous chapter (*Figure 2*) one can obtain an instant view of how typical non-

sport participants are on each scale and also on scale clusters. The estimated marginal mean of conflict (M=52.66) was found to be greater than all other variables in the analysis. While the summary score of conflict is not a measure of self-concept, it does contribute to the interpretation of the subjects responses. When the conflict score is above average the subject is focusing more on assertion than negation, agreeing with many positive attributes, while at the same admitting to rather than denying negative characteristics. This particular anomaly may indicate a balanced self-view or it may signal the presence or emergence of conflict. This finding appears to support the notion that non-sport participants exhibited a certain degree of ambivalence in their responses. Additionally the estimated marginal means of non-sport participants were only slightly above the mean on the scales of physical self-concept (M=50.4), and social self-concept (M=50.13). Furthermore, non-sport participants profile also fell into the normal range. From visual inspection of the non-sport participant group one can determine that the profile created is considered a relatively "flat" profile.

It is of importance to state that the instrument used in this study design was a research tool and not intended for clinical intervention. Any clinical evaluation of results is a phase of intervention that is of particular importance to groups with extremely high or low scores on the instrument. Such at risk groups would benefit from guidance in theses areas, which hopefully would help them improve in areas important to their lives on and off the playing field.

Recommendations

With regard to future research, an agreement should be reached regarding measurement and definition discrepancies facing self-concept research. All research in this area would benefit from a more universal measurement of self-concept and related variables. One obstacle to this would be the need to vary instruments so they were appropriate for the specific ages and abilities of the subjects being studied.

Based on the findings of this study, the following is suggested for future studies. Initially, a greater number of subjects should be obtained for data analysis. This would increase the ability to generalize results. Additionally, the increased subject population should be expanded to include groups of female sport participants from varied geographical regions and cultures. Although, it can be anticipated that sport participants from different geographical regions and cultures would possess higher physical self-concept scores, it would be interesting to analyze the specific dimensions to discover the particular strengths and weaknesses of the subjects within the particular region being studied. Also, by increasing the subject population one could generate profiles for specific sports being studied. This would be helpful because within specific sports strengths and weaknesses could be identified. Furthermore, this may possibly assist coaches and athletes select sports or sport areas where they would most likely be successful when that is not clear from their physical capabilities. Likewise a logical extension to the present study would be to select samples from Universities who are members of different NCAA divisions. Furthermore, by expanding the subject population one could compare athletes of various chronological ages, maturation levels, races, different sports, different player positions, lengths of participation, participation in

various extracurricular activities, academic status, in-season vs. out-of-season, scholarship athletes vs. walk-ons', injured vs. healthy athletes, all Conference or all American vs. team members, team leaders vs. team members, and coaches vs. athletes.

Another suggestion for future research would be to change the design of the current study to a repeated measures or repeated measures longitudinal design. A more complete understanding of the effects of sport participation on female subject's self-concept may be obtained by examining how self-concept measures change during the course of an intervention. By pre-testing and post-testing participants, one may be able to discern if any developmental changes in female sport participants self-concept occurs during a specific period. Still it may be advantageous to extend the research longitudinally to record the development and possible changes in female sport participant's self-concept over time. In addition to the research implications, this assessment has clinical utility for individual student athletes. By testing subjects periodically during the length of their academic career, assessors can identify strengths and/or potential concerns that can be addressed in a timely manner. One possible concern may be the athletes becoming familiar with the instrument. However, it should be noted that all self-report measures are based on the honesty of the respondent and to be effective as a conduit for successful sport participation an athlete should be willing to be forthright. Theoretically by employing this design one could more effectively promote more positive physical and psychological gains in student athletes as well as identify at risk behaviors to initiate appropriate intervention strategies by recommending University sponsored treatment. At risk behaviors would be determined by scores at least one standard deviation above or below the mean on the particular profile generated. Also, the

results obtained from testing of student athletes have meaningful implications for the coaches. Three possible interventions to address any concerns of coaches towards sport participants' scores could be self-monitoring, goal setting, and skills training exercises.

Considering the findings of this study a grant should be written and submitted to the NCAA to fund psychological research on female sport participants. Following the results of grant funded research, a general comprehensive policy should be drafted and submitted to the NCAA for consideration and implementation, requiring athletic departments to examine the role of psychological constructs on sport participants initially and periodically during their collegiate careers in conjunction with other key factors that are related to student athletes success.

Educational and athletic administration should adopt a proactive approach to psychological analysis regarding female sport participants in order to identify performance enhancing strengths and possible stressors. A cross-disciplinary effort which includes athletic departments, psychology departments, and counseling departments should be considered. This could theoretically result in more appropriate management of athletic department finances. Coaches and educators could more effectively assess a student's probability at successful matriculation through the study of the specific dimension of academic self-concept. Through the use of psychological testing of sport participants more informed decisions could be made regarding athletic scholarships. Coaches and educators should work cooperatively with their athletic departments to promote the psychological well-being of female sport participants. It is acknowledged that athletic departments receive support from successful Alumni. Continued and additional support is contingent on coaches and athletes success. Both

physiological and psychological variables help contribute to athletic success. Coaches and educators should use all available means to become more effective in the development of psychological strategies towards student athletes.

Furthermore psychological research must continue with regard to female sport participants. The present study found enough differences in self-concept to classify female sport participants as a viable group of study. The construct of self-concept is but one measure to assess the psychological well being of student athletes. It has been shown by the results of this study to provide an effective assessment of the physical self-concept of sport participants. In addition, sport participants significance in the specific dimensions of family self-concept as well as the supplementary scores of satisfaction and behavior provide implications towards future research. Recommendations for future research have been made which may increase the number of significant variables and stimulate viable research questions along this line of research.

As previously noted one of the most prevalent changes in sports in the past three decades has been the increased participation of females in sport. In 1972 the ratio for female sport participants was 1 in 27, thirty years later in 2002 the ratio was 1 in 3 (Adams-Blair, 2002). From 1988-89 to 2001-02, NCAA member institutions have added 1,852 sport teams for women (National Collegiate Athletic Association Sports Sponsorship, 2001-2002). This study demonstrated that sport participation has the potential to be an important positive force in a young woman's overall development. As coaches and educators, we have the responsibility and means to make the student athletes we mentor more capable and successful young adults.

APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL

The University of Southern Mississippi

Institutional Review Board

118 College Drive #5147
Hattiesburg, MS 39406-0001
Tel: 601.266.6820
Fax: 601.266.5509
www.usm.edu/irb

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **R23050602**
PROJECT TITLE: **The Global and Specific Dimensions of Self-Concept Related to Female Participation In Collegiate Athletics**
PROPOSED PROJECT DATES: **03/21/05 to 12/30/05**
PROJECT TYPE: **Renewal of a Previously Approved Project**
PRINCIPAL INVESTIGATORS: **Dane Beary**
COLLEGE/DIVISION: **College Of Health**
DEPARTMENT: **School of Human Performance & Recreation**
FUNDING AGENCY: **N/A**
HSPRC COMMITTEE ACTION: **Exempt Approval**
PERIOD OF APPROVAL: **03/28/05 to 03/27/06**

Lawrence A. Hosman

Lawrence A. Hosman, Ph.D.
HSPRC Chair

3-29-05
Date

APPENDIX B

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Sincerely yours,

Susan Dunn Weinberg
Assistant to the President
WPS Rights and Permissions
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SDW:se

APPENDIX C

COACHES CONSENT LETTER

Spring, 2005

University of Southern Mississippi Athletic Department
Box 5017

Dear Coach:

I am conducting a research project for my dissertation involving USM student athletes and would like to include members from your team in my study. I am currently a Ph.D. student at The University of Southern Mississippi in the School of Human Performance and Recreation pursuing a degree in Human Performance with an emphasis in Teaching and Administration.

My research involves assessing the self-concept of female collegiate athletes. My desire is to expand the knowledge base in this area. The results theoretically can be used to examine female students' participation in collegiate athletics. I am writing this letter to request permission for some of your team members to complete my questionnaire. The instrument being used in this research is the Tennessee Self Concept Scale second Edition (TSCS: 2), an 82-item questionnaire that can be completed by anyone with a third grade reading ability. It will take approximately 10-15 minutes to complete the questionnaire.

The questionnaire will be administered by researcher with instructions to answer or return unanswered to researcher following distribution. The researcher is the only person who will see this information. No individual's questionnaire responses will be reported. Only pooled data will be reported. All data collected will be destroyed following analysis. Your athlete's participation in this study is important and encouraged, but purely voluntary. If, for any reason your athlete's are not comfortable completing the questionnaire, they may simply return the incomplete survey to me.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures research projects involving human subjects follow federal regulations. For your convenience I have attached a copy of the notice of committee action. Any questions or concerns about the rights of your student-athlete's should be directed to the Director of Research and Sponsored Programs, The University of Southern Mississippi, Box 5147, Hattiesburg, MS 39406-5147, (601) 266-6820.

Participation is appreciated.

Kind regards,

Dane Bradford Beary, M.S.
Hattiesburg, MS 39406-5142

Attachment

APPENDIX D

DATA COLLECTION SCRIPT

Investigator's introduction to students:

My name is _____.

Today I will be asking for female volunteers to complete a short demographic sheet and questionnaire.

Investigator's review of student's rights:

Participation is purely voluntary and the information you provide anonymous and confidential. Only pooled data will be analyzed, no individual student's information will be reported. All demographic sheets and questionnaires will be destroyed following analysis.

Investigator's instructions:

First, complete the short demographic sheet which accompanies each questionnaire. Then, the questionnaire asks you to describe how you feel about yourself and will take approximately 10-15 minutes to complete. There are no right or wrong answers, so please just describe yourself as honestly as you can. When you are ready to begin, read each statement and decide how well it describes you according to the following scale:

Answer 1 if the statement is ALWAYS FALSE

Answer 2 if the statement is MOSTLY FALSE

Answer 3 if the statement is PARTLY FALSE AND PARTLY TRUE

Answer 4 if the statement is MOSTLY TRUE

Answer 5 if the statement is ALWAYS TRUE

Read each statement carefully. Then circle the number that shows your answer. Please press hard when circling a response. Circle only one number for each statement. If you wish to change a response, cross it out with an **X**, and circle the new response you have chosen. When you finish please return the demographic sheet and questionnaire. Any questions before we begin?

APPENDIX E

SUTDENT CONSENT LETTER

Spring, 2005
Dear Student:

The attached self-concept questionnaire is part of a research project conducted by Mr. Dane Beary. I am a student, in The School of Human Performance and Recreation at The University of Southern Mississippi.

The purpose of this letter is a formal request to female volunteers to participate in a study on "how you see yourself." Participation will require the completion of the questionnaire which will take approximately 10-15 minutes of time. Results from the analysis of the questionnaire will be completely confidential insuring each individual's protection.

The questionnaire will be administered by the lead investigator with instructions to answer or return unanswered to the lead investigator following distribution. Only the researcher will see this information. No individual's questionnaire responses will be reported. Only pooled data will be reported. All data collected will be destroyed following analysis. Your participation in this study is important and encouraged, but purely voluntary. If, for any reason you are not comfortable completing the questionnaire, you may simply return the incomplete survey to the researcher.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, Box 5147, Hattiesburg, MS 39406, (601) 266-6820.

Participation is appreciated.

Kind regards,

Dane Bradford Beary, M.S.
Hattiesburg, MS 39406-5142

Attachment

APPENDIX F

DEMOGRAPHIC FORM

Sex: _____

Age: _____

Marital Status: (single, married, divorced) _____

Children: _____

Class: (Fr., So., Jr., Sr.) _____

Extracurricular Activities: (Cheerleader, Flag corp., Band, Sorority, Intramural sports, University sport, Et cetera) explain

_____

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