THE EFFECTS OF PHYSICAL FITNESS TRAINING AND GROUP COUNSELING ON SELF-CONCEPT AND PHYSICAL SELF-CONCEPT OF FEMALE UNIVERSITY STUDENTS

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F. HÜLYA AŞÇI

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Prof. Dr. Bahattin Akşit
(Director)

I certify that this thesis satisfies all the requirements as a thesis for the degree of Doctor of Philosophy.

Prof. Dr. Meral Aksu
(Head of Department)

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Doctor of Philosophy.

Prof. Dr. Füsun Akkök
(Supervisor)

Examining Committee Members

Prof. Dr. Füsun Akkök

Prof. Dr. Petek Aşkar

Prof. Dr. Gül Aydın

Prof. Dr. Uğur Öner

Prof. Dr. Hülya Gökmen

ABSTRACT

THE EFFECTS OF THE PHYSICAL FITNESS TRAINING AND GROUP COUNSELING ON SELF-CONCEPT AND PHYSICAL SELF-CONCEPT OF THE FEMALE UNIVERSITY STUDENTS

Aşçı, F. Hülya

Ph. D. , Department of Educational Science

Supervisor: Prof. Dr. Füsun Akkök

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The purpose of this study was to determine if the self-concept and physical self-concept of the female university students were affected by participating in an 10 week physical fitness training, group counseling and combined physical fitness training with group counseling. The subjects of this study were randomly selected 40 female university students drawn from 68 volunteer female university students at Middle East Technical University. 40 female subjects were randomly assigned to physical fitness group, group counseling group, combined physical fitness training with group counseling group and control group. Tennessee Self-Concept Scale and

Marsh Physical Self-Description Questionnaire were administered as psychological measures to 40 subjects before, in the middle, and after the 10 week treatments. In addition, some physiological measures were obtained from all subjects before and after the 10 week treatment. Subjects in the physical fitness group participated in the physical fitness training 3 times a week for 10 weeks which included two times 50 minutes step aerobics and one time aerobic dance per week. Subjects in group counseling group had 10 sessions of unstructured self-concept enhancement group experiences which lasted approximately one and half hour to two hours per week. Furthermore, subjects in the combined physical fitness training with group counseling had the same content of group experiences and physical fitness program. Two way ANOVA with repeated measures were performed to determine changes in the self-concept and physical self-concept scores. The results on the self-concept revealed no significant differences in each subscales of the self-concept among four treatment groups ($p > .05$). Two way ANOVA with repeated measures on the subscales of the self-concept indicated significant time effects for the physical self, family self, self-satisfaction, identity and total self-concept or positive self ($p < .05$) but, not on other subscales of the self-concept - moral/ethical self, personal self, social self, self-criticism and behavior- ($p > .05$). In addition, no significant group by time interaction effects were obtained on the subscales of the self-concept ($p > .05$). For the subscales of physical self-concept, two way ANOVA with repeated measures revealed significant group effect for the physical activity and coordination subscales ($p<.05$). Furthermore, the results of two way ANOVA with repeated measures showed significant time effects on the activity, flexibility subscales ($p <. 05$); but not other

subscales of the physical self-concept - sport competence, health, body fat, coordination, appearance, endurance, strength, general physical self-concept and self-esteem- (p > . 05). However, significant group by time interactions were obtained on the physical activity, sport competence, coordination and strength subscales according to two way ANOVA with repeated measures (p < .05).

Keywords: Self-concept, Physical Self-concept, Group Counseling, Physical Fitness Training, Female university students.

ÖZ

FİZİKSEL ZİNDELİK ANTRENMANININ VE GRUPLA PSİKOLOJİK DANIŞMANIN ÜNİVERSİTELİ KIZ ÖĞRENCİLERİN BENLİK KAVRAMI VE FİZİKSEL BEN KAVRAMLARI ÜZERİNE ETKİSİ

Aşçı, F. Hülya

Doktora, Eğitim Bilimleri Bölümü

Tez Yöneticisi: Prof. Dr. Füsun Akkök

Kasım 1998, 182 Sayfa

Bu çalışmanın amacı, 10 haftalık fiziksel zindelik antrenmanının, grupla psikolojik danışmanın ve birlikte yürütülen fiziksel zindelik antrenmanı ile grupla psikolojik danışma süreçlerinin üniversiteli kız öğrencilerin benlik kavramı ve fiziksel benlik kavramlarını etkileyip etkilemediğini araştırmaktır. Araştırmanın örneklemini Orta Doğu Teknik Üniversitesin'de okuyan gönüllü 68 kız üniversite öğrencisinden rastgele seçilen 40 kız üniversite öğrencisi oluşturmuştur. 40 kız

öğrenci rastgele fiziksel zindelik antrenmanı, grupla psikolojik danışma, fiziksel zindelik antrenmanı ile grupla psikolojik danışmanın birlikte yaşandığı süreç ve kontrol gruplarına ayrılmıştır. Tennessee Benlik Kavramı Envanteri ve Marsh Kendini Fiziksel Tanımlama Envanteri psikolojik ölçümler olarak 40 üniversiteli kız öğrenciye 10 haftalık uygulamadan önce, uygulamanın ortasında ve uygulamadan sonra uygulanmıştır. Buna ek olarak, bazı fizyolojik ölçümlerde bütün deneklerden 10 haftalık uygulamadan önce ve sonra alınmıştır. Fiziksel zindelik antrenmanı grubundaki denekler 10 hafta boyunca haftada 2 kez 50 dakikalık step ve bir kez de aerobik dans programına katılmışlardır. Grupla psikolojik danışma grubundaki denekler ise, 10 oturumluk yaklaşık 1.5 - 2 saatlik yapılandırılmamış benlik kavramı gelişimine yönelik grup yaşantısına katılmışlardır. Ayrıca, fiziksel zindelik antrenmanı ile grupla psikolojik danışmadan oluşan gruba katılanlar aynı antrenman programına ve grup yaşantısına katılmışlardır Benlik kavramı ve fiziksel ben kavramındaki değişimleri test etmek için; tekrarlı ölçümlerde 2 yönlü varyans analizi yapılmıştır. Benlik kavramı ile ilgili sonuçlar, 4 grup arasında benlik kavramının hiçbir alt ölçeğinde anlamlı fark olmadığını göstermiştir ($p > .05$). Tekrarlı ölçümlerde 2 yönlü varyans analiz sonuçları fiziksel ben, aile ben, kendinden hoşnut olma, kimlik alt boyutları ve genel benlik kavramı için ölçümler arasında anlamlı farklılıkların olduğunu ortaya koyarken ($p < .05$); diğer alt boyutlar için - ahlaki ben, kişisel ben, sosyal ben, kendini eleştirme ve davranış- anlamlı farklılık bulunmamıştır ($p > .05$). Buna ek olarak, benlik kavramının alt boyutları için grup ve süre etkileşimide anlamlı bulunmamıştır ($p> .05$). Fiziksel ben kavramının alt boyutları için, yapılan tekrarlı ölçümlerde 2 yönlü varyans analiz sonucu, fiziksel

aktivite ve koordinasyon alt boyutları için gruplar arası farkın olduğunu göstermiştir ($p < .05$). Ayrıca, yapılan tekrarlı ölçümlerde 2 yönlü varyans analiz sonucuna göre, fiziksel aktivite ve esneklik alt boyutlarında ölçümler arası farklılık varken ($p < .05$); diğer alt boyutlarda -sportif yeterlilik, sağlık, vücut yağ, koordinasyon, görünüş, dayanıklılık, kuvvet, genel fiziksel ben, kendine saygı- anlamlı farklılıklar yoktur ($p > .05$). Fakat, analiz sonucuna göre; fiziksel aktivite, sportif yeterlilik, koordinasyon ve kuvvet alt boyutları için grup ve süre etkileşimi anlamlı bulunmuştur ($p < .05$).

Anahtar Kelimeler: Benlik kavramı, Fiziksel ben kavramı, Grupla psikolojik danışma, Fiziksel uygunluk antrenmanı, Üniversiteli kız öğrenciler.

To My Daugther, MISRA

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PSPP	Physical Self-Perception Profile
TSCS	Tennessee Self-Concept Scale
MPSDQ	Marsh Physical Description Questionnaire
CSEI	Coopersmith Self-Esteem Inventory
METU	Middle East Technical University
COMG	Combined group
PFG	Physical Fitness training group
GCG	Group counseling group
CONG	Control group

CHAPTER I

INTRODUCTION

1.1. Background of the Study

During the past decade, there has been a resurgence of interest in the self that has focused on the study of individual differences as well as developmental change. Much of this work can be subsumed under the rubric of the "self-concept", where there has been a proliferation of theoretical and methodological activity, leading to a growing body of empirical evidence on the self (Harter, 1990).

The self as an object of conscious thought has consistently been a central issue for philosophers, psychologists and child developmentalists. This central issue - self-concept-has come to occupy a prominent role in human behavior and positive self image is central to the adaptive functioning and everyday happiness of the individual (Harter, 1986, 1988a).

"The degree of interest has been stimulated by the important and dual role of self concept in the explanation of human well being, its initiator and mediator role of human behavior. Self-concept has also been extensively used as an indicator of emotional and mental well being. In psychiatric intervention, for example, feelings of worthlessness accompanying clinical depression and positive self-regard is accepted as an attribute of an effectively functioning person. Research in educational setting

has gathered momentum as results have indicated that a student with higher self-esteem performs better academically and is more likely to exhibit personal qualities.such as social and leadership skills. As a result of this, it is not surprising that self-concept has attracted the attention of educators and educational researchers and it has been widely chosen as a worthy curricular or end product in itself and programs have been designed and delivered with a view to its promotion " (Fox, 1990a, p.3).

Additionally, "interest in self-concept stems from its recognition as a valued outcome in itself, the assumption that the improvements of self-concept may facilitate improvements in other areas" (Marsh, Smith, Barnes, and Butler, 1983, p.772). Fox (1988, 1990a) believed that much of what we do, whether conscious or not, is directed towards maximizing our chances of feeling good about ourselves and we learn to avoid situations in which we lack confidence and which expose us to our inadequacies and we are attracted to those which provide us with success. Therefore, the issue of self-concept is central to our understanding of human motivation and human behavior.

As it can be seen, that positive self-concept is widely posited to be a desirable outcome, to explain overt behaviors and other constructs, in many areas of psychological research. Despite these theoretical and practical significance of self-concept, like many other personality constructs, reviews of self-concept research typically identify a lack of theoretical models for defining and interpreting the constructs and, the poor quality of measurement instruments used to assess it (Wylie, 1974; Wells and Marwell; 1976, Marsh and Jackson, 1986). In an attempt to remedy

this problem, researchers shift the focus from studying the self-concept as broad global construct to a self-concept which is a multifaceted, hierarchical construct (Marsh and Jackson, 1986; Marsh and Peart, 1988; Marsh, 1993; Marsh, 1994; Marsh and Redmayne, 1994). One attempt was realized by Shavelson, Hubner and Stanton who reviewed empirical and theoretical research and posited a multifaceted, hierarchical model of self-concept derived from their review. Shavelson et al. proposed a general self-concept defined by academic and non-academic self-concept and academic self-concept was divided into self-concepts in particular content areas (e.g. English and Mathematics); non-academic self-concept was divided into social, physical and emotional self-concepts (as cited in Marsh, Barnes, and Hocevar, 1985; Marsh and Peart, 1988). Later Marsh and Smith (1982), Marsh, Barnes, Cairns and Tidman (1984), Marsh et al. (1985), Marsh and Shavelson (1985); Marsh, Richards, and Barnes (1986a); Marsh, Perry, Horsely, and Roche (1995) and Harter (1982, 1985a, 1988a) supported multidimensionality or multifaceted of self-concept. This multidimensional nature of self-concept emphasize that individuals have different perceptions in specific domains of life such as physical, social and work related aspects of each individual.

In this multidimensional model, individual's perception of himself/herself in physical domain takes an important place. First, researchers put physical self concept as a part of multidimensional self-concept structure, for example, physical appearance and physical ability subscale of Self-Description Questionnaire (Marsh, 1992). More recently, researchers have been interested in developing global physical self-concept scales (Fox and Corbin, 1989; Fox, 1990a; Marsh, Richards, Johnson,

Roche, and Tremayne, 1994) like global academic self-concept scales. Physical self-concept involves the perception of individual in physical domain such as strength, body appearance and endurance. Individuals' physical self has emerged as particularly important in the self-concept make up. How a person feels about himself is related to how he feels physically because physical self affect perceptions and performance in other domains, such as friendship and academic achievement.

Another important point related with the self-concept structure is its stable and malleable nature. Many researchers have noted the stable nature of self-concept (Epstein, 1973, O'Malley and Bachman, 1983; Marsh, Richards and Barnes, 1986 a,b). Although, researchers argue that the self-concept should be relatively stable over time, there is much interest in the construct -particularly in intervention studies- stemming from the attempt to change self-concepts because of its important role in the explanation of human behavior, human motivation, emotional and mental well being, its importance for adaptive functioning and everyday happiness of the individual.

Several practitioners from different fields have tried to change or improve the self-concept by using different strategies. For example; practitioners in the educational setting have investigated the effects of different teaching methods, teaching approaches or instructional strategies on the self-concept. Scheirer and Kraut (1979) for instance, reviewed academic intervention studies that attempted to improve self-concept as a means of improving academic achievement. In addition, a group of researchers or practitioners in the area of counseling psychology and clinical psychology, studied the effects of psychotherapy, group counseling and

individual counseling on improving the self-concept. Wylie (1979) revealed that psychotherapy and growth groups had little effect on the self-concept improvement. Furthermore, many other researchers believed that small group counseling helped students to improve or change their self-concept (Kelly and Mathews 1971; Sorsdahl and Sanche, 1985; Braucht and Weime, 1992, Kaplan, 1995). Another group of researchers have also investigated the role of different types of group counseling in improving or changing self-concept. Several investigators examined the effect of different group experiences such as sensitivity training group (Reddy and Beers, 1977); rational thinking group (Cangelosi, Gressard and Mines, 1980); structured and unstructured group (Ware and Barr, 1977; Baker, Thomas and Munson, 1983); affective education group (Bayers, 1986); growth group and encounter group (O'Dell and Seiler, 1975; Finando, Croteau, Sanz and Woodson, 1977) and different skill training group (Wright, Morris, and Fettig, 1974; Altmann and Black, 1978) on self-concept improvement.

Researchers from the field of sport and exercise science and psychology have also addressed the issues of self-concept improvement. Especially, in recent years, physical exercise has become increasingly popular and much of research described the psychological benefits of improvement in fitness. Self-concept, as an indicator of mental health and psychological functioning of individual, has been one of the psychological constructs which is widely studied in the psychological benefits of physical fitness training. Many studies have shown that self-concept appears to be affected by physical fitness change (Folkins and Sime, 1981). Like group counseling, the effect of various types of physical fitness training on self-concept has been

investigated since 1960. For example, Cocklin (1988); O'Neill (1989); Bothwell (1989); Mclnman and Berger (1993) have investigated the effect of aerobic dance program on the self-concept. On the other hand, Tucker (1983 ,1987) ; Brown and Harrison (1986); Brone and Reznikoff (1989) and Gysin (1989); have studied the role of strength training on self-concept improvement or change. Furthermore; the effect of swimming program (Miller, 1989); Shotokan karate training (Schmidt, 1988); field hockey and basketball training (Olu, 1990), creative dance participation (Blackman, Hunter, Hilyer, and Harrison, 1988; Miller, 1988); outward bound program (Marsh et al. 1986a, b) and sport camp experience (Anshel, Muller and Owens, 1986) on self-concept have been investigated.

In the literature, a few studies have been conducted to explore the joint effect of the two effective interventions -group counseling and physical training-on self-concept. Hilyer and Mitchell (1979) and Neal (1981) have investigated the effect of combined group counseling with physical fitness training on the self-concept. While Hilyer and Mitchell (1979) found that individuals who had low self-concept had an improvement in their self-concept after combined fitness program with group counseling, in contrast; Neal (1981) found no change in the self-concept scores of individuals who received a combined program of fitness training and group counseling.

As it can be seen in the literature, several studies investigated the effect of different types of group counseling on self-concept and the role of physical fitness training on the development of self-concept. However; the combined effects of

counseling and physical fitness on the development of self and physical self have not been explored very widely.

1.2. Purpose of the Study

The purpose of this study was to examine the effects of physical fitness training, group counseling and combined physical fitness training with group counseling on the self-concept and physical self-concept of female university students in Middle East Technical University (METU).

1.3. Significance of the Study

Self-concept is an important aspect of human behavior and human temperament emotion. It is not an epiphenomenan, but rather a construct that we feel is important since it has a very significant impact on individual's life. The concept of self determines our acts and behaviors. For example, if an individual evaluates himself / herself as an athlete, he / she directs all of his or her effort and act toward sports, he / she dresses like an athlete, he / she avoids smoking and alcohol that affect his or her success. Positive self-concept leads to a happy and adaptive daily life. The self-concept has come to occupy a prominent role in human behavior and, positive self-image is central to the adaptive functioning and everyday happiness of the individual.

Physical self-concept is also an important determinant of human behavior and emotions. Individual's perception of his or her physical aspects is also closely related

with total positive self-concept. A more positive physical self-concept is also an important aspect of adaptive and fully functioning daily life of the individual.

Therefore, enhancing self-concept and physical self-concept for healthy and happy life is an important and major issue for psychologists, educators and child developmentalists through many years. Different approaches and interventions have been used to enhance the self-concept and the individual's level of daily functioning. Most common and effective approaches have been physical fitness training and group experiences. Both of these approaches have been widely used . However, there has been little interest in studying the combined effects of these two effective approaches on self-concept. On the other hand, only the effect of physical fitness training on physical self-concept has been investigated. In the literature, no studies have been interested in either effects of group experiences nor combined effects of group experiences and physical fitness training on the physical self-concept. Therefore, an interest in exploring the combined effects of the two effective approaches -group experiences and physical fitness training- on the self-concept and physical self-concept lead this study.

1.4. Definition of Terms

Self-Concept: Self-concept is a hierarchical and multifaceted construct which is an individual's perception of self, formed through experience with the environment, interactions with significant others, and attributions of his/her own behavior and it is both evaluative and descriptive (Shavelson and Bolus, 1982).

Physical Self-Concept: It is an individual's perception of self in multifaceted physical domain (Marsh, 1993).

Physical Fitness Training: 10 week cardiovascular fitness training enhancing strength, endurance, flexibility, and body composition including aerobic dance and step aerobics.

Group Counseling: 10 week self-concept enhancement group experience enhancing the self-perception, self-understanding and exploration of self.

CHAPTER II

OVERVIEW OF SELF CONCEPT

2.1. Concept of self

Throughout many years, a resurgence of interest in the self has been increased. The self has come to occupy a prominent role in numerous theories of human behavior. The self has found advocates among developmentalist, social learning theorists, cognitive-attribution theorists, educational psychologists, as well as those clinicians espousing cognitive-behavioral models of treatment (Harter, 1986, 1988a).

The word self, in its dictionary sense, is a word we use to describe a particular individual such as, some unique personality we wish to single at from the rest of mankind (Combs and Snygg, 1959).

In historical perspective, the concept of self was defined indifferent ways. Such as self as a hypothetical construct, as a behavioral agent, as a structure or process, as a unitary concept, as conscious behavior, as an innate structure (Wells and Marwell, 1976; Gergen, 1971).

Related with the term of self, it is possible to find many psychological constructs such as self-acceptance, self-actualization, self-esteem and self-concept in

the literature. For example, Hansford and Hattie (1982), after reviewing 143 studies, identified 15 different self related terms during their meta-analysis. These terms were: self-concept, self-esteem, self-concept of ability, self-acceptance, self-perception, ideal-self, self-assurance, self-sentiment, self-attitude, self-confidence, self-regard, self-actualization, identity development, self-expectation and self. Within the literature, many of these terms, particularly self-esteem and self-concept, overlap with each other and some of these terms are used interchangably. Due to this, in this text the terms -self-concept, self-esteem and self-perception- are used interchangeably according to the context. Self-concept is one of the very important constructs in the psychology literature. Because of its importance in psychology and education, the interest in self-concept has increased and its construct has been discussed in many theories, but there is still a lack of consensus in terms of a proper definition. The concept of self has been defined in different ways by various theorists or psychologists, each attempting to fit a definition to their own arguments. When we look at the historical development of the concept of self, it is found that there have been over a hundered definitions. Though some of these definitions are similar to each other, some others are relatively different and contrasting. Most of them however, are too general, therefore, it is difficult to arrive a precise operational definition. In order to provide a better idea about self-concept, some definitions are presented here.

For example, Shavelson et al. proposed the following definition of self-oncept: "Self concept is an individual perception of him or herself through

experience with the environment, interactions of his or her own behavior" (as cited in Marsh, Relich, and Smith, 1983, p.173).

On the other hand, Combs and Snygg (1959) defined self-concept as more or less discrete perception of self in which the individual regards as part, or characteristic of his being. In addition, Pangrazi (1982) pointed out that self-concept is a system of ideas, attitudes, values and commitments that constitute person's inner world.

Another definition of self-concept was proposed by Burn (1982). According to Burn (1982, p.1)

> *the self-concept is composed of all beliefs and evaluations you have about yourself. These beliefs (self-images) and evaluations (self-esteem) actually determine not only who you are, but what you think you are, what you think you can do and what you think you can become.*

The self-concept is the self as perceived, or what a person refers to as "I" or "me". It may be made up largely of self experiences, events in the phenomenal field discriminated by the individual as "I" , "Me" or "self" (Jones, 1995). On the other hand, according to Weiss (1987), self-concept has traditionally referred to the descriptions or labels that an individual attaches to him or herself, such as physical attributes, behavioral characteristics or emotional qualities. The definition of Young and Bagley is very close to Weiss's. According to them, self-esteem is " what the individual sees about himself or herself as salient and important, and how such characteristics are evaluated" (as cited in Piskin, 1996, p. 42).

Furthermore, Tan (1970) describes self-concept as a system of individuals' values, emotions and concepts that individual process resulting from interaction with

himself, physical and social environment. According to Gergen (1971) self-concept is valuable in allowing the individual to form generalizations about himself through social interactions that persist over time.

2.2. Historical Trends Toward Self-Concept

Many different theories were proposed about self-concept. Its origin dates back to William James. William James was the first psychologist to elaborate on the self-concept. For James "a man's self is the sum total of all that he can call his"- the notion of appropriation and/or identity divided it into three constituent parts: the material Me, the social Me and the spiritual Me" (as cited in Wells and Marwell, 1976). According to James, "global self-esteem was captured by the ratio of one's successes to one's pretensions and one's level of self-esteem hinged on the extent to which one considered oneself successful in domains where one had aspirations of success" (as cited in Harter, 1987, p.220). James categorized " two aspects of global self. He formulated the terms "Me" and "I" for "the emprical person and judging thought". He saw the global self as simultaneously "Me" and "I". They were discriminated aspects of the same entity, a discrimination between pure experience (I) and the contrast of that experience (Me); between a self as subject (I) and a self as object (Me)" (as cited in Piskin, 1996).

After James, the notion of self continued to grow in importance for some three decades, with a number of notable contributors to its development. Among the theorists, Cooley who was the next major figure to deal with the idea of self, wrote from a more sociological perspective than James. Cooley is perhaps the best known for his notion of the looking glass self which postulates that an individual conception

of him or herself is determined by perception of other peoples' reactions to him or her (as cited in Wells and Marwell, 1976; Gergen, 1971). In addition, Cooley who first pointed out the importance of subjectively interpreted feedback from others as a main source of data about self (as cited in Bıyıklı, 1989) and developed a theory of self that was concerned primarily with how the self grows as a consequence of interpersonal interactions (as cited in Piskin, 1996).

Cooleys' views was later expanded in the influential writings of Mead. Like James, Mead saw the essence of self in the I-Me distinction and like Cooley, Mead saw the self as a social phenomenon (as cited in Wells and Marwell, 1976). According to Mead, every behavior commences as an "I" but develops end as "Me" as it comes under the influence of societal constraints. "I" provides the propulsion; "Me" provides direction (as cited in Burn, 1982; Öner, 1985; Can, 1990).

Another early trend having an effect on self theory was the work of psychoanalytic theorists, beginning with Freud. In psychoanalytic theory, the conscious awareness was largely subsumed under the concept of ego. Self-concept is a conscious and an unconscious percept. Freud suggested that concept of superego and ego ideal represent social self which made up self-concept and he did not distinguish the terms of self-concept and personality (Öner, 1982).

The most outstanding among those who have followed Freud were Fromm, Horney and Sullivan. Both Fromm and Horney made particularly important contributions to our understanding of self-love. Fromm stressed the importance of self-love for human happiness whereas Horney emphasized on neurotic forms of self-

love (as cited in Gergen, 1971) and Horney also focused her interest on self-alienation (as cited in Koyuncu, 1979).

As a psychoanalytic theorist, Fromm put greater emphasis on sociological factors and emphasized the close relation between a person's regard for himself and the way he is able to deal with other persons. A basic theme of his theory was that self-love is a prerequisite for the ability to love others. His definition of love is primarily giving not receiving (as cited in Piskin, 1996).

Horney as previously mentioned was another psychiatrist who has emphasized on self-alineation. She envisaged on individual as having three separate and distinct selves which are idealised self, actual self and real self (as cited in Bıyıklı, 1989).

Sullivan on the other hand, specified the self processes more explicitly and represented an unusual aspect of psychoanalytic perspective, by being particularly social-psychological. According to Sullivan, the self is built out of experience by means of reflected appraisals and is entirely a learned phenomenon (as cited in Wells and Marwell, 1976). Sullivan believed that if reflected appraisals have been derogatory, then self image is apt to be disparaging and hostile. If on the other hand, the reflected appraisal has been chiefly positive and constructive, then one's feelings about himself are more inclined to be positive and approving (as cited in Hamacheck, 1971).

Jung was another theorist who has studied self. Jung claimed that the self does not emerge until the various components of personality are fully developed. Jung emphasized the term of self-realization. According to him, a person is

continually developing, learning new skills and moving toward self-realization (as cited in Piskin, 1996).

Adler as a individual psychologist stressed the term of creative self. The concept of the creative self implies that people create their own personalities, actively constructing them out of their experiences and heredities (as cited in Ryckman, 1993). According to him, the self-concept of the individual always tries to find experiences that is satisfactory for individual, if satisfactory experiences can not be found, individual creates them (as cited in Gençtan, 1984).

According to Erickson, self-identity emerges from experience. He also indicates that identity is obtained from achievement that has meaning in culture. He described eight stages of the development of identity and emphasized identity crisis. For him, identity formation is a continuing process of progressive differentiation and crystallizations which expand self-awareness and self-exploration (as cited in Burns, 1982).

Apart from the psychoanalysts and the early interactionists, ego psychologists studied the self-concept. Allport was one of the first psychologists who significantly departed from the behaviorist trend and did some major work on the "ego psychology". Allport developed a synthesis of the ego and self-constructs which he termed "proprium". According to Allport the term of "proprium" is intended to cover the self as the object of knowing and feeling to be included as the subjective elements that are essential to the concept" (as cited in Nash, 1970, p.466).

Furthermore, Super defined the vocational self-concept. According to Super vocational self-concept is the constellation of self-attributes considered by the

individual to be vocationally relevant. Super focused on the delineation of 13 metadimensions such as self-esteem, clarity, certainty, stability and realism. Most recently he suggested that the self-concept theory might be better called "personal construct theory". According to him, personal perception and construction of environment bring a consideration of social, economic, and political factors influencing the ways in which self is translated into career (as cited in Betz, 1994).

In the recent years, a new theoretical approach was brought to the self-concept called as the phenomenological approach (sometimes called perceptual or humanistic approach). This perspective attempts to understand man through the impression of the subject and not through the eyes of an observer. It seeks to understand how the individual views himself, how his needs, feelings, values, beliefs and unique perception of his environment influence him to behave as he does. Perception is a central concept in phenomenology and refers to the processes of selecting, organizing and interpreting material into a coherent construction of psychological environment. This environment has variously been termed as the perceptual field, the psychological field and the phenomenal field or life space (Burn, 1982).

The phenomenological psychologists, represented by Combs and Snygg (1959) have a perceptual approach in which the crucial element is the manner in which the individual sees or interprets reality. In their view, behavior is always reasonable and purposeful, through the definition of what is reasonable for an individual, not objective and all behavior is determined by the perceptual field. According to Combs and Snygg (1959, p.123), "concept of self means more or less

discrete perceptions of self which the individual regards as part, or characteristic of his being".

Another phenomenological psychologist was Rogers whose self theory and ideas about the fully functioning individual represent a synthesis of phenomenology as developed by Combs and Snygg. The self, which is the nuclear concept in Roger's theory, has numerous features, the most important of which are these "(a) the self strives for consistency, (b) a person behave in ways which are consistent with the self, (c) experiences that are not consistent with the self are perceived as threats and are either distorted or denied, (d) the self may change as a result of maturation (as cited in Hamacheck, 1971, p.54). The self, according to Rogers, was a phenomelogical concept which was the major determining factor in all human behavior. For him, self-concept was the organized set of characteristics that the individual perceives as being peculiar to himself/herself. It is primarily a social product and is acquired through social contact (as cited in Piskin, 1996).

It can be seen that there are many different theoretical approaches to self-concept which began with sociological view through the phenomenological view of self-concept.

2.3. Models and Measures of Self-Concept

In the literature, it is possible to find different models of self-concept which are proposed according to these different theories and can be associated with a particular measurement strategy. Models of self-concept within the literature can be distinguished along a number of dimensions, the most important is, whether the self

is best viewed as a unidimensional construct or as a self evaluations that are more multidimensional in nature (Harter, 1988 a).

Until recently, self-concept was viewed as unidimensional construct (Figure 2.1). Self-concept as a unidimensional construct could be assessed by simply adding the responses about feelings across a wide range of life situations such as in schoolwork, sports, health, music and friendships (Fox, 1988). This unidimensional model is best represented in Coppersmith's and Piers-Harris's self-concept scale (as cited in Fox and Corbin, 1989).

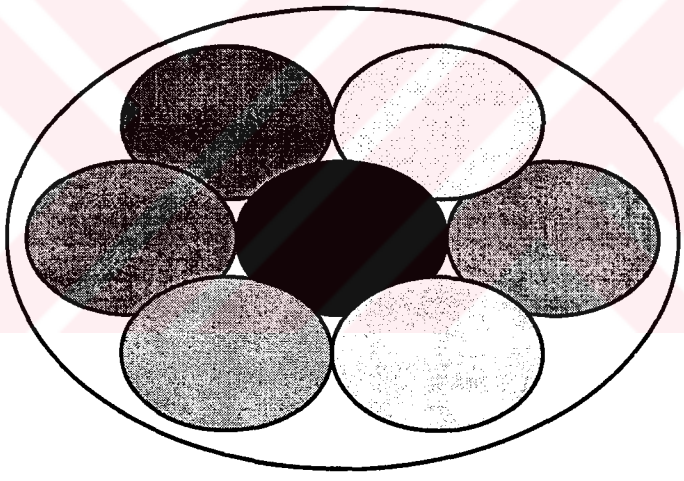

Figure 2.1: Unidimensional model of self-concept

From " The Child's Perspective in Physical Education: The Self-Esteem Complex" by K. R. Fox, 1988, The British Journal of Physical Education, 19, p. 248.

Unidimensional model is based on the assumption that the self-concept is a unitary construct best assessed by presenting the child subject with items tapping a

range of context, e.g., the child sense of self in school, with friends and with family (Harter, 1990).

This single approach has been highly criticized because it fails to acknowledge that children and adults even more so, have different feelings about themselves in different aspects of their lives and these may vary in their contribution to overall self-esteem. As a result of these arguments, a multidimensional approach has been put forward as an alternative. According to multidimensional model of self-concept, individual may have different perceptions of themselves as a professional, as a family member, as a leader or as a follower (Sonstroem, 1984). Figure 2.2 shows the multidimensional model of self-concept.

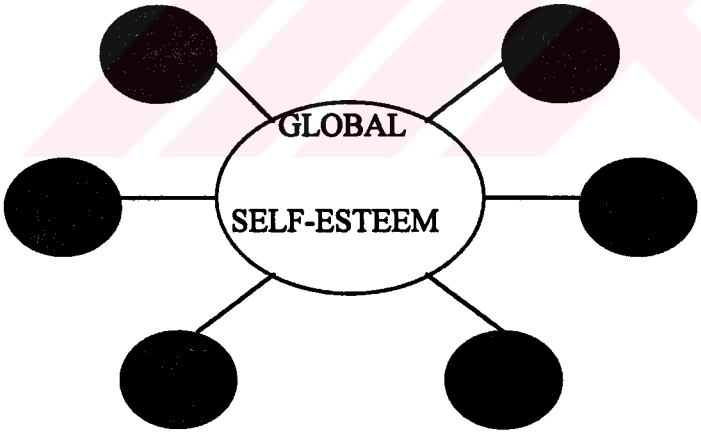

Figure 2.2: Multidimensional model of self-concept

From " The Child's Perspective in Physical Education: The Self-Esteem Complex" by K. R. Fox, 1988, The British Journal of Physical Education, 19, p. 248.

Different instruments have been developed such as Harter Self-Perception Profile For Children (1985a) and for Adolescents (1988b), according to this model. Besides, Marsh and colleagues (Marsh and Shavelson,1985) have developed increasingly complex Self-Description Questionnaires (SDQI, II, III) for preadolescents, early adolescents and late adolescents.

A third model to the self-concept is the hierarchical models of self (Figure 2.3). In these models, a construct such as self-concept represents a superordinate category under which order subcategories of the self are organized (Harter, 1986; Byrne and Shavelson, 1986). Epstein, L'Ecuyer are some proponents of hierarchical model of self-concept (as cited in Harter, 1985b).

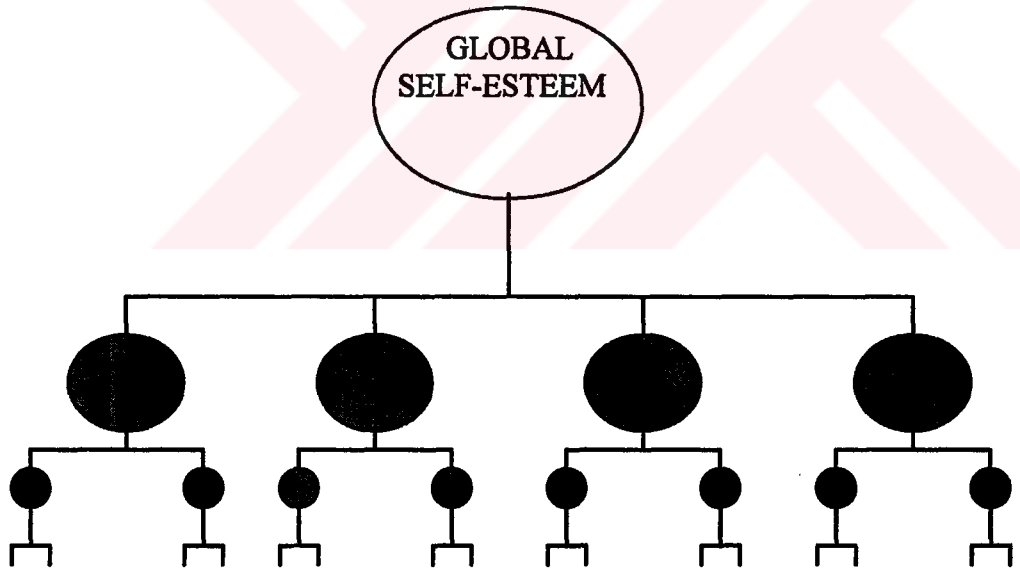

Figure 2.3: Hierarchical models of self-concept

From " The Child's Perspective in Physical Education: The Self-Esteem Complex"by K. R. Fox, 1988, The British Journal of Physical Education, 19, p. 248.

An alternative approach to self-concept was proposed by Rosenberg who has emphasized the global self-esteem, the general regard one holds for the self as a person. Rosenberg has sought not to polarize the issue in the form of unidimensional versus multidimensional model of self. He has argued that individuals possess a general sense of self-esteem or a feelings of worth as a person, in addition to those evaluations of one's adequacy across the specific domains of one's life (as cited in Harter, 1986, 1988a, 1990; Trent, Russell, and Cooney, 1994). Rosenberg Self-Esteem Scale was developed in accordance with this model of self-concept.

Another model of the self-concept represents an integration of both multidimensional and unidimensional themes, at the level of both model and measurement. The model underscores the importance of global judgements of esteem or self-worth, in addition to evaluation of domain specific competencies. Thus, global self-worth is assessed directly and independently by a set of items tapping one's overall judgement of worth as a person. These items inquire about the extent the individual like oneself as a person, likes the way he/she is leading his/her life, is happy with the way one is. Separate subscales tapping domain specific evaluations provide a multidimensional profile (Harter, 1985a, 1986, 1988a).

In the present study, a multidimensional approach and measures will be taken into consideration. Therefore, in the following section, multidimensional nature of self-concept will be discussed in detail.

2.4. The Multidimensional Self - Concept

The structure and dimensionality of self-concept have been discussed throughout the history. Historically, the self-concept research emphasized a broad global construct that did not differentiate between self-perceptions in physical, social, academic, other domains. Shavelson, Hubner, Stanton reviewed empirical and theoretical research and posited a multifaceted, hierarchical model of self-concept derived from their review. Shavelson et al. proposed a general self-concept defined by academic and non-academic self-concepts in particular content areas (English and Mathematics); non-academic self-concept was divided into social, physical and emotional self-concept. Physical self-concept was further divided into self-concepts of physical ability and physical appearance. Social self-concept was divided into relations with peers and relations with significant others (as cited in Marsh and Jackson , 1986; Marsh and Peart, 1988).

At the time Shavelson et al. first developed their model, the multidimensionality of self-concept was not broadly accepted. However, after 1970s subsequent studies (as cited in Fleming and Courtney, 1984; Harter, 1982; Marsh, Barnes, Cairns and Tidman, 1984; Marsh et al., 1985) provided strong support for the multidimensionality of self-concept. Marsh and Shavelson (1985) reviewed research stimulated by the Shavelson et. al. model; they also found strong support for multidimensionality of self-concept.

In addition to that, Shavelson et al. model was supported by Marsh, Relich and Smith (1983). Marsh et. al. (1983) found that reading achievement was

substantially correlated with the reading self-concept, less correlated with self-concepts in other academic areas and uncorrelated with self-concepts in non-academic areas. These results provide support for multiple dimensions of the self-concept.

There is also support for Shavelson et al. model in the physical domain. Marsh and collegeous (Marsh and Jackson, 1986; Jackson and Marsh, 1986) found that athletic participation was substantially related to physical ability self-concept, but was substantially less correlated with other non-physical areas of self-concept. Furthermore, Marsh and Peart (1988) demonstrated that physical fitness was substantially related to the physical ability self-concept scale, modestly related to physical appearance self-concept and unrelated to other areas of self-concept. These results support the multidimensional nature of the self-concept.

Even though, studies support the multidimensional nature of the self-concept, in recent years, researchers (Marsh 1990, 1992) argued that in educational settings, students have very distinct self-concepts specific to particular school subjects. Therefore, researchers suggest a specific measure of different dimensions of self-concept such as academic self and physical self (Marsh et al., 1995). As a result, there is a tremendous interest in studying the specific aspect of self-concept especially physical self-concept separately. In the following session this topic will be discussed.

2.5. Physical Self-Concept

The perception of the physical self has emerged as particularly important in self-esteem make-up. From the childhood, sense of our ability to interact and master our physical environment is crucial to healthy development. Maturation, stature, appearance, and physical ability are among the most public of our attributes and are increasingly used as reference points in our identity. In line with theories such as competence motivation, it also appears that this physical identity becomes associated with our choice of physical activity and health related behaviors such as involvement in or avoidance of competitive part, recreational pursuits, health related exercise or weight loss strategies. It may also have profound implications for social behavior, in general, and may hold particular significance for study with those who are physically challenged. As a result, physical self-perceptions appear to act as significant contributors to our self-esteem structure and may hold some answers regarding behavior patterns (Fox, 1990a).

This important psychological construct-physical self-concept is defined as individuals' perception of himself/herself in aspects of physical domain such as strength, endurance, sport ability and physical appearance (Fox and Corbin, 1989). Clearly, physical self is a separate entity that is strongly influenced by several subdomains concerned with physical accomplishment and appearance (Fox, 1990b).

The study of physical self-concept has gained much interest in recent years. Fox (1988) proposed a research model for understanding the self-esteem in physical domain (Figure 2. 4).

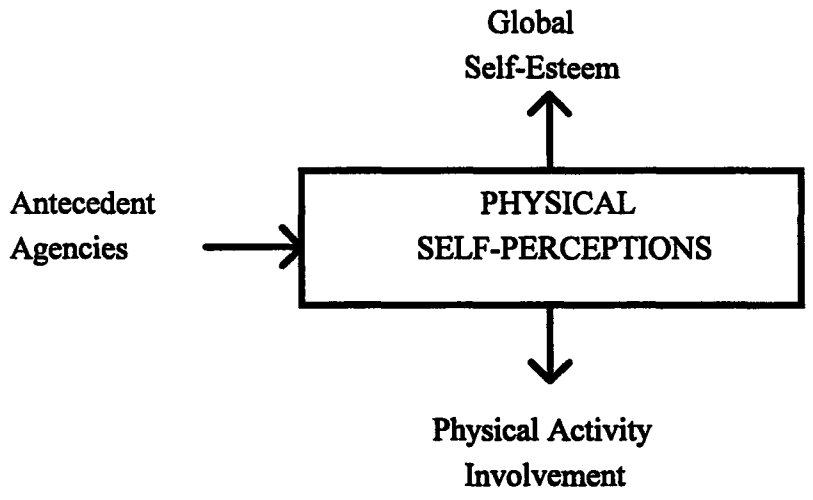

Figure 2.4: A physical self research model

From " The Child's Perspective in Physical Education: The Self-Esteem Complex"by K. R. Fox, 1988, The British Journal of Physical Education, 19, p. 252.

In this model, he (1988) emphasized on physical self perception for understanding the self-esteem. According to him, improvement in physical domain can enhance improvement of self-esteem and further participation in physical activity. In addition to that, in 1989, Fox and Corbin developed a specific measure and model for physical self concept. This measure and model of physical self-concept incorporated the aspects of hierarchical approach and the multidimensional nature. Figure 2.5 represents the hierarchical structure of self-perception in the physical domain.

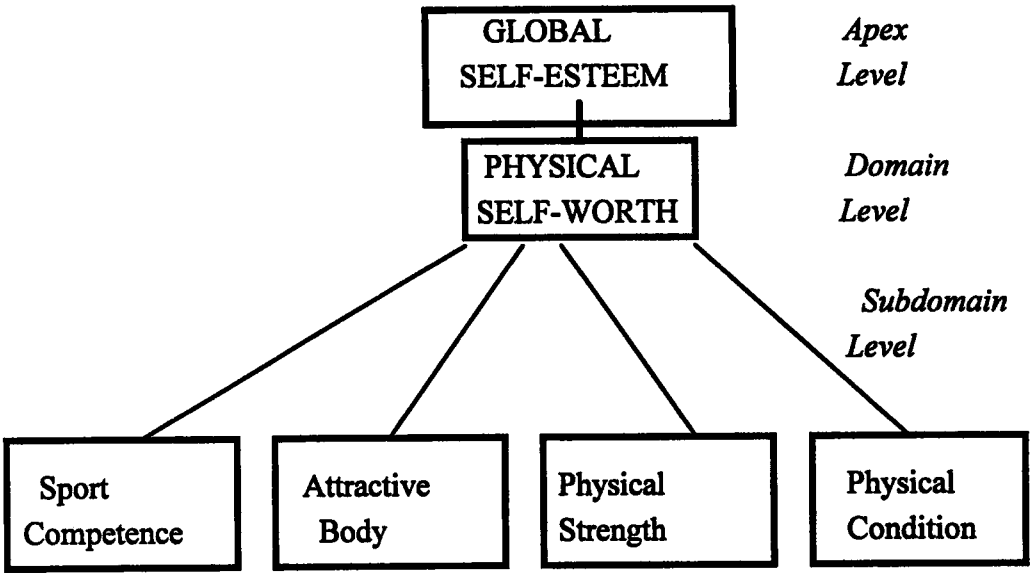

Figure 2.5: Hypothesized hierarchical organization of self-perception.

From " The Physical Self-Perception Profile: Development and Preliminary Validation" by K. R. Fox and C. B. Corbin, 1989, Journal of Sport and Exercise Psychology, 1, p. 414.

The hierarchical model is an important concept for educators as it provides a possible mechanism by which the day to day occurences at school might filter the physical domain as an example (Figure 2.6). Figure 2.6 illustrates several levels of self-perception, which range from state (right now) feeling of competence or adequacy to a generalized physical self-esteem and finally a global self-esteem. Although this model has not been adequately tested through research intuitively, it seems that several repeated exposures to success in football lessons would eventually produce an increased sense of football competence. This in turn, if combined with similar experiences in other sports, might promote feelings of general sport

competence. This may merge with other important aspects of the physical self to produce a healthy level of physical self-worth and so on (Fox, 1990b).

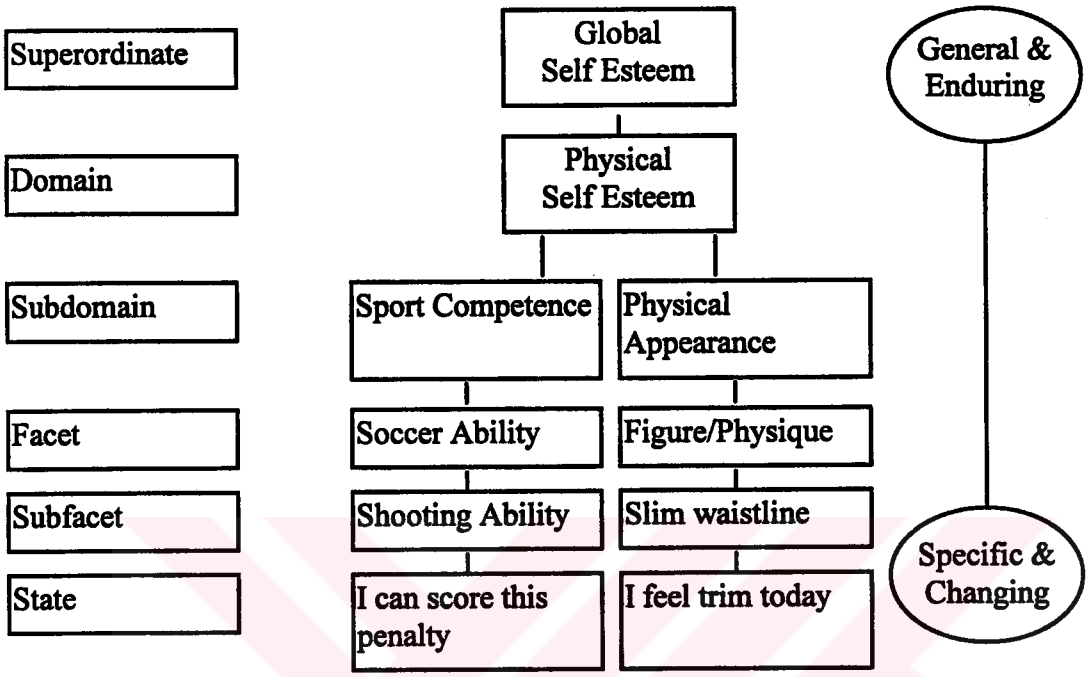

Figure 2.6: Levels of specificity of self-perception within the physical domain

From "Physical education and development of self-esteem in children. N. Armstrong (Ed.), New Direction in Physical Education. Champaign: Human Kinetics by K. R. Fox, 1990b.

As mentioned before, Fox and Corbin (1989) developed " Physical Self-Perception Profile" based on the hierarchical model of self-perception in psychomotor domain. The format and initial design of the physical self-perception was based substantially on Harter's general self-concept instrument and include 5 dimensions (Marsh and Sonstroem, 1995) - sport competence, physical condition,

body,attractiveness physical strength and global physical self-worth- as presented in the Figure 2.5.

After Fox and Corbin (1989), Marsh (1993) proposed the multidimensional profile of physical fitness indicators to a parallel set of multidimensional physical self-concept. Like, Fox and Corbin (1989); Marsh et al., (1994) have recently developed the "Physical Self-Description Questionnaire" that measures nine specific components of physical self-concept, global physical self-concept and global self-esteem. Marsh and collegeous model (1994) is hierarchical and multidimensional. Marsh and Redmayne (1994) also supported the multidimensional, hierarchical physical self-concept by finding a relationship between multiple dimensions of physical fitness and specific components of physical self-concept.

As it can be seen, physical self-concept has received interest from sport and exercise psychologists. In this study, this important psychological construct for human well being and general self-esteem will be investigated by using Marsh and collegeous' (1994) physical self-concept instrument.

2.6. Approaches Enhancing Self-Concept

2.6.1. Exercise and Self-Concept

Physical exercise has become increasingly popular in recent years, and much research describing the psychological benefits of improvements in fitness has emerged from variety of settings. Physical educators, exercise physiologists, psychologists, psychiatrists and physicians have all addressed this issue (Folkins and

Sime, 1981). In recent years, there is a burgeoning interest of counseling psychologists in the psychological benefits of exercise. Counseling psychologists have begun incorporating health strategies into their therapy sessions by using physical fitness training to facilitate the counseling process (Wilfley and Kunce, 1986).

A lot of of research exists to substantiate the mental health benefits of physical exercise. The use of physical fitness training is considered an appropriate helping strategy for improving the psychological functioning of an individual. Self-concept, as an indicator of mental health and psychological functioning of individual, has been one of the psychological constructs which is widely studied in the psychological benefits of physical fitness training research.

Through several years, many researchers have been interested in the role of exercise or physical fitness training in enhancing self-concept. Researchers have used different types of exercise or physical activity programs in determining the changes in the self-concept. For example, some researchers have used different sport activities to determine the improvement of self-concept. One of researchers was Koacher (1971) who has investigated the self-concept changes in individuals as a result of 12 days swimming program. He has found that individuals who have learned to swim in the program experienced a decrease in the self-ideal self-concept discrepancy of significant proportions as a result of an increase in the self-concept. On the other hand, Miller (1989) studied 120 children from National Youth Sport Swimming program to determine its effect on the self-concept of 9 to 14 year children. The findings revealed that there were changes in the swimming skills, but

no significant differences in any subscale of self-concept. Only subjects in the advanced beginner group reported a significant increase in the athletic self-concept. As a result; changes in athletic skills would be associated with changes in athletic self-concept.

Besides, Lee (1988) has studied 261 college students to determine the effects of participation in a selected physical activities program on the self-concept, self-acceptance and ideal self. 261 college students participated in the physical activity classes of weight training, karate, or golf, and professional education class. He has found that students in academic subjects showed greater gain in their self-concept and discrepancy scores as well as between self- concept and ideal self than students in activity classes.

Another study was conducted by Schmidt (1988). The purpose of his study was to investigate the effects of Shotokan karate training on the self-concept of 61 university students who were in the educational foundations classes, health education classes, physical education, swimming and karate classes. He found no significant differences among the group on the measure of the self-concept and its subcomponents. There were positive gains in mean scores on self-concept for the control and karate groups and negative gains on both variables for the swimming group and these changes were not statistically significant.

On the other hand, Hawkins and Gruber (1982) have investigated the effects of a season of a little league baseball on the self-esteem of 94 9-12 aged boys. They have found that a significant improvement in players' general self-esteem, home-

parents self and school-academic self scores. The social self scores were significantly lowered on only two of the eight teams.

McDonald and Howe (1989) have determined whether challenge/initiative recreation program enhanced the self-concept of 38 abused children living in a residental care facility or not. They have found that challenge/initiative games significantly enhanced behavior, anxiety, popularity and happiness subscales of Piers-Harris Children's Self-Concept Scale.

In the recent years, Olu (1990) has explored the effects of 10 week basketball and field-hockey training on the self-concept of 12-14 years old and 16-18 years old secondary school males and females. He has found that involvement in the organized physical education and sports program in school improved the self-concept scores of male and female subjects. The scores of trained subjects were significantly higher in the total positive self, self-satisfaction, physical self, personal self and social self. Stein and Motta (1992) have compared aerobic exercise of swimming to the nonaerobic exercise of weight training on self-reported measures of depression and self-concept. Subjects consisted of 89 male and female undergraduate students between ages of 18 and 42 who had voluntarily registered during a fall semester for a section of swimming for fitness, weight training or introduction to psychology. The results of this study have showed that the non-aerobic group was superior to the aerobic group for enhancing self-concept which included physical aspects of self. In addition, after 7 week weight training program there were significant improvement in the physical self, social self and personal self however, significant improvement was only obtained in personal self after 7 week swimming program.

In 1992, Philip has examined the relationship between self-concept and participation in leisure activities. He has concluded that some types of self-concept descriptions can be significantly associated with participation in leisure activities. Olu (1994) has studied the relationship between improvement in sport skills and increase in positive self-concept before and after training of 10 week field hockey and athletics by 12 to 14 year old junior high school and 16 to 18 year old senior high school boys and girls. Results showed a significant improvement in self-concept with skill training and skill acquisition.

Most of other researchers studied the different types of training program on self-concept. For instance Collingwood and Willett (1971) have studied the effects of 3 weeks obesity physical training program on the self-concept and the body attitude of 5 obese male teenagers. They have reported that there was a significant increase on the self-concept dimension, self-acceptance and a non significantly increase on the ideal self-dimension. In addition to that, McGowan, Jarman and Pedersen (1974) conducted a study to determine the effects of success oriented competitive endurance training program on the self-concept and peer approval of seventh grade boys. They assigned the subjects as an experimental group who participated in 3 or 4 days running program per week or who participated in various competitive activities on non-running days and a control group who did not attend regular physical education classes. At the end of 18 weeks semester, the competitive endurance training program increased the self-concept and fitness but not the peer approval.

Like McGowan, Jarman and Pedersen (1974), Marsh and Peart (1988) have investigated the effects of 6 week competitive and cooperative physical fitness

program on physical fitness and on different facets of self-concept of 137 girls attending to eighth grade. After pre-test measurement, subjects were assigned to one of two fitness programs and to a control group. The control group participated in a unstructured game of volleyball, while the two experimental groups were participated in aerobic training programs. They have reported that physical fitness substantially correlated with physical ability self-concept but, not significantly related to other areas of self-concept. The experimental intervention had a significant effect on only two of 11 self-concept scores: physical ability and to lesser extent , physical appearance. For both physical ability and physical appearance scales, the cooperative group scored higher than the competitive group, but the control group scored higher than competitive group and lower than the cooperative group.

The purpose of Brown, Morrow and Livingston's study (1982) was to determine if self-concept changes in college age females occurred as a result of involvement in 14 week physical conditioning program. Results have indicated that women showed significant differences in the self-concept upon the completion of the conditioning program, however; effects were not generalizable to all dimensions of the self-concept, only significant change was obtained in the physical self. The increase in the self-concept was the result of changes in subjects' physiological functioning.

On the other hand, Hatfield, Vaccora and Benedict (1985) used jump rope programs in improving the self-concept and cardiovascular fitness. They have studied 11 children aged from 9 to 11 years to describe some selected psychological and physiological changes in children engaged in 8 week precision rope jumping

program. They said that although subjects had high self-concept before the beginning of the training, there was a significant improvement on the general self-concept after jump rope regimen. However, no significant change was obtained in the physical appearance and physical attributes.

Outward bound program or sport camp experiences was another type of exercise program that has been investigated by the researchers in order to determine its role in enhancing the self-concept. A study was done by Marsh, Richard and Barnes, (1986 a, b). Marsh and his colleagues (1986 a, b) have examined a systematic change and stability in multiple dimensions of the self-concept, to test hypothesized effects of participation in the outward bound program on the self-concept. A total of 27 groups participated in 26 day residential program. The participants completed the Self-Description Questionnaire III one month before the beginning of the program, on the first day of the program and on the last day of the program. The participation in the program produced an increase in the multiple dimension of self-concept over 26 days interval, demonstrating effectiveness of the program. Marsh, Barnes and Richards (1986 a) also have found that 18 months after completion of the program, there was little systematic change in the multidimensional self-concepts during long-term follow-up interval. Marsh, Barnes and Richards (1986a) have concluded that self-concept can be changed through effective intervention and that these effects can be maintained. A similar conclusion was also proposed by Scherman (1989). Anshel, Muller and Owens (1986) have also supported the effect of sport camp experience on the self-concept of 15, 6 to 9 years old boys. They have said that sport camp only influenced a specific area of self-

concept rather than the general self-concept, so perceived sport ability scores of subjects increased after 6 week sport experiences.

Some researchers have believed that creative dance movement activities have an influence on the self-concept development, because dance involves vigorous activities. For instance, Blackman, Hunter, Hilyer and Harrison (1988) have studied adolescent females to determine to what extent the self-concept and the physical fitness affected by 4 months dance team participation in a high school setting. 16 female adolescents were assigned to an experimental group who were the members of a dance team, and a control group who did not participate in any extracurricular activities. According to the Tennessee Self-Concept scale's results; there were significant increases in the physical self and the social self for the experimental group. On the other hand; the aim of Miller (1988) study was to examine the effects of dance movement on the development of the self-concept in older adults. He said that dance/movement class influenced the positive image of self-concept for older adults. Experimental group possessed stronger self-concept in the areas of the physical self and the personal self.

The effect of an aerobic dance participation on the self-concept has been widely investigated in the literature. For example, Jasnoski, Holmer, Solomon and Aguiar (1981) have conducted a study in order to determine the effect of 10 week aerobic exercise on the self-perception of 39 women subjects. They said that the training was effective in increasing subjects' aerobic capacity and also had an effect on subjects' perceptions of their abilities and their confidence both in the physical and non-physical areas. According to their studies, changes in aerobic capacity were not

related to changes in the self perceived abilities and confidence. Plummer and Koh (1987) have studied college women to determine whether self-concept was related to participation in aerobics or not. After 10 weeks aerobic classes, there were significant differences in mean self-concepts between the control group and the aerobic group. No significant differences were found for self-criticism and moral-ethical subscale.

Furthermore, Cocklin (1988) has examined the effects of a participation in an aerobic dance class on the self-concept of 69 females. In addition, he has determined if the level of physical fitness and feelings about the body was significantly related to the self-concept. 69 women aged 20-50 were randomly assigned to an experimental, placebo or no treatment control group. The experimental and placebo groups participated in exercise classes 3 nights per week for 8 weeks. At the end of the study; he has concluded that the self-concept increased significantly from pre to post test for both experimental and placebo groups. Body cathexis and physical fitness were not found to be significantly related to self-concept. O'Neill (1989) has studied 53 non-athletes females for determining the effect of 4 week aerobic exercise program on the self-concept. She has found that aerobic exercise treatment subjects had significantly higher physical self-concept scores than the control group. Like O'Neill; Bothwell (1989) has concluded that 12 week aerobic dance program made a significant impact on the self-concept of 43 women and 6 men. McDonald and Hodgdon (1991) made a meta analysis about the effect of aerobic fitness training on self-concept. They have concluded that self-concept scores increased significantly after participation of aerobic fitness training independent of the instrument used to

measure self-concept. They also noted that increases in self-concept scores were observed in both male and female groups and in all age groups, that is young, middle-aged and elderly adults.

Recently, Mclnman and Berger (1993) have tried to clarify the relationship between the self-concept and the exercise. They have examined the self-concept and mood changes of female university students associated with aerobic dance participation. The result of the study revealed a significant increase in the following subscale of Marsh Self-Description Questionnaire after aerobic dance program: Emotional Stability, Physical Appearance, Problem Solving, Math, Honesty, General, Academic, Opposite Sex Relations, Parental Relations and Physical Ability self-concept.

Through several years; strength training and its effect on the self-concept were studied. Tucker was one of the researchers who studied the effects of strength training on the self-concept. In his study, Tucker (1983; 1987) has investigated the effects of 4 months weight training program on the self-concepts of 240 college males. He has found that regular weight training program was significantly related to enhancement of the self-concept of college males. Although the experimental and control groups, had congruent psychological profiles at the outset of the program, two groups differed in global, internal and external self-concept at the conclusion of 16 weeks training. Again Tucker (1982) in his earlier study which was done on 105 college male students found that 16 week weight training program had an effect on 8 of 9 self-concept subscales.

The purpose of Trujillo's (1983) study was to investigate whether weight training and running exercise intervention program would effect the self-esteem of 35 undergraduate females from Wisconsin University. 35 females were assigned to a weight training group, a running group and a control group. After 16 weeks, following results were obtained: changes in self-esteem from pre-test to post-test for each individual participant was found to be significantly increased in both weight training and running group. The control group did not gain in self-esteem, but showed a slight decrease for this attribute.

Brown and Harrison (1986) have also examined the effects of 12 week strength training program on the rate of strength gain and self-concept. They have used young and mature women as subjects. Both age groups were assigned to experimental and control groups. After subjects' strength levels were measured, the experimental groups began a 2 week of moderate intensity weight training which was 3 days a week, for 60 minutes each day and 3 sets of 10-12 repetitions of bench press and pull-down. After moderate intensity training, the subjects began a 10 week of high intensity progressive weight training. They have found that 12 week strength training program was effective for increasing strength and general self, physical self and self-satisfaction scores.

Like Brown and Harrison (1986); Brone and Reznikoff (1989) have studied 37 varsity football team member to clarify the relationship between gain in strength and self-concept. The adjective checklist was administered to subjects before 5 days to starting the weight training program. After 14 week strength training program; participants viewed themselves as more disciplined and planful and

changes in strength correlated positively with changes in self-confidence and few changes occured in self-concept.

Recently; Gysin (1989) has found that 10 week weight training program had an effect on physical self-concept of 88 college male students.

As it can be seen in above results, exercise seem to be an effective intervention for improving self-concept. After different kinds of exercise significant improvements were obtained in the self-concept of subjects. Although most of the results were consistent, some of the studies reported significant change in general self-concept but some others failed to report change in general self or global self. However, most of the studies revealed significant improvement in the sport specific aspect of the self such as physical self, sport ability, physical appearance. These consistent findings directed the researcher toward studying the relationship between physical self-concept and exercise. In the following subsection, the studies that investigate these relationships will be presented.

2.6.1.1. Exercise and Physical Self-concept

Researchers not only investigated the effect of exercise on global self-concept but also studied its effects on specific aspects of self-concept such as physical self. For example, Wilfley and Kunce (1986) have examined 49 subjects to determine physical and psychological benefits of a 8 week individualized exercise program. To determine psychological benefits of exercise, physical self-concept was used as a criterion. Individualized exercise emphasized specific warm-up exercises, walking, jogging, cycling and cool-down exercises. The results of this study revealed that

physical self-concept increased after the exercise program. Another similar study was conducted by Caruso and Gill (1992). They conducted two studies. In the first study Caruso and Gill (1992) have examined the effect of a 10 week aerobics and weigth training and physical activities on the physical self-perception of 34 female undergraduates in their first study. They have reported that physical self-perception changes over the 10 weeks, but improvements in physical self-perception occured independent of an exercise/activity group. In the second study , Caruso and Gill (1992) have compared the effect of weigtht training and physical education activities on physical self-perception and body image perceptions of 37 males and 28 females. The results of this second study revealed no significant changes in the physical self-perception over the 10 week program.

Page, Fox, Armstrong and McAndle (1993) have also examined the effect of 8 week aerobic training on bicycle ergometer on the physical self-concept of female subjects. Page et al. (1993) have found that participation in a 8 week aerobic program caused a change in strength, physical condition and physical self-worth subscales of physical self-perception, but no significant effects in body attractiveness and sport competence subscales.

In recent years, Aşçı, Kin, and Koşar (1996) studied the effects of a participation in an 8 week aerobic and step dance program on the physical self-perception of female university students. Aşçı et al. (1996) found significant time differences in the score of physical self-worth, strength, physical condition, body attractiveness and sport competence for step aerobic group and for the aerobic group

significant time differences were obtained in the physical self-worth, strength, body attractiveness and sport competence subscales.

Sonstroem (1984) in his review has also emphasized the importance of exercise and physical fitness in enhancing the self-concept. In addition to that; Sonstroem and Morgan (1989) have emphasized the importance of exercise in self-concept improvement by proposing a model for examining exercise and self-esteem interaction. Also in this model, the importance of studying physical self was emphasized. This model is presented in Figure 2.7 (Sonstroem and Morgan, 1989, p.333).

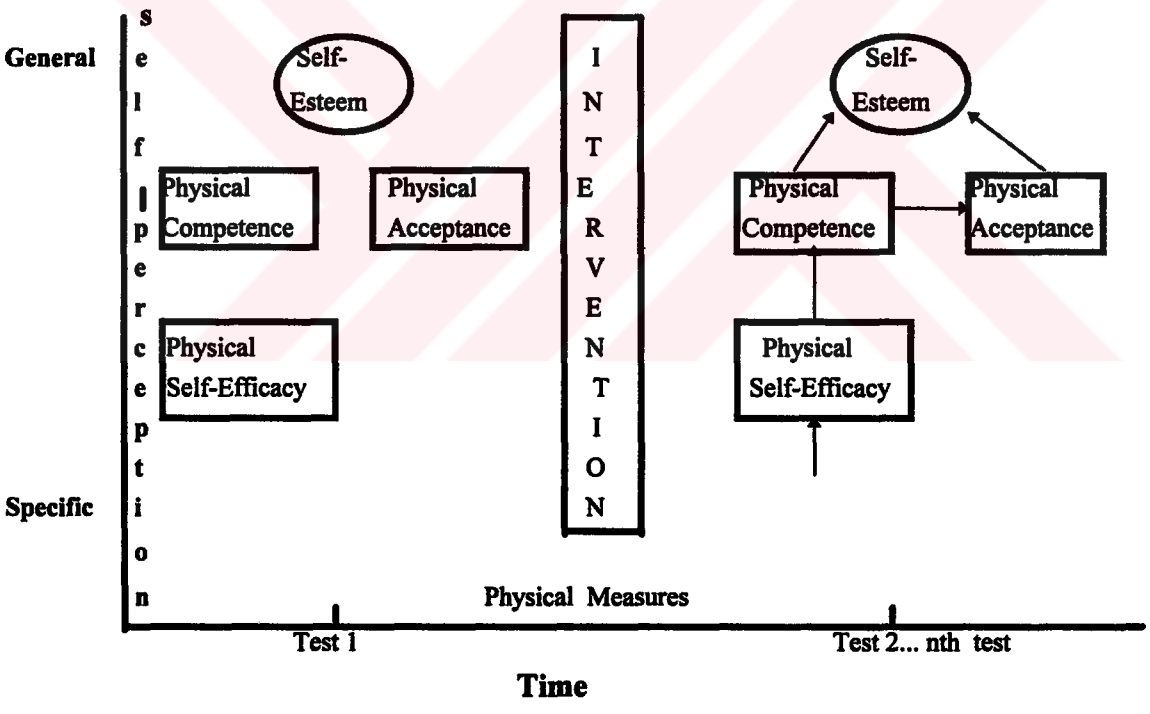

Figure2.7. Proposed model for examining exercise and self-esteem interactions.

From " Exercise and Self-Esteem: Rationale and Model" by J. R. Sonstroem and W. P. Morgan, Medicine and Science in Sports and Exercise, 21, p. 333.

In this study, their model will be taken into a consideration in order to determine the effect of exercise or physical fitness training on self-concept and physical self-concept.

It can be concluded that exercise as an intervention strategy has resulted in enhancing self-concept and physical self-concept. The literature suggests potential effectiveness of physical fitness training or exercise on improving self-concept and physical self-concept. Counselors can also use physical activity as a therapeutic intervention for enhancing psychological functioning of individuals.

2.6.2. Group Counseling and Self-Concept

One of the problems frequently encountered by most of individuals is poor or negative self-concept when individuals are typically experiencing a multitude of changes and challenges. In everyday life, individuals face with many changes and challenges. For example, socially, individual is confronted by pressures from peer groups, society and family expectations and individual must resolve the conflict at a certain point of life. In order to resolve the conflict or tolerate the pressure, individuals need to have positive or good self-concept. It can be said that positive self-concept is an important aspect of healthy psychological development for all of us. Therefore, most of the educators, clinicians, researchers and counselors have become concerned with enhancing the self-concept of the individuals.

One of the ways for enhancing the self-concept that has been investigated or offered by counselors and researchers is the experiencing different types of group counseling.

For example, Mackeen and Herman (1974) have investigated the influence of group counseling on the levels of self-esteem, anxiety, depression and hostility in 3 groups of adult females. The group counseling programs lasted for 3 groups and were similar in discussions of concept, providing opportunity for positive reinforcement but differed in terms of total time that the participants were involved. 3 groups of adult females were from middle class, provincial social assistance and city social assistance. The results showed significant improvement in the self-concept of adult females in provincial social assistance group after the group counseling program. In addition, Şerifi (1985) has examined the effects of 12 week group counseling on self-concept of high school students. The results revealed that 12 week group counseling had significant effects on both self-concept of male and female high school students.

Some of the researchers have examined the effects of different training group (T-group) experiences on the self-concept. White (1974) has investigated the effect of fishbowl approach to a T-group interaction and normal approach T- group interaction on the self-concept. Participants were assigned to "fish bowl approach" T group, "normal approach" T-group and a control group. Fishbowl approach involved a structured feedback system in which the individual in the group interaction takes feedback from out group and then some other procedures take place. After a 7 week T-group session, neither fish bowling nor normal T group design improved the self-concept more than the control group receiving no T-group experiences. Besides

White (1974), Reddy and Beers (1977) have studied the effects of a week long, sensitivity training group on self-concept of 22 white adults. Reddy and Beers (1977) have reported that participants with a strong physical self-concept are enhanced in sensitivity group while those with a weak self-concept are diminished. They (1977) have also suggested that physical self-concept is an important variable to be investigated in sensitivity training.

Klemke (1977) has also conducted a study to determine the role of a sensitivity training group on the self-concept from a sociological perspective. He found a positive change in the self-concept as a result of the sensitivity training.

Another type of a training group which was investigated by researchers for determining the role of T-group in self-concept changes was the communication skill training group. Altmann and Black (1978) have examined the influence of 13 week communication skill training group in changing the students' self-concepts. They (1978) had obtained no significant communication intervention effect on total positive self concept, total net conflict and self-criticism scores of students.

Intimacy group training is another type of T-group and its effects on self-concept have been investigated by Widra and Amidon (1987). The purpose of their study was to determine the effect of intimacy group training on the self-concept of 95 students. Intimacy training group provided framework in which people felt safe to explore their propensity for intimacy as well as their blocks and resistance against it. Intimacy group training included structured exercise, guided fantasies, non-verbal

interaction, feedback and group participation. The results of study revealed significant improvement in self-concept of 95 students after intimacy training group.

Stake and Pearlman (1980) have focused on the effects of assertiveness training group on self-concept of 121 women as described as performance self-esteem. 126 session of assertiveness training groups were formed for improving the self-concept of women. After 6 sessions of assertiveness training group performance self-esteem scores increased significantly.

Besides T-group, some researchers have investigated the effect of structured and unstructured group counseling on the self-concept. For instance, Wright, Morris and Fettig (1974) have conducted a study to determine the relative effectiveness of 8 week structured and unstructured group counseling approaches in helping students improve their functioning in social skill areas as reflected through their self-concept, as measured by self-report and the Tennessee self-concept scales. They have concluded that nonstructured groups showed greater significant mean differences within self-satisfaction, personal self, social self and positive self from pre to post test. They have also indicated that significant differences within self-satisfaction, personal self, social self and positive self from pre to post test. They have also indicated that significant differences were found in social self scale between nonstructured, structured and control groups.

Like Wright, Morris and Fettig (1974); Ware and Barr (1977) have tried to determine effects of 9 week structured and unstructured personal growth group experience on 39 freshmen volunteers' self-concept and self-actualization. The

structured group participated in 8 hour mini marathon designed to develop a psychological safe group feeling. The unstructured group participated in 8 hour mini marathon, but the session was relatively unguided by the leaders. According to the results of this study, both structured and unstructured groups improved their self-concept in the positive direction than did the control group. In addition, significant differences were obtained between structured and unstructured groups on the self-criticism and personal self subscale of the self-concept.

Furthermore, O'Dell and Seiler (1975) have compared the effects of different types of personal growth groups such as encounter, gestalt awareness, self discovery and communication on self-evaluation of his perception of his thinking, feeling, body, however, they did not find any significant effects of these 4 groups on the self-perception of 50 university students. Finando, Croteau, Sanz and Woodson (1977) also found similar results in their studies. The aim of their studies was to compare the influence of encounter and Gestalt groups on the self-concept of 72 undergraduate students. Each group met for 36 hours with 2 sleep breaks of approximately 7 hour each as a form of marathon group. They have indicated that encounter and Gestalt groups may contribute some changes in the self-concept , however, no significant differences were found between encounter and Gestalt groups. Shindi (1988) has reached similar conclusions indicating that encounter group increased the self concept of maladjusted students.

The affective education program is another type of group experience that is investigated in the literature to determine the effect of group counseling on the self-concept. In 1983, Summerlin, Hammett, Payne have conducted a study on the

elementary 4th grade students to determine whether participation in affective program has an effect on self-concept. Affective education experience as called magic circle designed to provide students to develop their own self-confidence, personal effectiveness and understanding of interpersonal relation and lasted 25 minutes at 3 times. Primary self-concept inventory results showed significant higher scores on both social self-domain and the total self-concept. Bayer (1986) has also determined the effect of an affective education group experiences on the self concept of 7 th grade students by comparing two methods of affective education group experience, directed versus facilitated. According to the results of the study, facilitated experimental group showed significantly greater self-concept gain than did the directed group. In other words, self-concept improved significantly only through the affective experiences that the students themselves have chosen, developed and explored. Moreover, Hadley (1988) has studied the effects of 12 week affective education program as a form of group counseling on elementary school children's' self-concept but she did not find any improvement in the self concept after a 12 week treatment.

In the literature, it is also possible to find many different forms of group experiences and their effects on self-concept that have been investigated or have been used for changing the self-concept. For example, Calhoun (1987) has concluded that bibliotherapy resulted in positive or negative changes in self-perception. Baker, Thomas and Munson (1983) have found that 4 week structured group discussion experiences had an effect on the self-concept but they did not find any significant effects of cognitive restructuring on the self-concept of 209 ninth grade students. In

addition, Cangelosi, Gressard and Mines (1980) have evaluated the effectiveness of 12 week rational thinking group on the self-concept in 36 adolescents. The results of the study showed an increase in the self-concept of the adolescents after a 12 week rational thinking group, especially rational thinking group was effective in increasing the scores on behavior, anxiety, happiness and satisfaction scales.

The aim of Cooker and Caffeys' (1984) study was to investigate the effects of 10 week group counseling which was directed toward improving the self-awareness and personal growth on 43 freshmen, sophomore and junior football player's self-esteem, reading note, comprehension, efficiency and athletic attitude at the university of Mississippi. In this study, no significant effect of group counseling on self-esteem was obtained.

Another study related with improving or changing the self-concept by using different types of group experiences was carried on Henderson, Kelbey, Engebretson (1992) with stress control program. They have examined the influence of 9 session stress management program on children's self-concept by measuring Piers-Harris Children's Self-concept scale. They have found a significant influence of stress management program on the behavior subscales of self-concept.

Sorsdahl and Sanche (1985) have intended to investigate the effect of 20 week classroom meeting as a form of group counseling on 91 elementary school children's score on Piers-Harris Children's self-concept scale. However, they did not find any significant effects of 20 week intervention on any subscale of self-concept. A parallel study was done by Wiggins and Wiggins (1992). The intent of this study was to study different counselor emphases and approaches in improving the self-

concept of elementary school students. Elementary school students were assigned to 2 groups. Group 1 was guided by counselors who used classroom guidance activities as primary method of intervention. On the other hand, group 2 was guided by counselors who used individual counseling as primary and small group counseling as the secondary method of intervention. Wiggins and Wiggins (1992) have concluded that counselors whose primary intervention strategy was individual counseling with classroom and small group work as secondary, reported significantly more positive gains in self-concept than counselors who focused primarily on classroom guidance work. According to their results, individual counseling was simply more effective in helping to raise self-esteem than classroom guidance activities and small group work.

Furthermore, Shechtman, Weiser and Kurtz (1993) have used value clarification program as a form of group experience for improving the self-concept of fourth grade students. The results revealed significant gains in two schools in related dimensions of self-esteem classroom behavior, intellectual and school status.

In addition to above studies on group counseling, other investigators have used other ways for improving self-concept. For instances, Braucht and Weime (1992) have tried to improve self-concept of students by improving teacher self-esteem.

As it can be seen from all of the above discussion, in the literature there are conflicting results related with effects of different forms of group counseling on the self-concept. Some findings showed significant gains in subdomains of self-concept but not on the global self-concept. Also contrary findings in relation to the effectiveness of the programs were presented. ,

2.6.3. Combined Effects of Physical Fitness Training and Group Counseling on Self-Concept

In literature, some researchers have investigated the combined effects of physical fitness training and group counseling on the self-concept. Collingwood and Carkhuff revealed that physical fitness program can be a significant counseling tool (as cited in Hilyer, Jenkins, Deaton, Dillon, Meadows, and Wilson,1980). Under the light of this view, Hilyer et al. (1980) developed a course for physical dimensions of counseling at Auburn university. They tried to determine the effect of a 10 week of intensive physical fitness training including flexibility, strength development and running program on physiological and psychological measures of students who were from different helping professions. Students who were in experimental groups also received 3 hours a week of instruction, counseling and training in physical fitness and health related areas. They also spent 5 hours a week as counselors in a physical fitness program for adolescent delinquents in a youth home setting. Hilyer et al. (1980) concluded that when physical fitness training program combined with some counseling skill, it had a significant effect on the self-concept. It appears that physical programs structured to improve functional fitness regularly bring about improvements in self-esteem. The result of their study indicated that physical fitness programs can be used in the training of counselors.

It can be proposed that both counseling skills and physical fitness training skills are necessary for improving the self-concept. Taking this as a starting point, some researchers tried to combine physical fitness training with group counseling for improving the self-concept. For example, Hilyer and Mitchell (1979) have examined

40 college students to investigate the effect of 10 week systematic physical fitness training combined with counseling on the measured self-concept. 40 college students were randomly assigned to control, running and running with counseling programs. Both running and running with counseling groups participated in running programs 3 times a week for 1 hour. The running with counseling group met for an additional hour each week. After a 10 week program, the group receiving fitness training and running made a significant gain in self-concept as measured by the Tennessee Self-Concept scale. It was also found that the students who received fitness training and counseling who had low self-concepts on the pre-test measure made positive changes in the self-concept.

A similar study was conducted on the ninth grade boys by Neal (1981). Neal (1981) has determined the relationship between cardiovascular fitness and self-esteem. Ninth grade boys were randomly assigned to cardiovascular fitness group, counseling group, cardiovascular fitness and counseling group and a control group. The cardiovascular fitness group participated on a 10 week cardiovascular program including combination of circuit and interval training. The counseling group participated in a 10 week structured group counseling which consists of the presentation of film, filmstrip or story dealing with the elements of self-esteem and discussion of the contents of the presentation. The cardiovascular fitness and counseling group attended both fitness and counseling programs. In contrast to Hilyer and Mitchell (1979), Neal (1981) has found no significant differences between the four treatment groups on the adjusted means for self-esteem.

The literature reveals a limited number of studies on the combined effect of physical fitness training and counseling on the self-concept. In addition, research on this topic showed contradictory results.

CHAPTER III

METHOD

3.1. Overall Research Design

The purpose of this study was to explore the effects of a 10 week group counseling, physical fitness training, and combined physical fitness training with group counseling on the self-concept and physical self-concept of volunteer female students at the METU. For testing this purpose; an experimental design which is the 4 x 3 factorial design with 3 treatment and one control group and 3 measurements (pre, mid, post) was used.

3.2. Statement of the Problem

The problem of this study was to explore the effect of 10 week physical fitness training, group counseling, and combined physical fitness training with group counseling on the self-concept and physical self-concept of volunteer female university students in METU.

3.3. Hypotheses

The purpose of this study was to test the following hypotheses:

i) There are no significant differences among pre, mid, and post test measures in the positive or total self-concept scores of female university students in each

treatment group (group counseling, physical fitness training, combined physical fitness training with group counseling and control) based on 10 week treatment.

ii) There are no significant differences among pre, mid, and post test measures in the following self-concept subscales scores of female university students in each treatment group (group counseling, physical fitness training, combined physical fitness training with group counseling and control) based on 10 week treatment:

Physical Self, Moral/Ethical Self, Personal Self, Family Self, Social Self, Self-Criticism, Behavior, Identity, Self-Satisfaction

iii) There are no significant differences in the positive or total self-concept scores of female university students among group counseling, physical fitness training, combined physical fitness training with group counseling and control groups after the 10 week treatment.

iv) There are no significant differences in the following self-concept subscales scores of female university students among group counseling, physical fitness training, combined physical fitness training with group counseling and control groups after the 10 week treatment:

Physical Self, Moral/Ethical Self, Personal Self, Family Self, Social Self, Self-Criticism, Behavior, Identity, Self-Satisfaction

v) There are no significant differences among pre, mid, and post test measures in the following physical self-concept subscale scores of female university students in each treatment group (group counseling, physical fitness training,

combined physical fitness training with group counseling and control) based on the 10 week treatment:

Physical Activity, Sport Competence, Health, Body Fat, Coordination, Appearance, Endurance, Flexibility, Strength, General Physical Self-Concept, Self-Esteem

vi) There are no significant differences in the following physical self-concept subscale scores of female university students among group counseling, physical fitness training, combined physical fitness training with group counseling and control groups after the 10 week treatment:

Physical Activity, Sport Competence, Health, Body Fat, Coordination, Appearance, Endurance, Flexibility, Strength, General Physical Self-Concept, Self-Esteem

3.4. Assumptions

i) It is assumed that the subjects completed both self-concept scale and physical self-concept scale unbiasly and truthfully.

ii) It is assumed that the subjects followed the test instruction.

3.5. Description of Variables

The dependent variables of this study were the self-concept and the physical self-concept. The subscales of the self-concept as a dependent variable were the physical self, moral/ethical self, personal self, social self, family self, self-criticism, identity, self-satisfaction, behavior and positive self-concept (total self-concept). The

descriptions of the subscales of the self-concept as a dependent variables are given below (Roid and Fitts, 1991; p 3):

Physical self:
represents the individual's view of his or her body, state of health, physical appearance,skills, and sexuality.
Moral/Ethical self:
describes the self from a moral/ethical frame of reference-examining moral worth, relationship to God, feelings of being a "good" or "bad" person and satisfaction with one's religion or lack of it.
Personal self:
reflects the individual'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.
Family self:
reflects the individual's feelings of adequacy, worth, and value as a family member. It refers to the individual's perception of self in relation to his or her immediate circle of associates.
Social self:
reflects the self as perceived in relation to others. It defines others in a more general way by reflecting the person's sense of adequacy and worth in social interaction with other people in general.
Identity:
describes the " what I am" and describes his or her basic identity as self-perceived.
Self-satisfaction:
describes how satisfied he or she feels with the perceived self-image. It reflects the level of acceptance.
Behavior:
expresses "what I do" or "the way I act". It describes the individual's perception of his or her own behavior or the way he or she functions.
Total or positive self:
reflects the overall level of self-esteem.

The subscales of the physical self-concept as a dependent variables included the followings: health, coordination, physical activity, flexibility, endurance, sport competence, strength, body fat, appearance, general physical self-concept and self-esteem. The description of each variables are given below (Marsh, 1996; p114):

Appearance:
being good looking, having a nice face.
Strength:
being strong, having powerful body with lots of muscles.
Endurance:
being able to run a long way without stopping, not tiring easily when exercising hard.
Flexibility:
being able to bend and turn your body easily in different directions.
Health:
not getting sick often, getting well quickly when you are sick.
Coordination:
being good at coordinated movements, being able to physical movement smoothly.
Physical Activity:
being physically active, doing lots of physical activities regularly.
Body fat:
not being overweight, not being too fat.
Sport competence:
being good at sports, being athletic, having good sports skills.
General Physical Self-concept:
feeling positive about one's physical self.
Self-esteem:
overall positive feelings about self.

The independent variables that were used in this study were three types of treatments, namely, group counseling, physical fitness training and combined physical fitness training with the group counseling.

3.6. Data Sources (Sample)

The subjects of this study were forty female university students ranging from 18 to 24 year of age (M = 21.10; SD= 1.37) who were randomly selected from 68 volunteer female university students who took the elective courses offered from Physical Education and Sport Department. Forty female students were randomly

assigned to four groups - physical fitness training, group counseling, combined physical fitness training with group counseling group, and the control group-.

3.7. Data Collection Instruments

In this study several psychological and physiological measures were used. These measures are listed and described below.

3.7.1. Psychological Measures

3.7.1.1. Tennessee Self-Concept Scale (TSCS)

The Tennessee Self-Concept Scale (Appendix A) was used to assess the subjects' self-concept. The scale consists of 100 self-descriptive statements which the subject uses to portray his own picture of himself (Roid & Fitts, 1991). The scale, a 100 item questionnaire has 90 of its items divided equally into positive and negative items while the remaining 10 items comprise the self-criticism scale which come from the L scale of the Minnesota Multiphasic Personality Inventory and that is the "Lie Scale" . The Likert scale with 100 items that appear in random order in the booklet are descriptive. Ninety statements which contribute to the self-concept scores, are organized into a rectangular matrix divided into columns and rows. There are 5 vertical columns which are physical self, moral-ethical self, personal self, family self and social self. These are external scales of TSCS. The three horizontal rows describe identity, self-satisfaction and behavior and three horizantal rows also accepted as an internal scales of TSCS. There is also a total positive score which is a global or overall self-concept score. Ninety TSCS items, half of which are negatively

scored, are responded to on 5 point scale (1= completely false, 5= completely true). Ten TSCS items which are items from the MMPI Lie scale are not considered in scoring (Roid and Fitts, 1991). Negatively scored items are scored reversely and then added to item responses for various subscale scores (Marsh and Richards, 1988).

3.7.1.2. Marsh Physical Self-Description Questionnaire (MPSDQ)

Marsh Physical Self-Description Questionnaire (Appendix B) was used to measure the physical self-concept. This scale consists of seventy items designed to measure eleven subscales which are strength, body fat, activity, endurance/fitness, sports competence, coordination, health, appearance, flexibility, general physical self-concept and self-esteem. MPSDQ includes 6 components of physical self-concept and 5 components of physical fitness. Each item in these components is a simple declarative statement and subjects respond with a 6 point true-false response scale. MPSDQ is designed for adolescents 12 years of age or older (Marsh, Richard, Johnson, Roche and Tremayne, 1994).

3.7.1.3. Physical Self-Perception Profile (PSPP)

The Physical Self-Perception Profile (Appendix C) developed by Fox and Corbin (1989) assesses self-perceptions in the physical domain. The inventory with thirty items consists of four PSPP subdomain scales of perceived sport competence, physical condition, attractive body, physical strength and domain scale of physical self-worth. Each subscale consists of 6 items that subjects are presented with two contrasting descriptions of people (e.g., people with unattractive bodies versus people with attractive bodies) and are asked which description is most like themselves and

whether the description they select is "sort of true" or "really true" for them. Items' scoring ranges from 1 to 4 ; because each scale is composed of 6 items, scales scores can range from 6 to 24 (Fox, 1990a; Fox & Corbin, 1989; Sonstroem, Speliotis and Fava, 1992). The reliability and validity evidences for the instrument for Turkish university students were obtained in a recent study carried out by Aşçı, Aşçı, and Zorba (1995). The internal consistency (Cronbach alpha) of this instrument ranged from 0.72 (body attractiveness) to 0.87 (strength) for Turkish female university students and for Turkish male university students, it ranged from 0.77 (body attractiveness) to 0.82 (sport competence and physical condition). The test-retest reliability of the instrument was changed between 0.73 (sport competence and strength) and 0.84 (body attractiveness) for females and 0.75 (physical self-worth) and 0.82 (strength) for males.

3.7.1.4. Coopersmith Self-Esteem Inventory (CSEI)

The Coopersmith Self-Esteem Inventory (Appendix D) is a widely used scale consisting 58 items which requires approximately 10 minutes to complete. The self-esteem items yield a total score and five separate subscale scores (General Self, Social Self-Peers, Home-Parents, School-Academic, and Lie). When the items from all four subscales are tallied (an 8 item lie scale excluded), the overall score will yield a global self-esteem evaluation. The format required the students to read each statements (which are self-evaluative self-statements) and respond "like me" and "unlike me". The answers which were indicative of high self-esteem were given two points. For example, if a student responded to statement "I find it very hard to talk in

front of class" with " Unlike Me", he or she received two points, and no point if he or she responded " Like Me". Negative items were scored as correct (for example, " I get upset easily at home"), if they were answered " Unlike Me". The total self-score, which is the sum of the number of correctly answered items (excluding those items used for detection of lies), was multiplied by two, resulting in a maximum possible total self-score of 100 (Piskin, 1996). The reliability study of the instrument was conducted by Piskin (1996) for Turkish secondary school students. The reliability coefficient (split half) for total self-esteem was found 0.82 for females, and 0.81 for males. These values for subscales were changed from 0.42 to 0.72 for females and from 0.47 to 0.77 for males.

3.7.1.5. Reliability and Validity Studies of TSCS and MPSDQ For Turkish University Students

Since the instruments (TSCS and MPSDQ) were developed with respect to Western Culture, they had to be adapted to Turkish culture. As far as measuring the psychological constructs concerned, it is expected that some items will be valid across different cultures while others may be valid for specific ones. For this reason, the reliability and validity evidence for both TSCS and MPSDQ were obtained for Turkish university students. For this purpose, firstly, following translation procedure was carried out:

MPSDQ was separately translated into Turkish by 3 specialists in English linguistics and the researcher. The researcher collected the four translations and discussed the results with these people to decide upon the most appropriate draft.

Then the most appropriate draft of the instrument was given to two English teachers to translate the Turkish version of MPSDQ back into English. The researcher compared the MPSDQ that was translated into Turkish and back again into English, to the original English version of this test, to determine if any differences existed between original version and the translated version. The purpose of doing this translation was to ensure that the wording of the items in Turkish would be equivalent to the original meaning of items in English.

For the TSCS, the previous translated form (Emresoy, 1995) was used. The four items which was excluded from previous form were included in this form.

After the final form of TSCS and MPSDQ were formed, to find the evidence for test-retest reliability coefficient of both instruments, the Turkish version of TSCS and MPSDQ were administered to randomly selected 40 female students from 208 students who took the elective courses from Physical Education and Sport department and Art and Music department, with a two week interval.

Both instruments were administered to the remaining 168 female university students who took the elective courses that were offered by the Art and Music and Physical Education and Sport departments for the purpose of obtaining evidence for the reliability and validity of TSCS and MPSDQ. To obtain the validity evidence for both these two instruments, other instruments that measure the self-concept and physical self-concept were also given to 168 female students. For determining the evidence for the validity of TSCS, CSEI (Piskin, 1996) was used. On the other hand,

the evidence for the validity of MPSDQ was obtained by administering the PSPP (Fox, 1990a).

In addition, another validity evidence were obtained for the TSCS and MPSDQ by giving the instruments to a specialist in the field of psychology, to ask her evaluations in terms of the context

3.7.1.6. Results of Reliability and Validity Studies

A. The Reliability Results of TSCS:

Test - retest reliability for a two week interval based on data from 40 female university students and Cronbach alpha coefficient obtained from 168 female university students are reported in Table 3.1.

Table 3.1: Reliability Results of TSCS

SUBSCALES OF TSCS	TEST-RETEST RELIABILITY COEFFICIENT N= 40	INTERNAL CONSISTENCY COEFFICIENT ALPHA N=168
PHYSICAL SELF	0.84	0.73
MORAL SELF	0.83	0.65
PERSONAL SELF	0.82	0.79
FAMILY SELF	0.82	0.70
SOCIAL SELF	0.80	0.73
SELF-CRITICISM	0.71	0.64
SELF-SATISFACTION	0.78	0.80
IDENTITY	0.90	0.82
BEHAVIOR	0.80	0.72
TOTAL	0.88	0.90

Test-retest reliability coefficients, presented in Table 3.1, ranged from 0.71 (self-criticism) to 0.90 (identity). To assess the internal consistency (Alpha model) of TSCS subscales for female university students, Cronbach alpha coefficients were calculated, with resulting coefficients of 0.73 for the physical self and the social self, 0.65 for the moral-ethical self; 0.79 for the personal self; 0.70 for the family self; 0.64 for the self-criticism; 0.80 for the self- satisfaction; 0.82 for the identity; 0.72 for the behavior; and 0.90 for the total self-concept.

B. Results of Subscales Intercorrelations of TSCS:

The intercorrelations among the subscales of TSCS and total self-concept for the Turkish sample are presented in Table 3.2.

Table 3.2: Subcale intercorrelations of TSCS for the Turkish Sample

SUBSCALES OF TSCS	MOR SELF	PER SELF	FAM SELF	SOC SELF	SELF-CRT	SELF SAT	BEH	IDENTITY	TOT
PHYSELF	0.38**	0.60**	0.43**	0.47**	-0.06	0.66**	0.60**	0.67**	0.77**
MORSELF		0.53**	0.45**	0.30*	-0.30**	0.58**	0.60**	0.59**	0.70**
PERSELF			0.47**	0.53**	-0.32**	0.74**	0.74**	0.64**	0.84**
FAMSELF				0.34**	-0.03	0.60**	0.56**	0.64**	0.72**
SOCSELF					-0.17*	0.54**	0.64**	0.66**	0.72**
SELFCRT						-0.06	-0.37**	-.0.21**	-0.24**
SELF-SAT							0.51**	0.51**	0.83**
BEH								0.69**	0.84**
IDENTITY									0.86**

* p < .05
** p < .01

Phyself= Physical self, Morself= Moral/Ethical self, Perself= Personal self, Famself= Family self, Socself= Social self, Selfcrt= Self-Criticism, Self-sat= Self Satisfaction, Tot= Total self-concept

The TSCS subscale intercorrelations for 168 female university students ranged from -0.03; ($p > .05$) between family self and self-criticism to 0.86 ($p < .01$) between identity and total self-concept. With the self-criticism, correlation coefficients ranged from -0.03; $p > .05$ (between self-criticism and family self) to - 0.37; $p < .01$ (between self-criticism and behavior). It is noted that the self-criticism is not a measure of self-concept therefore, high and significant correlations were not expected between self-criticism and the subscales of TSCS. Table 3.2 also shows that the most significant and the highest correlations were obtained between total self-concept scores and other seven subscales of TSCS.

C. The Evidence for the Validity of TSCS

To obtain the evidence for the validity of TSCS, the correlation coefficients between subscales of TSCS and subscales of CSEI were calculated (Table 3.3).

The correlation coefficient between all subscales of TSCS and subscales of CSEI were significant except the correlation between self-criticism and all subscales of CSEI and the correlation between moral/ethical self and two subscales of CSEI (school/academic, social self). It is important to note that the highest and significant correlation were obtained between total self-concept subscale scores of CSEI and the subscales of TSCS.

D. Factorial Validity of TSCS:

Based on the work of Bolton (1976), Levin, Karni, and Frankel (1978), Principal Component Factor analysis with varimax rotation was conducted on

Table 3.3: Intercorrelations between TSCS and CSEI

SUBSCALES OF TSCS	SUBSCALES OF CSEI					
	SCH/ ACA	HOME/ PAR	SOC SELF	GEN SELF	TOTAL	SHORT FORM
PHYSELF	0.26**	0.28**	0.31**	0.45**	0.44**	0.45**
MORSELF	0.14	0.26**	0.13	0.27**	0.27**	0.27**
PERSELF	0.30**	0.29**	0.27**	0.60**	0.52**	0.53**
FAMSELF	0.21**	0.59**	0.29**	0.39**	0.46**	0.44**
SOCSELF	0.30**	0.21**	0.53**	0.45**	0.48**	0.49**
SELFCRT	-0.05	-0.10	-0.01	-0.14	-0.12	-0.10
SELF-SAT	0.25**	0.35**	0.32**	0.51**	0.49**	0.49**
IDENTITY	0.35**	0.45**	0.46**	0.49**	0.56**	0.54**
BEH	0.22**	0.28**	0.28**	0.45**	0.42**	0.44**
TOTAL	0.32**	0.42**	0.41**	0.58**	0.58**	0.58**

* $p < .05$
** $p < .01$

Phyself= Physical self, Morself= Moral/Ethical self, Perself= Personal self, Famself= Family self, Socself= Social self, Selfcrt= Self-Criticism, Self-sat= Self Satisfaction, Tot= Total self-concept, Sch/Aca= school/academic, Home/par= Home/Parent, Gen self= General self

subscale scores. The subscale scores were obtained by summing the randomly selected set of items from each subscales of TSCS. For testing factorial validity of external subscales of TSCS, 15 subscale scores of TSCS were calculated by randomly selected set of items from each external subscales of TSCS. In other words, there are 15 subscale scores consisting of randomly selected 6 items each. For example, For Physical self subscale 3 subscale scores were calculated by summing randomly selected 6 items from this subscale. To determine the factorial validity of the internal subscales of TSCS, again 15 subscale scores of TSCS were calculated from randomly added items of each internal subscales of TSCS. For each internal subscale, 5 subscale scores were calculated by randomly combined items. The reason

of conducting factor analysis on subscale scores of TSCS was the small sample size. By using subscale scores, number of items of TSCS was reduced. 100 items of TSCS was reduced to 15 subscale scores.

As previously mentioned two Principal Component Factor analysis with varimax rotation were conducted separately for 5 external scales and self-criticism and 3 internal scales of TSCS. The results of these two factor analysis are presented in Table 3.4 and 3.5.

Table 3.4. Principal component factor loading for internal scales of TSCS

ITEMS	FACTORS		
	1	2	3
Beh1 (14,18,31,35,71,90)			0.41
Beh2 (16,33,34,51,70,85)			0.75
Beh3 (15,36,53,54,68,87)			0.68
Beh4 (49,13,52,67,69,89)			0.64
Beh5 (17,32,50,72,88,86)			0.57
Identity1 (1,2,24,39,59,78)	0.69		
Identity2 (3,22,37,41,55,74)	0.67		
Identity3 (6,19,21,42,57,73)	0.71		
Identity4 (5,20,40,58,60,75)	0.80		
Identity5 (4,23,38,56,76,77)	0.65		
Self-sat1 (7,9,25,48,66,79)		0.74	
Self-sat2 (8,28,30,43,63,83)		0.68	
Self-sat3 (12,29,44,62,65,80)		0.72	
Self-sat4 (10,26,46,47,61,81)		0.58	
Self-sat5 (11,27,45,64,82,84)		0.74	
Eigenvalue	6.09	1.63	0.97
% Variance	40.6	10.9	6.5
Cum % Variance	40.6	51.5	58.0

Note: Factor loading below 0.40 were eliminated. Beh= Behavior, Self-sat= Self-satisfaction

Table 3.4 indicated the results of factor analysis for 15 subscale scores of 3 internal scales of TSCS. Each subscale scores of 3 internal scale was loaded on intended factors with the total variance of 58 %. Eigenvalues for 3 internal factors are at least 0.97 and items load at least 0.41 on intended factors. According to Principal Component Factor analysis with varimax rotation, Factor 1 was identity, Factor 2 was self-satisfaction and Factor 3 was behavior.

Table 3.5 represents the Principal Component factor analysis with the varimax rotation for the external scales of the TSCS.

Table 3.5. Principal component factor loading for external scales of TSCS

ITEMS	FACTORS					
	1	2	3	4	5	6
Phyself1 (1,2,5,9,12,14)				0.79		
Phyself2 (3,4,88,11,15,27)				0.82		
Phyself3 (6,7,8,10,13,16)				0.57		
Morself1 (21,23,27,28,31,36)						
Morself2 (19,22,26,30,33,35)			0.76			
Morself3 (20,24,25,29,32,34)			0.78			
Perself1 (38,41,43,47,51,54)			0.76		0.76	
Perself2 (39,40,42,45,48,52)					0.58	
Perself3 (37,49,44,46,50,53)					0.75	
Famself1 (56,60,62,65,68,72)		0.73				
Famself2 (57,58,63,66,69,71)		0.79				
Famself3 (55,59,61,64,67,70)		0.75				
Socself1 (73,77,79,84,87,88)	0.79					
Socself2 (75,78,80,83,85,90)	0.84					
Socself3 (74,76,81,82,86,89)	0.71					
Selfcrt1 (92,94,96,98,100)						0.77
Selfcrt2 (91,93,95,97,99)						0.85
Eigenvalue	6.02	1.74	1.60	1.14	0.94	0.73
% Variance	35.4	10.3	9.4	6.7	5.6	4.3
Cum % Variance	35.4	45.7	55.1	61.9	67.4	71.7

Note: Factor loadings below 0.40 were eliminated. Phyself= Physical self, Morself= Moral/Ethical self, Perself= Personal self, Famself= Family self, Socself= Social self, Selfcrt= Self-Criticism

E. The Reliability Results of MPSDQ:

Table 3.6 represents the test-retest reliability of MPSDQ within a two week interval.

According to Table 3.6, the highest test-retest reliability coefficient was obtained in the subscale of endurance and strength with the result of 0.92. On the other hand, the lowest reliability coefficient was found in the general physical self-concept subscale of MPSDQ (r= 0.82).

Table 3.6: Reliability Results of MPSDQ

SUBSCALES OF MPSDQ	TEST-RETEST RELIABILITY COEFFICIENT N= 40	INTERNAL CONSISTENCY COEFFICIENT ALPHA N=168
HEALTH	0.84	0.73
ACTIVITY	0.97	0.83
COORDINATION	0.85	0.85
SPORT COMPETENCE	0.91	0.93
STRENGTH	0.92	0.84
BODY FAT	0.85	0.87
APPEARANCE	0.88	0.87
FLEXIBILITY	0.85	0.92
ENDURANCE	0.92	0.89
GENERAL PHYSICAL SELF-CONCEPT	0.82	0.90
SELF-ESTEEM	0.84	0.85

Table 3.6 also shows the Cronbach alpha coefficients for MPSDQ subscales. As it can be seen from Table 3.6 the Cronbach alpha coefficients for MPSDQ subscales ranged from 0.73 (health) to 0.93 (sport competence).

F. The Results of Subscales Intercorrelations of MPSDQ:

The intercorrelation of the MPSDQ subscales for 168 female university students are presented in Table 3.7. The highest correlation coefficient was between the sport competence and coordination ($r = 0.75$; $p < .01$) subscales of the MPSDQ whereas the lowest correlation was found between the appearance and health ($r = 0.06$; $p > .05$) subscales of MPSDQ. The results also clearly show that the intercorrelations among the health and all other subscales of MPSDQ which (ranged from -0.06 to 0.35) are significantly lower than the intercorrelations among all other subscales of MPSDQ which (ranged from 0.06 to 0.75).

Table 3.7: Subscale intercorrelations of MPSDQ for Turkish Sample

SUBSCALES of MPSDQ	SCOM	BFAT	GPSC	SE	FLEX	END	COOR	APP	STR	HEA
ACT	0.63**	0.06	0.24*	0.11	0.48**	0.59**	0.59**	0.22**	0.51**	0.15
SCOM		0.09	0.37**	0.29**	0.56**	0.71**	0.75**	0.23*	0.73**	0.28**
BFAT			0.54**	0.21**	0.20**	0.09	0.15*	0.43**	-0.08	0.08
GPSC				0.60**	0.34**	0.21**	0.41**	0.71**	0.30**	0.12
SE					0.14	0.08	0.33**	0.59**	0.38**	0.29**
FLEX						0.64**	0.62**	0.25**	0.43**	0.15*
END							0.63**	0.11	068**	0.28**
COOR								0.30**	0.64**	0.34**
APP									0.27**	0.06
STR										0.35**

* $p < .05$
** $p < .01$

Act= Physical activity, Scom= Sport Competence, Bfat= Body fat, GPSC= General physical self-concept, SE= Self-esteem, Flex= Flexibility, End= Endurance, Coor= Coordination, App= Appreance, Str= Strength, Hea= Health

G. The Evidence For the Validity of MPSDQ:

Table 3.8 reports the correlations between the subscales of MPSDQ and the subscales of PSPP for obtaining the evidence for the validity of MPSDQ.

Table 3.8: Intercorrelations between MPSDQ and PSPP

SUBSCALES OF MPSDQ	SUBSCALES OF PSPP				
	SCOMP	PCON	BATTR	PSTRE	PSW
ACT	0.44**	0.33**	0.06	0.31**	0.09
HEL	0.33**	0.37**	0.19**	0.31**	0.17
COOR	0.61**	0.48**	0.19**	0.51**	0.22*
STR	0.58**	0.46**	0.09	0.71**	012
FLEX	0.40**	0.33**	0.10	0.32**	0.12
BFAT	0.00	-0.05	0.33**	-0.21**	0.33**
END	0.53**	0.49**	0.03	0.52**	0.01
APP	0.24**	0.16*	0.58**	0.12	0.56**
SCOM	0.74**	0.53**	0.12	0.55**	0.17
GPSC	0.34**	0.18*	0.54**	0.17*	0.63**
SE	0.34**	0.28**	0.42**	0.26**	0.49**

* $p < .05$
** $p < .01$

Act= Physical activity, Scom= Sport Competence, Bfat= Body fat, GPSC= General physical self-concept, SE= Self-esteem, Flex= Flexibility, End= Endurance, Coor= Coordination, App= Appreance, Str= Strength, Hea= Health, Scomp= Sport Competence, Pcon= Physical Condition, Battr= Body Attractiveness, Pstre= Physical strength, Psw= Physical self-worth.

The results indicated that most of the MPSDQ scores correlate with PSPP scores and higher significant correlation was found between related subscales of MPSDQ and PSPP but, no significant correlation was found between unrelated subscales of MPSDQ and PSPP. For example, physical self-worth subscale of PSPP correlates 0.63 ($p<.01$) with the general physical self-concept; sport competence

subscale of PSPP correlates 0.74 ($p<.01$) with the sport competence subscale of MPSDQ, while body fat subscale of MPSDQ correlates -0.05 with the physical condition subscale of PSPP.

H. Factorial Validity of MPSDQ

Factor analysis of the MPSDQ subscales is important to determine that subscales are capable of measuring independent constructs. For this reason, the Principal Components Factor analysis with varimax rotation based on subscale scores calculated from randomly combined set of items of each 11 scales were conducted. For each 11 scales of MPSDQ two subscale scores were calculated so that 70 items were reduced 22 subscale scores because of small sample size for conducting factor analysis based on 70 items.

Table 3.9 shows the results of the Principal Components Factor analysis with varimax rotation. The data reveal strong support for 11 factor structure of MPSDQ, which explained 90.9 % of the variance in the items. Eigenvalues for 11 factors are 0.3 and items load at least 0.67 on their intended factor. As it can be seen Table 3.9, each calculated subscale scores of 11 subscale of MPSDQ loaded on the intented factor. For instance; Factor 1 was defined flexibility, Factor 6 was appearance, Factor 11 was general physical self-concept. No cross loading were obtained in this analysis.

Table 3.9: Principal components factor loading for MPSDQ items

ITEMS	FACTORS										
	1	2	3	4	5	6	7	8	9	10	11
App1 (40,18,51)						0.84					
App2 (62,7,29)						0.79					
Scom1 (5,16,38)										0.68	
Scom2 (27,49,60)										0.69	
Flex1 (9,31,64)	0.89										
Flex2 (20,42,53)	0.86										
End1 (21,32,43)							0.79				
End2 (10,54,65)							0.69				
SE1 (11,44,70,68)			0.85								
SE2 (22,33,55,66)			0.87								
Hea1 (1,34,67,56)					0.92						
Hea2 (12,23,45,69)					0.95						
Str1 (8,19,63)								0.75			
Str2 (30,52,41)								0.68			
Coor1 (2,46,57)									0.77		
Coor2 (13,24,35)									0.67		
GPSC1 (28,39,61)											0.69
GPSC2 (6,17,50)											0.73
Act1 (3,36,25)		0.88									
Act2 (14,47,58)		0.82									
Bfat1 (15,37,48)				0.91							
Bfat2 (4,26,59)				0.91							
Eigenvalue	8.6	3.7	2.0	1.5	0.9	0.8	0.7	0.5	0.5	0.4	0.3
% Variance	39.3	16.7	9.1	6.9	4.2	3.6	3.0	2.4	2.2	1.8	1.6
Cum % Variance	39.3	56.0	65.0	72.0	76.2	79.8	82.9	85.3	87.5	89.3	90.9

Note: Factor loadings below 0.40 were eliminated. Act= Physical activity, Scom= Sport Competence, Bfat= Body fat, GPSC= General physical self-concept, SE= Self-esteem, Flex= Flexibility, End= Endurance, Coor= Coordination, App= Appreance, Str= Strength, Hea= Health

3.7.2. Physiological Measures

3.7.2.1. Muscular Strength:

The leg and back strength were measured by using the back and leg dynamometer. The leg strength was measured by using the following procedures:

Using the back and leg dynamometer, the individual stands on the platform with trunk erect. The knees are flexed to an angle of 130 to 140 degree. The handbar is held using a pronated grip and is positioned across the thighs by adjusting the length of chain. A belt, which is attached to each end of the handbar, is positioned around the subject's hips. The belt helps to stabilize the bar and reduce the stress placed on the hands during the leg lift. Without using the back, the subject's knees are slowly but vigorously extended. The maximum indicator needle remains at the peak force achieved (Heyward , 1991).

In order to measure the back strength the following procedures were applied:

Using the back and leg dynamometer, the individual stands on platform with knees fully extended and the head and trunk erect. The handbar is positioned across the thighs and , without leaning backward, the subject pulls it straight upward using the back muscles. The shoulders are rolled backward during the pull. Clients should be reminded prior to lifting to flex the trunk minimally and to keep the head and trunk erect during the test (Heyward, 1991).

3.7.2.2. Flexibility:

The range of the motion available in the hamstrings and lower back was measured using sit and reach test. In this test, subjects sit on the floor with back and head against the wall, legs fully extended and bottom of feet against sit and reach box, place hands on top of each other and reach forward without letting head and back come off the wall. Gradually, subjects try to reach forward sliding fingers along

yardstick, holding final position for 2 seconds. Then, researcher measures and records final number of inches reached to nearest 1/2 inches (Heyward, 1991).

3.7.2.3. Cardiorespiratory Fitness (Endurance):

In order to assess the subjects' endurance or cardiorespiratory fitness, Bruce test protocol was used. The Bruce protocol is the most widely used treadmill protocol or estimation of maximal oxygen consumption. It involves change in speed and grade every 3 minutes (American College Sport Medicine(ACSM), 1991). During treadmill test, blood pressure and heart rate were monitored and recorded in 3 minute intervals for the purpose of controlling the subjects. $VO_{2\,max}$ values for women were calculated with following formula given by Pollock et al. for the Bruce protocol:

$$VO_{2\,max} = 4.38\,(Time) - 3.90$$ (cited in Heyward, 1991)

3.7.2.4. Body Composition:

Body composition was measured by using skinfold measurements. Skinfold measurements were taken on the right side , using a skinfold caliper (Holtain Ltd), according to standard procedures (ACSM, 1993). Measurement sites for skinfold included subscapula , triceps, suprailiac and abdomen.

After that, body fat percentage was calculated from skinfold measurements utilizing following recent regression equation developed by Yuhasz

F % = 5.783 + 0.153 (Triceps + Scapular + S. iliac + Abdomen)

(as cited in Zorba and Ziyagil, 1995)

3.7.2.5. Muscular Endurance:

To measure muscular endurance, crunches or bent leg curl -up (sits up) was used. The procedures that are offered by Stokes, Moore, Moore, and Shultz (1992) and Hockey, (1989) was followed. The crunches performed in one minutes.

3.8. Data Collection Procedures

Before the treatment began, all the volunteer subjects pretested together by the researcher and experienced examiners on all physiological measures (strength, flexibility, endurance, and body composition) and psychological measures. In the present study, psychological measures were collected by using TSCS for measuring self-concept and MPSDQ for assessing physical self-concept. Following this procedure, 40 subjects were randomly assigned to four treatment groups - group counseling, physical fitness training, combined physical fitness training with group counseling and control group-. Afterwards, each subject in these four treatment groups were tested on psychological measures at the beginning of a 10 week treatment, at the middle of 10 week treatment and after the 10 week treatment program. Pre, mid and post- test measurements were done by the researcher. However, physiological measures were taken from subjects before and after the 10

week treatments. All physiological testing and exercise sessions adhered to ACSM. In order to control subjects' diet, diet schedule was provided to all subjects and diet schedules of subjects were controlled weekly throughout the study. Besides, each participants signed an informed consent (Appendix E) form prior to psychological and physiological testing and treatment.

Each group counseling session was recorded by videotape and lead by the researcher who is a Ph.D. student at the Psychological Counseling and Guidance department of METU. Furthermore, each fitness session was instructed by experienced fitness trainers.

3.9. Treatment Conditions

Four treatment conditions were used in this study. These are as follows:

3.9.1.Group Counseling Group (GCG):

The group experience was a type of self-concept enhancement group which aims to facilitate self-exploration, to promote improved self-understanding and self-concept of group members through the use of success oriented group experience, to explore identity of self and to increase awareness of self and others. The self-concept enhancement group's aim also included developing member's awareness, expression and acceptance of feelings and developing the ability to verbalize thoughts, feelings and ideas and improving an ability to express themselves in the group. The group was expected to create an atmosphere in which participants could deal with each other with more depth than is generally experienced in traditional personal

interactions. The ultimate goal was the person's encounter with self and to help the group members to enhance their interpersonal skills and awareness of each other's needs and to become aware of her strengths and weaknesses.

The group experience consisted of 10 sessions conducted by the researcher. The group sessions were held once a week for 10 weeks. Each session lasted one and a half hour to two hours per week. The group structure was closed and homogenous.

To establish a facilitative relationship in 10 week self-concept enhancement group experiences , following necessary conditions that are proposed by Rogers were taken into consideration: empathy, unconditional positive regard and genuineness (cited in Hansen, Warner, Smith, 1980).

The group followed the same stages of regular group experiences - initial, transition, working and termination.

The group counseling techniques included the following principles:

1. A helping relationship was established with the group members by the demonstration of open concern with the problems they experience in their daily life. Special care was given to each individuals' problem as it arise and the purpose was to arrive at action steps to work through those problems.

2. Group members were given opportunities to openly express their feelings about the activity. An atmosphere of acceptance of those who did not enjoy the program was quickly established.

The following is a summary of the 10 group sessions:

Session 1: Initial Session

In this introductory session, the main aim was to explain what group experience is, to identify group rules and norms and also to get group members to know each other. In addition, the expectations of group members from group experience were shared in the first session. In other words, in the first session, each member set a personal goal to work on for the next 9 weeks.

Session 2:Getting Acquianted

The aim of the second session was to encourage group participants to introduce their self to group and to explore their positive sides. Each group member was encouraged to share 5 positive sides with the other group members.

Session 3: Exploration of Self

To explore self and to help the participants learn a little more about themselves were the aim of the third session. For this purpose the following questions were asked to each group members:

" What would you be if you were an animal?"

" What would you be if you were a natural element?"

" What would you be if you were an instrument?"

Four different options related with each categories were given to each member. After selecting one option for these three questions, group members were encouraged to share what were the similarities between their characteristics and these selected elements. In other words, commonalities were emphasized. After this sharing, feelings about this exercise were explored.

Session 4: Communication Skills

The aim of the session four was to emphasize the importance of listening and eye contact skills for effective communication, interpersonal relationships and group experience.

For exploring the importance of eye contact, group members were asked to get into pairs and each pair was asked to share briefly with each other what they have been doing since the last group meeting. The group leader told them not to look at each other while they were doing this for about 3 minutes. Then the pairs were asked to continue their conversations and to look directly into each others' eyes for about 3 minutes. Every group member was encouraged to share their feelings in relation to these experiences.

For improving and emphasizing the listening skills, the group leader introduced the exercise by asking the group to think , for a moment, about listening to others and being listened to by others. Then the group leader asked everyone to think of a time when he felt that she was not listened to. Then every member was asked to pick another group member to talk with about one time when they felt they were really listened to by another person and one time they felt they were ignored and

not listened to by another person. The group leader then asked the members to try to remember how they felt in both of these situations.

Session 5: Positive Strokes

To promote a climate of trust, self-worth and positive reinforcement within group experience and to help group members to focus on her positive sides were the aim of this session. Also this session helped group members learn how powerful a compliment could be and how to accept them. For this purpose, every member of the group was told to share their ideas about the characteristics of the other group members which were recognizable, different and appealing to them. Each member was instructed to think of a positive statement they would be willing to share with the rest of the group. In addition, each member was instructed to share positive characteristics of group members that she has recognized during the group experience up to that session. Through this experience, each member had an opportunity to give and receive a compliment or positive strokes from other participant and closer, positive team feelings among participants were established.

Session 6: Evaluation of the Group Experience

The aim of this session was to evaluate the five week group experience. Each member was asked to share her ideas about the group experience. They were encouraged to share their feelings, their experiences during that 5 week period. They were also asked to talk what kind of personal changes they have felt.

Session 7: Sharing a Personal Problem

The aim of this session was to help group members identify one problem or concern which they would like to share.

Each participant was encouraged to share a personal problem with the group. Group members were encouraged to get actively involved with each other in discussing problems with each other. The group session was positive and supportive. The feelings related with experiencing a problem and sharing problems with group members were explored in this session.

Session 8: Exploring Uniqueness, Respect and Acceptance

In the session 8, the major aim was to explore and emphasize uniqueness and respect . For exploring this issue, the structured exercise " You and Me" was used. The exercise included giving a phrase to each participants enhancing uniqueness and respect of the individual. Each participant read these phrases to her partner.

After this exercise, feelings and experiences related with exercise were mentioned and shared in the group.

Session 9: Exploration of Feelings

The aim of the session nine was to identify, describe, explore and recognize the feelings. The structured exercise was used. Incomplete sentences related with three different kinds of feelings which were aggression, happiness, and sorrow were given to group members and group members were asked to complete the sentences

with their own words. After the completion of the exercise, the feelings related with this exercise were shared.

Session 10: Termination

The aim of the last session was to evaluate the nine week group experience and to explore changes that group members have felt and changes that they have explored and also to explore the feelings related to termination of the group experience. This session stressed the positive accomplishments of the group and encouraged the members to continue their improvements outside the group setting. The session was closed on supportive notes.

3.9.2. Physical Fitness Training Group (PFG):

The physical fitness program consisted of aerobic dancing and step aerobics which enhance cardiovascular fitness, muscular endurance, strength, flexibility, body composition, and skill related fitness. Physical fitness training was performed 3 days per week for 10 weeks. Each physical fitness training session lasted 50 minutes. Participants participated one time aerobic dance and two times step aerobics sessions in a week. Each session began with 10 minutes warm-up and then 25 minutes of either step aerobics or aerobic dancing and finally 10 minutes of floor exercises for legs and abdomen and 5 minutes cool down exercises.

The intensity of fitness training program was determined by calculating the "target heart rate" of each participant according to ACSM (1991, 1993). Participants performed aerobic dance and step aerobics at 60 % to 80 % of their target heart rate

range as recommended by ACSM (1991, 1993). The target heart rate range or the heart rate reserve was determined by using Karvonen formula:

Maximal heart rate = 220 - age
Heart Rate Reserve = Maximal Heart Rate - Resting Heart Rate
(HRR) (HR max) (HR rest)
Target Heart Rate = (60 - 70 % x HRR) + HR rest

(as cited in Bompa, 1994)

Heart rate of each participant was monitored 3 times by manual palpation from the carotid artery by each subject to ensure that heart rate stayed within target zone - prior to warm up, after either aerobic or step aerobics and after cool down-. The average heart rate of both step aerobics and aerobic dance sessions for 10 weeks were given in the Figure 3.1 and Figure 3.2.

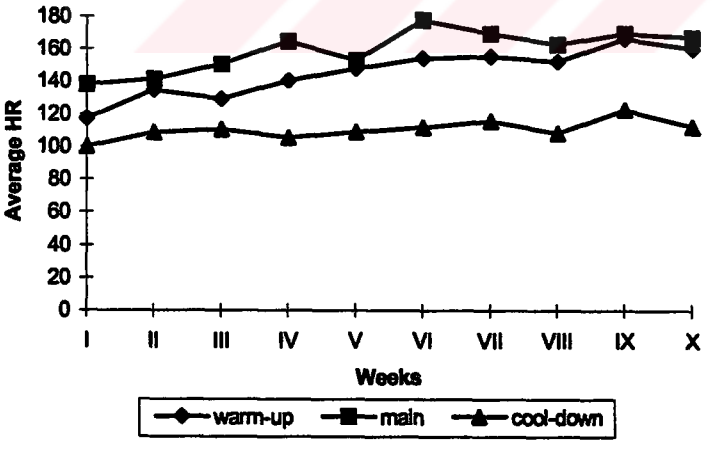

Figure 3.1 : The average heart rate of step sessions for the physical fitness group

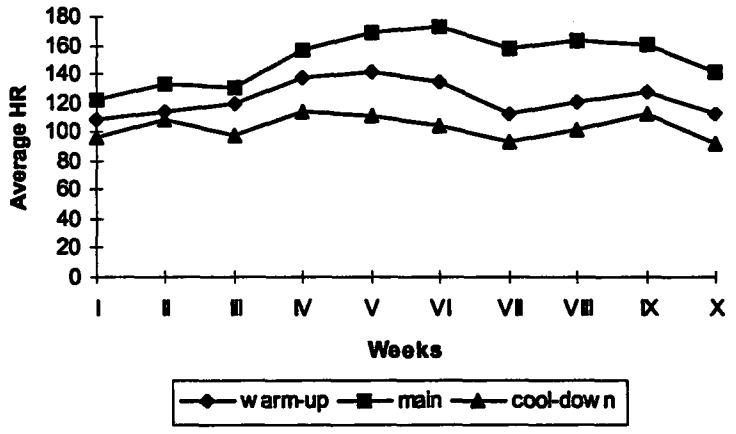

Figure 3.2: The average heart rate of aerobic sessions for the physical fitness group

3.9.3. Combined Physical Fitness Training with Group Counseling Group (COMG):

This group received both physical fitness training and group counseling that were similar with GCG and PFG. This group participated in physical fitness training 3 times per week and then attended one time the group counseling session for one and half hour to two hours per week.

The average heart rate that shows intensity of the physical fitness training for this group was given in the Figure 3.3 and Figure 3.4.

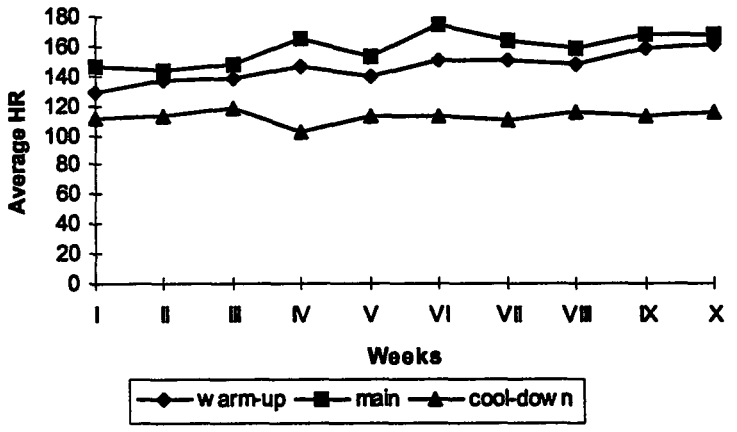

Figure 3.3: The average heart rate of step sessions for the combined group

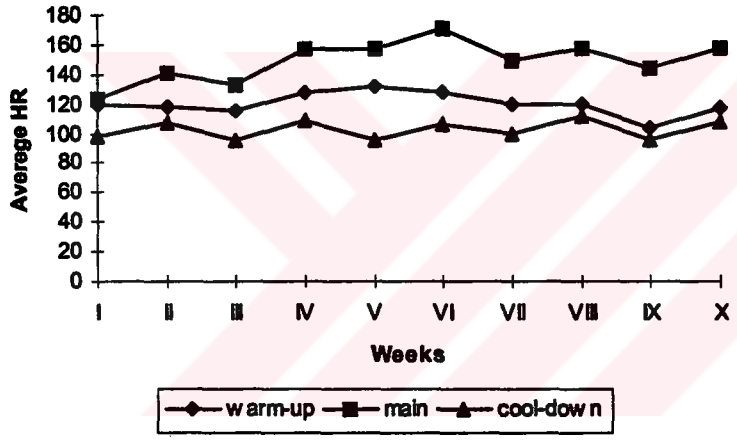

Figure 3.4: The average heart rate of aerobic sessions for the combined group.

3.9.4. Control Group (CONG):

This group received neither group counseling nor physical fitness training. No treatment procedures were applied to this group. They were asked not to

participate in any physical activity, as well. They partcipated theoretical course of sport psychology through 10 weeks.

3.10. Data Analysis Procedures

Descriptive statistics was used to find out subscale means of TSCS and MPSDQ for four treatment groups' pre-test, mid test and post-test scores.

Two Factor Analysis of Variance 4 (Groups) x 3 (time) with repeated measures was used to determine the differences in both scores of self-concept and physical self-concept subscales on the three administrations of the TSCS and MPSDQ among the four treatment groups based on 10 week treatment and to test the differences in self-concept and physical self-concept subscales among pre-test, mid and post-test measures of each of four treatment groups . In order to further examine each group's changes across the three measurements, One Way Repeated Measure ANOVA was performed as a follow up test. One way ANOVA by using gain scores among the three measurement was used to examine simple main effects following a significant group by time interaction. One way ANOVA as a follow-up was also used to examine group differences at each measurements. Tukey's HSD follow up test was used to identify the locus of significant time differences. Newman Keuls follow up test was used to determine significant group differences.

3.11. Limitations of the Study

The following limitations affect the interpretation and generalization of the results of this study.

First, the reliability of instruments were assessed by using internal consistency and test-retest reliability technique. Although several techniques were used, such as, internal consistency alpha, test-retest reliability and intercorrelations of the subscales, KR 20 and split half reliability were not assessed.

Second, self-concept and physical self-concept data were collected by using self-report methods. The limitations of self-report methods should be kept in mind before interpreting the results of this study. Some potential problems with these methods would be fakebility, social desirability, response style, and aquiescence.

Third, the sample of this study only included female university students. The results of this study could be generalized only for this group of subjects.

Fourth, the type of training offered in this study was the combination of step and aerobic dance program and limited to a 10 week period.

Fifth, the group experience was limited 10 week unstructured self-concept enhancement group.

CHAPTER IV

RESULTS

In the present study, the effects of group counseling, physical fitness training and combined physical fitness training with group counseling on the self-concept and the physical self-concept of female university students were investigated. The self-concept and physical self-concepts were measured as psychological measures and these were dependent variables of the present study. In addition, some physiological measures such as cardiovascular endurance, strength, percent body fat, muscular endurance, flexibility were assessed from each participant as control measures. In this section, the effects of group counseling, physical fitness training and combined physical fitness training with group counseling on the self-concept and the physical self-concept will be discussed separately. The results of physiological measures will also be introduced in this section.

4.1. The Effects of Group Counseling, Physical Fitness Training and Combined Physical Fitness Training with Group Counseling on the Self-concept

The means and standard deviations of the self-concept subscales of four treatment groups for pre, mid, and post- test measurements were given in Table 4.1.

Table 4.1: Descriptive statistics of self-concept subscales for four treatment groups

SUBSCALES OF SELF-CONCEPT	COMBINED GROUP		PHYSICAL FITNESS GROUP		GROUP COUNSELING GROUP		CONTROL GROUP	
	M	SD	M	SD	M	SD	M	SD
PHYSICAL SELF								
PRE	68.20	5.63	69.2	4.76	66.5	3.03	69.6	6.11
MID	68.4	5.74	69.8	3.26	64	8.46	66.5	4.6
POST	71.7	5.68	73.1	6.71	68.7	8.84	67	4.08
MORAL /ETHICAL SELF								
PRE	72.6	5.17	69.9	5.9	69.5	7.17	67.5	8.17
MID	71.7	5.12	70.6	6.1	67.5	7.96	65.5	7.21
POST	73.2	7.7	68.7	4.69	71.2	6.7	67.6	6.96
FAMILY SELF								
PRE	65.7	4.79	68	7.1	70.4	4.58	66.6	7.68
MID	68.2	6.84	69.5	7.44	68.8	8.15	66.8	9.46
POST	71.7	8.37	71.2	7.93	70.7	7.06	68.1	8.08
SOCIAL SELF								
PRE	66.8	6.16	66.8	5.31	64.3	5.91	65.3	7.54
MID	67.4	7.15	68.8	4.78	65.2	8.8	64.2	5.81
POST	70.7	5.74	68.5	6.69	67	9.75	63.6	5.76
PERSONAL SELF								
PRE	67.2	4.69	65	8.16	67.5	6.02	68.2	5.83
MID	67.1	5.22	66.4	7.46	64.9	4.98	65.5	5.97
POST	70.5	9.47	67.7	6.22	68.6	5.58	65.1	6.17
SELF-CRITICISM								
PRE	30.9	4.91	32.9	4.01	31.6	4.45	32.5	4.4
MID	32.8	4.29	33.5	5.19	31.9	4.15	33.3	2.71
POST	33.6	4.06	32.9	5.49	32.1	4.89	32.1	3.28
SELF-SATISFACTION								
PRE	106.6	10.77	105.9	10.81	109.2	7.44	109.8	6.91
MID	109.4	9.61	109.1	6.1	108.5	10.93	110	11.57
POST	116.8	10.9	109.3	7.21	113.1	11.26	108.6	11.18
BEHAVIOR								
PRE	110.2	6.8	109.6	8.95	109.9	5.11	109.3	8.17
MID	109.9	12.42	110.3	8.73	107	10.72	104.2	7.87
POST	113.9	12.56	111.6	10.02	111.3	11.84	105.3	7.01
IDENTITY								
PRE	123.7	5.44	123.4	7.86	119.1	10.49	118.1	8.62
MID	123.5	7.55	125.7	10.61	114.9	15.04	114.3	10.2
POST	127.1	8.23	128.3	8.79	121.8	13.85	117.5	8.15
TOTAL SELF-CONCEPT								
PRE	340.5	13.74	338.9	23.73	338.2	17.92	337.2	17.08
MID	342.8	24.4	345.1	18.8	330.4	33.43	328.5	20.74
POST	357.8	29.02	349.2	19.7	346.2	33.07	331.4	20.6

As can be seen from Table 4.1, the scores of each self-concept subscale increased from pre, mid, and to post test measurement for the combined group (COMG). For example, total self-concept score increased from pre; 340.5 ± 13.74, to mid; 342.8 ± 24.4 and then, to post; 357.8 ± 29.02; the self-satisfaction score also increased from 106.6 ± 10.77, to 109.4 ± 9.61, and then to 116.8 ± 10.9 respectively.

For physical fitness group (PFG), the highest amount of mean score changes were seen in the physical self-concept and total self-concept scores among the three measurements. The scores of the physical self-concept from pre to post ranged between 69.2 ± 4.76 and 73.1 ± 6.71 and the total self-concept score changed among 338.9 ± 23.73 , 345.1 ± 18.8; 349.2 ± 19.7 respectively.

Table 4.1 also shows the means and standard deviations of pre, mid and post-test measurements of self-concept subscales for group counseling group (GCG). For this group , interesting score changes of self-concept subscales can be seen in Table 4.1. Most of the self-concept subscale scores decreased from pre to mid test and then these scores increased from mid to post-test. For example; the total self-concept score decreased from pre; 338.2 ± 17.92 to mid; 330.4 ± 33.43 , and then increased to post; 346.2 ± 33.07; the score of the behavior subscale also decreased from 109.9 ± 5.11 to 107 ± 10.72, then increased to 111.3 ± 11.84 respectively.

For the control group (CONG), only a small amount of mean score changes occurred in the subscale of self-concept among pre, mid, and post-test measurements according to Table 4.1.

Two factor (group x time) Analysis of Variance (ANOVA) with repeated measures was carried on to determine the differences in the pre, mid and post -test

measurements of each self-concept subscales among the four treatment groups-combined group, physical fitness group, group counseling group, and control group-.

In other words, two factor ANOVA with repeated measures were performed to investigate the effects of group counseling, physical fitness training, combined physical fitness training with group counseling on the each subscales of the self-concept. The results of two way ANOVA with repeated measures of each subscales of self-concept are shown in the following tables.

Physical self:

Table 4.2. represents the results of two way ANOVA with repeated measures employed to the physical self subscale of self-concept scores of subjects.

Table 4.2 : Results of two way ANOVA with repeated measures for the physical self subscale of self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	322.43	3	107.48	1.74	0.176
TIME	176.07	2	88.03	4.33*	0.017
GROUP x TIME	155.40	6	25.90	1.27	0.280
ERROR BETWEEN	2220.50	36	61.68		
ERROR WITHIN	1463.20	72	20.32		
TOTAL	4337.6	119			

* $p < 0.05$

ANOVA results revealed that , the main effect for group, ($F(3,36)= 1.74$; $p > 0.05$) and group by time interaction, ($F(6,72)= 1.27$; $p> 0.05$) were not significant. However, the main effect for time was significant, ($F(2, 72)=4.33$; $p < 0.05$).

Repeated measures one way ANOVAs for the physical self examined each group's change across the three measurements, obtaining significant differences for the PFG , $F(2,18)= 3.76$; $p < 0.05$. In order to further examine the time differences for PFG, Tukey's post-hoc tests (Tukey $HSD_{PFG}= 3.91$) were performed which indicated significant differences in the physical self-concept between pre and post test measurements.

Moral/Ethical self:

The results of two way ANOVA with repeated measures applied to the moral/ethical self subscales scores of subjects are given in Table 4.3.

Table 4.3 : Results of two way ANOVA with repeated measures for the moral/ethical self subscale of self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	478.09	3	159.36	1.43	0.250
TIME	40.20	2	20.10	1.84	0.166
GROUP x TIME	86.33	6	14.39	1.32	0.260
ERROR BETWEEN	4011.37	36	111.43		
ERROR WITHIN	786.13	72	10.92		
TOTAL	5402.12	119			

Two way ANOVA with repeated measures on the moral/ethical self showed no significant main effect for groups ($F(3,36) = 1.43$; $p > 0.05$); no significant main effect for time ($F(2,72) = 1.84$; $p > 0.05$) and no significant group by time interactions ($F(6,72)= 1.32$, $p > 0.05$).

Personal self:

The results of two way ANOVA with repeated measures employed to the personal self subscales of subjects are presented in Table 4.4.

Table 4.4: Results of two way ANOVA with repeated measures for the personal self subscale of self-concept.

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	76.23	3	25.41	0.28	0.836
TIME	80	2	40	2.23	0.115
GROUP x TIME	160.40	6	26.73	1.49	0.194
ERROR BETWEEN	3210.70	36	89.19		
ERROR WITHIN	1291.60	72	17.94		
TOTAL	4818.93	119			

The ANOVA results on the personal self showed no significant main effect for groups ($F(3,36) = 0.28$; $p > 0.05$); no significant main effect for time ($F(2,72) = 2.23$; $p > 0.05$) and no significant group by time interactions ($F(6,72) = 1.49$, $p > 0.05$).

Family self:

Table 4.5. shows the results of two way ANOVA with repeated measures applied to the family self subscale scores of subjects.

The groups (4) x times (3) ANOVA with repeated measures employed to the family self subscale of self-concept revealed no significant main effect for group, ($F(3,36) = 0.35$; $p > 0.05$), no significant group by time interaction, ($F(6,72) = 1.11$; p

> 0.05). On the other hand, a significant main effect for time , ($F(2,72) = 5.42$; $p < 0.01$), was observed for the family self (Table 4.5).

Table 4.5 : Results of two way ANOVA with repeated measures for the family self subscale of self-concept.

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	140.62	3	46.87	.35	0.790
TIME	165.27	2	82.63	5.42**	0.006
GROUP x TIME	101.80	6	16.97	1.11	0.363
ERROR BETWEEN	4835.97	36	134.33		
ERROR WITHIN	1096.93	72	15.24		
TOTAL	6340.59	119			

** $p < 0.01$

One way ANOVA with repeated measures examined each group 's change across the three times, obtaining significant differences for COMG, ($F(2,18) = 3.78$; $p < 0.05$) , and for the PFG, ($F(2,18) = 4.64$; $p < 0.05$). This significant differences in group mean scores were obtained between pre and post-test measurements for both groups according to Tukey's post-hoc analysis (Tukey $HSD_{COMG} = 5.60$ and Tukey $HSD_{PFG} = 2.68$).

Social self:

Table 4.6 shows the results of two way ANOVA with repeated measures applied to the social self subscale scoers of subjects.

Table 4.6 : Results of two way ANOVA with repeated measures for the social self subscale of self-concept.

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	333.97	3	111.32	1.04	0.389
TIME	55.80	2	27.90	1.88	0.161
GROUP x TIME	108.33	6	18.06	1.21	0.309
ERROR BETWEEN	3871.07	36	107.53		
ERROR WITHIN	1070.53	72	14.87		
TOTAL	5439.70	119			

According to Table 4.6, there was no significant main effects for group, ($F(3,36)= 1.04$; $p > 0.05$); no significant main effect for time, ($F(2,72) = 1.88$; $p > 0.05$); and no significant group by time interactions, ($F(6,72) = 1.21$; $p > 0.05$), regarding social self.

Self-criticism:

Table 4.7 represents the results of two way ANOVA with repeated measure employed to the self-criticism subscale of the self-concept sscores of subjects.

Table 4.7 : Results of two way ANOVA with repeated measures for the self-criticism subscale of self-concept.

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	23.49	3	7.83	0.18	0.908
TIME	17.87	2	8.93	1.21	0.303
GROUP x TIME	31.73	6	5.29	0.72	0.636
ERROR BETWEEN	1544.30	36	42.90		
ERROR WITHIN	530.40	72	7.37		
TOTAL	2147.79	119			

The results of the self-criticism subscale of self-concept was similar to that of the social self. The main effect for the group , for time and the group by time interaction were not significant, ($F(3,36) = 0.18$; $p > 0.05$), ($F(2, 72) = 1.21$; $p > 0.05$), and ($F(6,72) = 0.72$; $p > 0.05$), respectively (Table 4.7).

Self-satisfaction:

In Table 4.8, the results of two way ANOVA with repeated measure applied to the self-satisfaction subscale scores of subjects are given.

Table 4.8 : Results of two way ANOVA with repeated measures for the self-satisfaction subscale of self-concept.

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	133.69	3	44.56	0.22	0.882
TIME	343.82	2	171.91	4.16*	0.020
GROUP x TIME	418.78	6	69.80	1.69	0.136
ERROR BETWEEN	7291.23	36	202.53		
ERROR WITHIN	2978.07	72	41.36		
TOTAL	11165.5 9	119			

- $p < 0.05$

Two way ANOVA with repeated measures results also demonstrates significant main effect for time on the subscale of self-satisfaction, ($F(2,72) = 4.16$; $p < 0.05$) (Table 4.8). However; no significant main effect for group, ($F(3,36) = 0.22$; $p > 0.05$) was obtained. In addition, the interaction effect of group by time, ($F(6,72) = 1.69$; $p > 0.05$), was not significant for the self-satisfaction subscale of the self-concept.

Follow-up one way ANOVA with repeated measures indicated significant time differences for COMG, ($F(2,18) = 4.57$; $p < 0.05$). In order to further examine the locus of time differences, Tukey's follow-up test was performed for COMG (Tukey HSD_{COMG} =8.90), founding a significant difference between pre and post test measurement on the self-satisfaction score represented improvement in the score of self-satisfaction from pre to post test measurements.

Behavior:

The results of two way ANOVA with repeated measure applied to the behavior subscale of the self-concept are presented in Table 4.9.

Table 4.9 : Results of two way ANOVA with repeated measures for the behavior subscale of self-concept.

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	442.89	3	147.63	0.77	0.517
TIME	151.55	2	75.78	1.96	0.148
GROUP x TIME	208.58	6	34.76	0.90	0.499
ERROR BETWEEN	6885.90	36	191.28		
ERROR WITHIN	2779.20	72	38.60		
TOTAL	10468.12	119			

Table 4.9 indicates no significant main effect for groups, ($F(3,36) = 0.77$; $p > 0.05$), no significant main effect for time, ($F(2,72) = 1.96$; $p > 0.05$), and no significant group by time interaction, ($F(6,72) = 0.90$; $p > 0.05$), on the score of behavior subscale of self-concept.

Identity:

The results of two way ANOVA with repeated measures applied to the identity subscale scoers of subjects are shown in the Table 4.10.

Table 4.10: Results of two way ANOVA with repeated measures for the identity subscale of self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	1837.37	3	612.46	2.56	0.071
TIME	340.55	2	170.28	6.18**	0.003
GROUP x TIME	186.78	6	31.13	1.13	0.354
ERROR BETWEEN	8628.33	36	239.68		
ERROR WITHIN	1982.67	72	27.54		
TOTAL	12975.7	119			

** $p < 0.01$

According to Table 4.10; no significant group main effect was recorded for the identity score, ($F(3,36) = 2.56$; $p > 0.05$). Table 4.10 also reveals no significant group by time interactions for the identity score, ($F(6,72) = 1.13$; $p > 0.05$). On the other hand, significant time effect was found for this subscale, ($F(2,72) = 6.18$; $p < 0.01$). Although two way ANOVA shows significant main effect for the identity subscale, follow - up test of one way repeated measures ANOVA failed to indicate significant differences in the identity score among three measures for any treatment groups.

Total self (positive self):

In the Table 4.11, the results of groups x time ANOVA with repeated measures applied to the total self-concept are shown.

Table 4.11 : Results of two way ANOVA with repeated measures for the total self-concept subscale of self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	3870.97	3	1290.32	1.03	0.392
TIME	1984.07	2	992.03	5.00**	0.009
GROUP x TIME	1959.73	6	326.62	1.65	0.147
ERROR BETWEEN	45200.3	36	1255.56		
ERROR WITHIN	14294.8	72	198.54		
TOTAL	67309.9	119			

** $p < 0.01$

The 4 (groups) x 3 (time) factorial ANOVA with repeated measures applied to the total self-concept scores revealed no significant main effect for group, ($F(3,36) = 1.03$; $p > 0.05$), and no significant group by time interactions, ($F(6,72) = 1.65$; $p > 0.05$). However, the main effect for time , ($F(2,72) = 5.00$; $p < 0.01$), was significant for the total self-concept according to the results of two way ANOVA with repeated measures. Repeated measure one way ANOVA examined each group's change across three measurements, obtaining a significant differences for COMG, ($F(2,18) = 3.57$; $p < 0.05$). Tukey's post hoc follow up test demonstrated significant differences in the total self-concept score of COMG (Tukey $HSD_{COMG} = 17.9$) between pre and post-test.

4.2. The Effects of Group Counseling, Physical Fitness Training and Combined Physical Fitness Training with Group Counseling on the Physical Self-concept

The means and standard deviations of physical self-concept subscales for pre, mid, and post-test measurements of four treatment groups are represented in Table 4.12.

According to Table 4.12, the scores of the COMG in the most of the physical self-concept subscales showed improvement from pre to post-test measurement. For instance, the score of the health subscale increased from pre; 36.20 ±6.21 , to mid; 38.9 ±5.97 and then to post; 40.4 ±5.89. Similar mean score changes can also be seen in the activity subscale. The mean score of the activity for pre, mid and post-test were, 12.8 ±5.01 , 24.9 ±6.9 and 23.9 ±7.95 respectively.

For the PFG, the highest score for pre-test was obtained in the subscale of health (M= 39.2 ; SD= 7.97) while the lowest score was obtained in the subscale of the activity (M= 14.8 ; SD= 9.11). In addition, the highest mean score for mid test was also obtained in the subscale of health (M= 40.8 ; SD= 8.8), however, the lowest score was obtained in the endurance subscale of physical self-concept (M= 21.1; SD= 7.53). For the post-test, the mean score of the health subscale (M= 40.6; SD= 7.28) was also the highest one and the mean score of endurance subscale (M= 20.6; SD= 7.12) was the lowest one.

Table 4.12 also presents the means and standard deviations of physical self-concept subscales for GCG. According to Table 4.12, the mean score of physical self-concept subscales did not demonstrate changes from pre, mid, to post test measurements.

Table 4.12: Descriptive statistics of subscales of physical self-concept for four treatment groups

SUBSCALES OF PHYSICAL SELF-CONCEPT	COMBINED GROUP		PHYSICAL FITNESS GROUP		GROUP COUNSELING GROUP		CONTROL GROUP	
	M	SD	M	SD	M	SD	M	SD
ACTIVITY								
PRE	12.80	5.01	14.80	9.11	14.80	6.61	17.10	6.38
MID	24.90	6.90	25.30	7.45	13.60	6.57	16.10	7.50
POST	23.90	7.95	24.80	4.52	13.60	4.99	17.30	8.25
SPORT COMPETENCE								
PRE	19.60	4.20	19.30	7.01	19.30	7.02	20.20	7.16
MID	20.50	4.53	23.60	4.88	17.60	6.98	19.20	6.32
POST	23.60	2.84	25.70	4.14	18.50	8.68	17.20	5.98
HEALTH								
PRE	36.20	6.21	39.20	7.97	38.10	7.67	35.80	6.09
MID	38.90	5.97	40.80	8.80	37	7.23	34.40	5.30
POST	40.40	5.89	40.60	7.28	37.10	5.43	34.40	6.55
COORDINATION								
PRE	25.60	3.27	23.10	6.12	21.10	5.02	23.10	5.70
MID	26.50	1.90	26.50	4.58	20.20	5.18	20.90	6.28
POST	26.20	2.10	27.50	2.68	20.70	7.41	20.50	6.19
APPEARANCE								
PRE	29.60	3.69	28.10	2.85	26	3.59	28.40	4.67
MID	29	3.30	27.90	3.90	27.10	3.75	27.50	3.89
POST	31	2.83	29.30	2.83	26.80	4.37	27.60	3.69
BODY FAT								
PRE	23.60	7.18	25.20	6.91	24.80	9.13	27.30	9.01
MID	22.50	6.31	26.10	5.92	25.40	7.73	26.80	7.83
POST	23.00	7.27	27.90	5.59	25.40	6.93	26.80	8.19
ENDURANCE								
PRE	14.60	5.25	17.60	9.02	17.30	5.83	18.20	7.61
MID	14.10	3.57	21.10	7.53	16.20	5.07	17.80	6.01
POST	17.40	4.55	20.60	7.12	17.60	7.49	17.10	6.97
FLEXIBILITY								
PRE	21.30	7.76	21	8.74	20.70	8.03	22	8.25
MID	24.30	6.07	25.40	6.06	21.10	6.15	22.60	6.87
POST	24.70	6.20	26.30	5.72	20	8	21.60	5.95
STRENGTH								
PRE	23.30	4.27	19.50	7.31	21.80	5.90	23.70	5.17
MID	24.40	5.56	24.40	7.00	22.60	4.99	21.30	5.23
POST	24.50	6.17	25.30	6.80	23.10	6.12	23	5.48
GLOBAL PHYSICAL SELF-WORTH								
PRE	27.70	3.47	25.30	6.22	25.50	6.19	29.60	3.60
MID	27	3.77	27.20	5.88	25.50	5.25	27.10	5.22
POST	27	4.42	28.70	4.19	25.10	5.40	26	5.08
SELF-ESTEEM								
PRE	37.60	4.67	37.50	2.99	35.10	7.20	38.5	2.72
MID	39.60	5.34	37.50	4.17	36.20	7.57	37.10	5.93
POST	39.70	3.53	39	3.89	37.70	5.10	36.40	5.42

Only small amount of . changes in the subscales of the physical self- concept can be observed for GCG. For example, the scores of the appearance subscale for three measurements (pre, mid, post) were 26 ± 3.59, 27.1 ± 3.73 and 26.8 ± 4.37 respectively. In addition, the mean scores of the general physical self-concept for pre-test was 25.5 ± 6.19; for mid test was 25.5 ± 5.25 and for post-test 25.1 ± 5.4.

Like GCG, only a slight change occurred in the scores of subscales of the physical self-concept among pre, mid and post-test measurements for CONG. The mean scores of the most subscale of physical self-concept shows a slight fluctuation from pre to mid and to post-test. For instance; the mean score of the subscale of strength was 23.7 ± 5.17 for pre-test, 21.3 ± 5.23 for mid test, and 23 ± 5.48 for post-test.

A groups by time (4x3) ANOVA with repeated measures was used to examine changes in each of the subscales of physical self-concept across three measurements among four treatment groups- group counseling, physical fitness training, combined physical fitness training with group counseling and control-.

The results of two way ANOVA with repeated measures for each subscale of physical self-concept are presented in the following tables.

Physical Activity:

In Table 4.13, the results of groups x time ANOVA with repeated measure employed to the physical activity subscale scores of subjects are shown.

Table 4.13 : Results of two way ANOVA with repeated measures for the activity subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	1101.90	3	367.30	4.03**	0.014
TIME	683.55	2	341.78	13.19**	0.000
GROUP x TIME	938.05	6	156.34	6.04**	0.000
ERROR BETWEEN	3281.93	36	91.16		
ERROR WITHIN	1865.07	72	25.90		
TOTAL	7870.5	119			

** $p < 0.01$

The groups x time ANOVA with repeated measures on the activity subscale of physical self-concept revealed a significant main effect for groups, ($F(3,36) = 4.03$; $p < 0.01$), a significant main effect for time, ($F(2,72) = 13.19$; $p < 0.01$), and a significant group by time interaction, ($F(6,72) = 6.04$; $p < 0.01$) (Table 4.13).

Follow-up one way ANOVAs examined group differences at each measurements, finding significant differences at the mid and post test measurements, ($F(3,39) = 7.12$; $p < 0.01$) and ($F(3,39) = 6.53$; $p < 0.01$) among four treatment groups... In order to further examine the locus of group differences, Newman Keuls follow-up test was performed which showed that the scores of both COMG and PFG on the activity subscale were higher than CONG and GCG at the mid and post-test measurements.

Repeated measures one way ANOVAs for activity subscale examined each group's change across the three measurements , obtaining significant differences for both COMG, ($F(2,18) = 10.93$; $p < 0.01$), and the PFG, ($F(2,18) = 8.09$; $p < 0.01$). These significant differences in the activity scores were obtained between pre test

and mid test and also between pre and post-test for both groups according to Tukey post-hoc analysis (Tukey HSD_{COMG}= 7.32; Tukey HSD_{PFG}= 7.52).

One way ANOVAs as a follow-up was also used to examine changes across the three measurements among four treatment groups. One way ANOVAs were performed by using the gain scores of each individual from pre to mid; from pre to post, and from mid to post measurements. One way ANOVA revealed significant group differences in the gain scores of pre and mid test of activity, $F(3,39) = 8.26$; $p < 0.01$, and gain scores of pre and post-test of the activity, $F(3,39) = 6.92$; $p < 0.01$. Newman Keuls follow-up test demonstrated that both COMG and PFG had higher gain scores on the activity subscale than CONG and GCG. This interaction effect is graphically depicted in Figure 4.1.

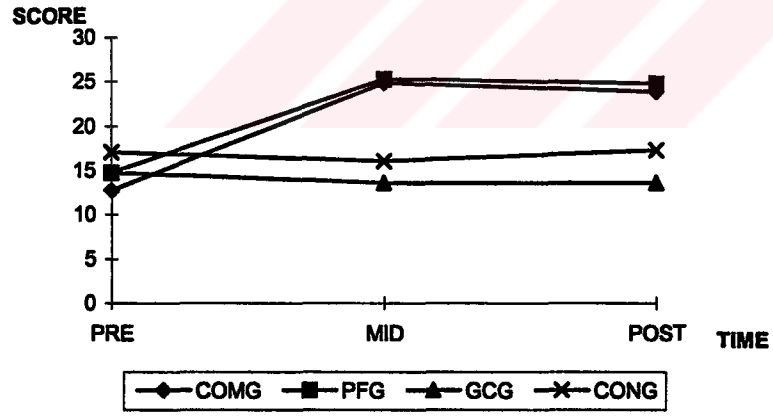

Figure 4.1. The activity score across three measurement for four treatment groups

Sport Competence:

Table 4.14 represents the results of two way ANOVA with repeated measures applied to the sport competence subscale of physical self-concept.

Table 4.14: Results of two way ANOVA with repeated measures for the sport competence subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	385.83	3	128.61	1.46	0.243
TIME	55.52	2	27.76	2.67	0.076
GROUP x TIME	306.55	6	51.09	4.91**	0.000
ERROR BETWEEN	3181.10	36	88.36		
ERROR WITHIN	748.60	72	10.40		
TOTAL	4677.6	119			

** $p < 0.01$

Table 4.14 revealed no significant main effect for group, ($F(3,36) = 1.46$; $p > 0.05$), and no significant main effect for time, ($F(2,72) = 2.67$; $p > 0.05$). However; group by time interaction was significant, ($F(6,72) = 4.91$; $p < 0.01$).

Follow-up one way ANOVAs by using gain scores of pre and mid test, and pre and post-test, and mid and post-test were performed for examining changes across the three measurements among four treatment groups. Follow-up one way ANOVAs demonstrated significant group differences in the gain score of pre and post test, ($F(3,39) = 8.61$; $p < 0.01$), and in the gain score of mid and post-test, ($F(3,39) = 3.46$; $p < 0.05$). Newman Keuls follow-up test indicated that for gain scores of pre and post test; both COMG and PFG had higher gain score than CONG and GCG, but for the gain score of mid and post test of sport competence, CONG

had lower gain score than COMG and PFG. No significant difference was appeared among GCG, PFG, and COMG. Figure 4.2 shows this interactions.

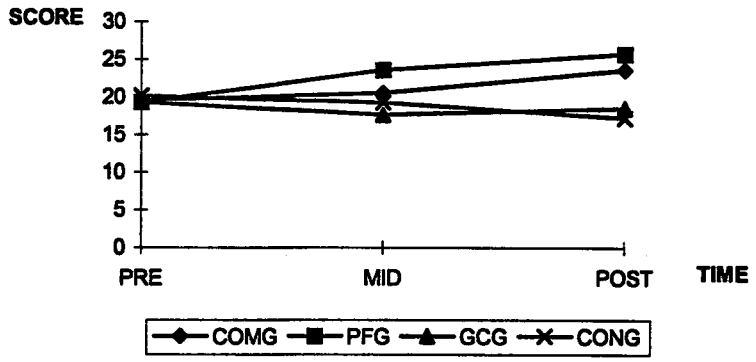

Figure 4.2. The sport competence score across three measurement for four treatment groups

Health:

Table 4.15 shows the results of two way ANOVA with repeated measures employed to the health subscale scores of subjects.

Table 4.15: Results of two way ANOVA with repeated measures for the health subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	450.02	3	150.01	1.28	0.295
TIME	12.87	2	6.43	0.62	0.543
GROUP x TIME	113.40	6	18.90	1.81	0.109
ERROR BETWEEN	4210.30	36	116.95		
ERROR WITHIN	752.40	72	10.45		
TOTAL	5538.99	119			

According to two way ANOVA with repeated measures on the health subscale of physical self-concept, no significant group main effect, ($F(3,36) = 1.28$; $p > 0.05$), time main effect, ($F(2,72) = 0.62$; $p > 0.05$), and group by time interaction, ($F(6,72) = 1.81$; $p > 0.05$), were recorded (Table 4.15).

Body Fat:

In Table 4.16, the results of two way ANOVA with repeated measures employed to body fat subscale of physical self-concept are presented.

Table 4.16: Results of two way ANOVA with repeated measures for the body fat subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	272.87	3	90.96	0.60	0.617
TIME	8.45	2	4.22	0.61	0.548
GROUP x TIME	39.48	6	6.58	0.94	0.469
ERROR BETWEEN	5427.93	36	150.78		
ERROR WITHIN	502.07	72	6.97		
TOTAL	6250.8	119			

The results of the body fat score was fairly similar to that of the health scores. The main effect for groups, ($F(3,36) = 0.60$; $p > 0.05$), the main effect for time, ($F(2,72) = 0.61$; $p > 0.05$), and group by time interactions, ($F(6,72) = 0.94$; $p > 0.05$), were not significant on the body fat subscale.

Coordination:

Table 4.17 shows the results of two way ANOVA with repeated measures for the coordination subscale of physical self-concept.

Table 4.17: Results of two way ANOVA with repeated measures for the coordination subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	708.83	3	236.28	4.26**	0.011
TIME	5.07	2	2.53	0.25	0.777
GROUP x TIME	148.80	6	24.80	2.48*	0.031
ERROR BETWEEN	1994.50	36	55.40		
ERROR WITHIN	718.80	72	9.98		
TOTAL	3576	119			

*$p < 0.05$
** $p < 0.01$

As it can be seen from Table 4.17, group main effect on the coordination, ($F(3,36)= 4.26$; $p < 0.01$) and group by time interaction, ($F(6,72) = 2.48$; $p < 0.05$), were significant. However, time main effect on coordination, ($F(2,72) = 0.25$; $p > 0.05$), was not significant. Follow-up one way ANOVAs examined group differences at each measurements, finding significant differences at the mid test, ($F(3,39) = 5.23$; $p < 0.01$), and at the post-test, ($F(3,39) = 5.08$; $p < 0.01$), among four treatment groups. Post hoc Newman Keuls test indicated that in both mid test and post test measurements, CONG and GCG had lower coordination scores than both COMG and PFG. For determining changes across the three measurements among four treatment groups , follow up one way ANOVAs were performed by using gain scores among three measurements. One way ANOVAs revealed significant differences in

the gain score of pre and post test, ($F(3,39) = 3.68$; $p < 0.05$), among four treatment groups. Newman Keuls follow-up tests demonstrated significant differences in the gain scores of coordination between CONG and PFG. The interaction effect is presented in Figure 4.3.

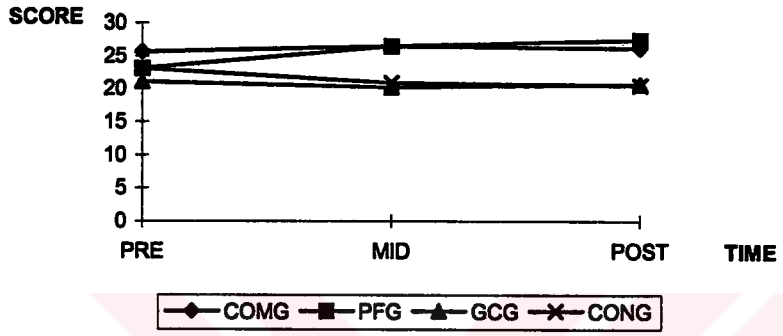

Figure 4.3. The coordination score across the three measurement for four treatment groups

Appearance:

The results of two way ANOVA with repeated measures employed to the appearance subscale of physical self-concept are given in Table 4.18.

Table 4.18: Results of two way ANOVA with repeated measures for the appearance subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	162.63	3	54.21	1.70	0.184
TIME	14.47	2	7.23	1.76	0.180
GROUP x TIME	29.40	6	4.90	1.19	0.321
ERROR BETWEEN	1147.97	36	31.89		
ERROR WITHIN	296.13	72	4.11		
TOTAL	1650.6	119			

Two way ANOVA with repeated measures reported no significant main effect for group, ($F(3,36) = 1.70$; $p > 0.05$), no significant main effect for time, ($F(2,72) = 1.76$; $p > 0.05$), on the appearance subscale of physical self-concept (Table 4.18). In addition, no significant interaction effects were found on the subscale of the appearance, ($F(6,72) = 1.19$; $p > 0.05$).

Endurance:

Table 4.19 reveals the results of two way ANOVA with repeated measures applied to the subscale of endurance.

Table 4.19: Results of two way ANOVA with repeated measures for the endurance subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	298.27	3	99.42	1.06	0.380
TIME	32.92	2	16.46	1.00	0.373
GROUP x TIME	119.08	6	19.85	1.21	0.313
ERROR BETWEEN	3390.93	36	94.19		
ERROR WITHIN	1184.67	72	16.45		
TOTAL	5357.06	119			

Like results of the appearance subscale of physical self-concept, no significant main effect for group, ($F(3,36) = 1.06$; $p > 0.05$), for time , ($F(2,72) = 1.00$; $p > 0.05$), and group by time interactions, ($F(6,72) = 1.21$; $p > 0.05$), on the endurance subscale were obtained.

Flexibility:

The results of the group x time ANOVA with repeated measures applied to the flexibility scores of subjects are presented in Table 4.20.

Table 4.20: Results of two way ANOVA with repeated measures for the flexibility subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	229.37	3	76.46	0.60	0.619
TIME	107.47	2	53.73	4.82**	0.011
GROUP x TIME	133.73	6	22.29	2.00	0.077
ERROR BETWEEN	4581.80	36	127.27		
ERROR WITHIN	802.80	72	11.15		
TOTAL	5855.17	119			

** $p < 0.01$

According to Table 4.20, the main effect for group and the group by time interaction were not significant, ($F(3,36) = 0.60$; $p > 0.05$), and ($F(6,72) = 2.00$; $p > 0.05$), respectively. The main effect for time was significant, ($F(2,72) = 4.82$; $p < 0.01$). Repeated measure one way ANOVAs examined each group's change across the three measurements, founding significant differences for PFG, ($F(2,18) = 4.72$; $p < 0.05$). This significant difference in group mean of flexibility score was obtained

between pre and post -test represented improvement in the score of the flexibility for PFG according to the results of Tukey post hoc analysis (Tukey $HSD_{PFG} = 4.70$).

Strength:

The results of two way ANOVA with repeated measures employed to the strength subscale scores of subjects are presented in Table 4.21.

Table 4.21: Results of two way ANOVA with repeated measures for the strength subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	44.42	3	14.81	0.19	0.905
TIME	72.80	2	36.40	2.96	0.058
GROUP x TIME	170	6	28.33	2.31*	0.043
ERROR BETWEEN	2868.57	36	79.68		
ERROR WITHIN	884.53	72	12.29		
TOTAL	4040.32	119			

* $p < 0.05$

As it can be seen from Table 4.21, the main effect for group, ($F(3,36) = 0.19$; $p > 0.05$), and main effect for time, ($F(2,72) = 2.96$; $p > 0.05$), on the strength subscale of physical self-concept were not significant, but significant interaction was obtained on the strength, ($F(6,72) = 2.31$; $p < 0.05$). The interaction is graphically depicted in Figure 4.4.

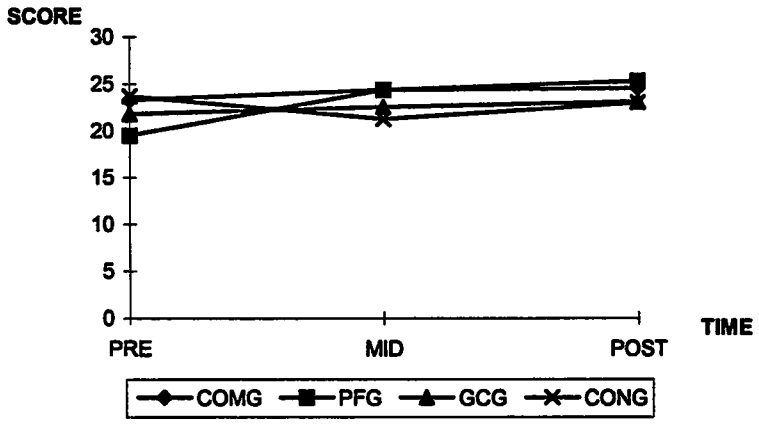

Figure 4.4. The strength score across the three measurement for four treatment groups

In order to further examine the interaction effect, follow-up one way ANOVAs were performed by using gain scores. According to results of one way ANOVAs, there was a significant difference in the gain score of pre and mid test, ($F(3,39) = 2.81$; $p < 0.05$) among groups. Newman Keuls follow up test revealed that PFG had higher gain score of strength between pre and mid test than CONG.

General Physical self-concept:

Table 4.22 indicates the results of two way ANOVA with repeated measures applied to the general physical self-concept subscale of physical self-concept.

Two factor ANOVA (group x time) with repeated measures on the general physical self-concept revealed no significant main effect for group, ($F(3,36) = 0.54$; $p > 0.05$), and no significant main effect for time, ($F(2,72) = 0.13$, $p > 0.05$). In addition, no significant interaction effect was evident for the general physical self-concept, ($F(6,72) = 2.02$; $p > 0.05$).

Table 4.22: Results of two way ANOVA with repeated measures for the general physical self-concept subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	87.03	3	29.01	0.54	0.656
TIME	2.82	2	1.41	0.13	0.875
GROUP x TIME	127.65	6	21.28	2.02	0.074
ERROR BETWEEN	1921.57	36	53.38		
ERROR WITHIN	757.53	72	10.52		
TOTAL	2896.6	119			

Self-Esteem:

Table 4.23 shows the results of two way ANOVA with repeated measure employed to self-esteem subscale of physical self-concept.

Table 4.23: Results of two way ANOVA with repeated measures for the self-esteem subscale of physical self-concept

SOURCE OF VARIATIONS	SS	Df	MS	F Value	p
GROUP	110.69	3	36.90	0.63	0.600
TIME	21.22	2	10.61	1.09	0.340
GROUP x TIME	78.78	6	13.13	1.35	0.245
ERROR BETWEEN	2104.30	36	58.45		
ERROR WITHIN	698.00	72	9.69		
TOTAL	3012.99	119			

The results of the self-esteem subscale of physical self-concept was similar to that of the general physical self-concept subscale. The main effect for group, time, and group by time interaction were not significant, ($F(3,36) = 0.63$; $p > 0.05$), ($F(2,72) = 1.09$; $p > 0.05$), and ($F(6,72) = 1.35$; $p > 0.05$), respectively.

4.3. Results of Physiological Measures as Control Variables

The physiological measures such as muscular endurance, body composition, strength, flexibility, and cardiorespiratory endurance were considered as control variables before and after 10 week treatments as suggested by ACSM (1993).

The descriptive statistics for the pre and post measurements of physiological variables for four treatment groups are presented in Table 4.24.

According to Table 4.24, some score changes were obtained in the some of the physiological variables from pre to post test for both COMG and PFG. For example, the mean score of flexibility for COMG increased from 26.20 ± 7.28 to 27.80 ± 5.68; for PFG these values increased from 26.52 ± 8.69 to 31.35 ± 6.61. In addition, the mean scores of muscular endurance at the pretest for both COMG and PFG were 21.7 ± 7.42 and 21.8 ± 7.21, respectively. These mean scores increased to 25.6 ± 6.40 for COMG and 28.3 ± 7.21 for PFG at the post test. Furthermore, body fat percent of both COMG and PFG decreased from 17.69 ± 3.02 for COMG and 17.06 ± 3.01 for PFG to 14.74 ± 1.85 for COMG and 14.40 ±2.05 for PFG. The mean scores of VO_2 max at the pretest were 34.83 ± 3.83 for COMG and 33.22 ± 4.32 for PFG. The mean scores of VO_2 max at the post test were 36.66 ± 3.24 for COMG and 38.15 ± 3.86 for PFG.

For CONG and GCG, only a slight change was obtained in the physiological variables from pre to post tests. For example, the scores of VO_2 max at the pre test were 33.63 ± 5.53 for GCG and 34.99 ± 4.94 for CONG. These score at the post-test

Table 4.24: Descriptive statistics of physiological variables for four treatment groups

PHYSIOLOGICAL VARIABLES	COMBINE GROUP		PHYSICAL FITNESS GROUP		GROUP COUNSELING GROUP		CONTROL GROUP	
	M	SD	M	SD	M	SD	M	SD
HEIGTH (cm)								
PRE	161.30	7.06	160.7	6.00	159.6	2.63	162.3	4.16
POST	161.30	7.06	160.7	6.00	159.6	2.63	162.3	4.16
WEIGTH (kg)								
PRE	59.73	6.32	57.84	7.72	58.05	7.74	57.85	5.47
POST	59.09	7.23	56.86	7.50	56.96	6.35	57.05	6.76
DIASTOLIC BLOOD PRESSURE (mmHg)								
PRE	72.50	11.12	77.5	6.32	74.0	8.23	74.0	7.38
POST	68.50	7.84	70.5	4.97	72.0	10.49	71.0	9.94
SISTOLIC BLOOD PRESSURE (mmHg)								
PRE	107.50	9.50	107.50	11.84	110.0	9.72	109.5	10.39
POST	108.0	5..37	113	6.32	110.5	7.25	112.8	10.46
PERCENT BODY FAT								
PRE	17.69	3.02	17.06	3.01	17.46	3.62	16.88	3.80
POST	14.74	1.85	14.40	2.05	16.64	2.83	15.55	3.29
MUSCULAR ENDURANCE (SIT-UPS)								
PRE	21.70	7.42	21.80	7.70	22.0	10.12	21.9	8.95
POST	25.60	6.40	28.30	7.21	20.7	11.18	23.8	6.76
FLEXIBILITY (cm)								
PRE	26.20	7.28	26.25	8.69	26.5	5.84	28.45	6.32
POST	27.80	5.68	31.35	6.61	28.0	7.11	26.10	4.58
MAX VO_2 (ml/perkg/min)								
PRE	34.83	3.83	33.22	4.32	33.63	5.63	34.99	4.94
POST	36.66	3.24	38.15	3.86	33.92	6.77	36.40	4.87
LEG STRENGTH (lb)								
PRE	46.23	9.53	47.64	9.99	43.55	9.56	42.55	12.72
POST	48.27	7.86	49.64	7.49	45.23	8.17	46.95	10.99
BACK STREGTH (lb)								
PRE	56.36	11.56	58.77	13.05	48.86	15.02	48.50	17.61
POST	54.41	11.27	65.05	11.49	50.27	11.05	59.32	21.08

were 33.92 ± 6.77 for GCG and 36.40 ±4.87 for CONG. Besides, only a small amount of changes occurred in the percent body fat for both GCG and CONG from pre (M= 17.46; SD= 3.62 and M= 16.88; SD= 3.80) to post-test (M= 16.64; SD= 2.83 and M= 15.55; SD= 3.29). These small amount of changes can also obtained in other physiological variables that can be seen from Table 4.24.

CHAPTER V

DISCUSSION

The purpose of this study was to determine if the self-concept and physical self-concept of the female university students were affected by participating in an 10 week physical fitness training, group counseling and combination of physical fitness training and group counseling.

For testing this purpose, two way ANOVA with repeated measures were performed on the self-concept and physical self-concept scores by using TSCS and MPSDQ.

In this section the effects of group counseling, physical fitness training, combined physical fitness training with group counseling on the self-concept and physical self-concept will be discussed separately.

5.1. The Effects of Group Counseling, Physical Fitness Training, Combined Physical Fitness Training with Group Counseling on the Self-concept

According to the results of the two way ANOVA with repeated measures on the subscales of self-concept, there were no significant differences in each subscales of TSCS among four treatment groups. Although the mean scores of COMG, PFG and GCG on the TSCS subscales increased through the 10 week treatment , two way

ANOVA with repeated measures did not reveal significant group effects. This result of the present study showed similarity with the results of Neal's (1981) study who has investigated the effects of 10 week cardiovascular program, group counseling and combination of group counseling and cardiovascular training on self-esteem of ninth grade boys founding no significant differences between the four treatment groups on the adjusted means for self-esteem. On the other hand, the result of the present study did not support the findings of Hilyer and Mitchel (1979). They reported a significant effect of running and running with counseling program on the subscales of TSCS among 40 college students. In addition, the findings of the present study is not in line with the results of Hilyer et al. (1980) concluding a combination of physical fitness program with counseling improved the self-concept of the individual. A possible explanation for the dissimilarity between the results in the previous studies and the present study may be due to the different types of exercise programs, different counseling approaches used in the study and methodological differences. Also, it may be thought that as being the students of a prestigious university like METU, those students may already have a more positive self-concept. If the means of these four groups are compared, they seem to be in the positive self-concept range.

Although the two way ANOVA with repeated measures on the subscales of TSCS did not reveal significant group differences among the four treatment groups, significant time effects were obtained on the physical self, the family self, self-satisfaction, the identity and total self-concept scores. To further examine time effects on each of these self-concept subscales for each treatment group separately, one way repeated measure ANOVAs were conducted.

According to the results of one way repeated measure ANOVA, a significant time difference was found between pre and post test on the score of physical self-concept for PFG. No significant time difference was recorded for COMG, GCG, and CONG. The physical self-concept scores of COMG and GCG tend to increase over time, but these improvements were not significant for the COMG and GCG. The result on the physical self-concept were in line with most of the studies which indicated the positive effects of different types of training on the physical self-concept (Wilfley and Kunce, 1986; Blackman, Hunter, Hilyer and Harrison, 1988; Marsh and Peart, 1988; Brown, Morrow and Livingston, 1988; O'Neill, 1989; Gysin, 1989; Olu, 1990; Mclnman and Berger, 1993). In today's world, physical fitness has been one of the accepted values and traits by most individuals; especially the young adults and the adolescents. Therefore, they seem to be more conscious and sensitive to changes in their body, coordination and strength. Furthermore, the physical fitness program may provide a medium to explore one's physical strengths and potentials and these may influence one's perception of himself or herself. Although both COMG and PFG had the same fitness program, the additional counseling experience did not lead to a significant time differences in the COMG. This may be due to the uniqueness, unique and specific needs of the individuals and these unique needs in the structuring of the group experience and fitness programs.

One way repeated measure ANOVAs also revealed a significant difference in the family self scores between pre and post test measurement for COMG and PFG. The family self scores of both COMG and PFG improved over 10 weeks however, the family self scores of GCG did not indicate a significant improvement over time.

Hawkins and Gruber (1982) studied the effect of a season of little league baseball on the self-esteem of 94 players, obtaining a significant effect on home-parent self. In addition, Marsh et al. (1986a, b) ; Plummer and Koh (1987); Marsh and Peart (1988); Mclnman and Berger, (1993) reported the effects of different types of physical training such as aerobic dance, cooperative and competitive physical fitness training, outward bound experience on the family self and parental relationships. The results of above studies supported the result of the present study which showed improvement on the family self scores over time for PFG. PFG may be accepted as a program that leads to observable changes in the individual and this may positively influence the self and eventually the self's relations with others specifically the family members.

One way repeated measure ANOVA also revealed a significant improvement in the family self for COMG. This result was supported by the results of Hilyer and Mitchel (1979) founding a significant effect of combined group counseling with running program on the family self scores of college students who had low self-concept. As it was indicated, physical fitness programs combined with group counseling seem to be an effective factor influencing how one perceive himself or herself. These treatments may have positive effects on the individual, therefore, the family relationships may be positive effected by this. Moreover, the issues and the content of the group counseling may have provided cues and responded to their needs in human relationship, especially family relations for this group. The individuals with more positive self-concept seem to have better interpersonal relationships (Rosenberg, 1965; Geist & Borecki, 1982; Ersanlı, 1991).

For GCG, no significant improvement was obtained on the family self over time. This might be supported by White (1974) and Ware and Barr's (1977) studies which reported an increase in all subscales of self-concept, however, no significant effect was found for most of the subscales of TSCS. As it was indicated before, the group experience may not have significantly responded to the unique and specific needs and demands of this group of subjects, since we had no improvements from pre to post means (M_{GCG}= 70.4; SD= 4.58 for pre; M_{GCG}= 70.7; SD= 7.06 for post)

Another significant time main effect was obtained on the self-satisfaction scores according to two way ANOVA with repeated measures. One way repeated measure ANOVAs as a follow up were also performed to examine each group changes in self-satisfaction over three measurements. The results indicated significant differences between pre and post test on the self-satisfaction score for COMG. This indicated that subjects in the COMG who received both physical fitness training and group counseling were more satisfied with the self they have perceived over times. This finding was similar with the results of Hilyer and Mitchel (1979) reporting a significant change in self-satisfaction scores of college students after 10 week combined running with group counseling program. This result was also supported by the studies which found effects of different types of physical training (Brown and Harrison, 1986; Plummer and Koh, 1987; Stein and Motta, 1992) and different types of group experiences (Ware and Barr, 1977; Cangelosi, Gressard and Mines, 1980) on the individual satisfaction with self because both physical fitness training and group experiences were applied to subjects in COMG, therefore contributing both to the physical and psychological domains of the individual. Since

subjects had an opportunity to test and develop their strengths and potentials in physical and psychological domains, and were supported in both, they seemed to have a better perception and satisfaction of themselves.

Although one way repeated measures ANOVA did not reveal time differences in self-satisfaction scores for GCG and PFG, the mean scores of self-satisfaction subscale tend to increase over time for the GCG and PFG. The result of self-satisfaction subscale for PFG showed dissimilarity with the most of the studies (Hilyer and Mitchel, 1979; Tucker, 1983; Brown and Harrison, 1986; Plummer and Koh, 1987; Olu, 1990; Stein and Motta, 1992). Only the result of Blackman et al. (1988) studies supported the result of the present study. The reasons for dissimilarity between the result of present study and other studies might be using different physical training program, variations in training duration, using a different sample and again, the individuality of the group members.

The score changes of self-satisfaction for GCG over the three measurements were also nonsignificant. The self-satisfaction score of the subjects in GCG decreased from pre to mid test but then score improvement was recorded from mid to post test. However, this improvement was not significant over time. This finding confirmed the results of White (1974) but not consistent with the results of Wrigth, Morris and Fettig (1974); Ware and Barr (1977); Cangelosi et al. (1980). Although, group counseling is considered an effective opportunity for the self-development, the duration or the content may not have been responsive to the current needs of the individual.

Two way ANOVA with repeated measure on the identity subscale revealed significant time effects. However, one way repeated measure ANOVAs examining each group changes in identity score over time failed to indicate significant time differences in identity score for four treatment groups. The identity scores tend to improve over time for COMG, GCG and PFG but these improvements were not significant for each group. It is possible to see some contradictory results on identity in the literature. Some of the studies showed significant effects of physical fitness training on the identity (Tucker, 1983; Plummer and Koh, 1987; Stein and Motta, 1992) but some others did not (Brown and Harrison, 1986; Blackman et al., 1988; Olu, 1990). On the other hand, most of the studies failed to obtain significant effects of different group experiences on the identity (Wright et al., 1974; White, 1974; Ware and Barr, 1977). Also, a contradictory result was reported in Hilyer and Mitchel's (1979) study indicating a significant effect of a running program combined with group counseling on the identity score. The duration and the content of the program may be a determining factor for this.

Another finding of the present study reported significant time effects on the total self-concept and positive self. In further analysis of the time effect , a significant difference in total self-concept score between pre and post test for COMG was depicted but not in PFG and GCG, participation in an combined physical fitness training with group counseling program improved the global self-concept, or positive self. The similar result was obtained in Hilyer and Mitchel (1979)' study which reported the combination of a running program with facilitative counseling can be an effective technique to help persons gain more positive views of themselves.

For PFG, no significant change was obtained on the global self and total self-concept. This is a contradictory result with most of the studies in the literature. Since most of the studies (Hawkins and Gruber, 1982; Trujillo, 1983; Tucker , 1983; Brown and Harrison, 1986; Marsh et al., 1986 a,b; Plummer and Koh, 1987; Olu, 1990; Stein and Motta, 1992; Mclnman and Berger, 1993) found the improvement or changes in the global self-concept after different types of fitness training. Besides these contradictory results, some similar results with the results of the present study were obtained in the literature by different researchers such as, Jasnoski, Holmes, Solomon and Aguior (1981), Brown et al. (1982), Hatfield, Vaccora and Benedict (1985), Lee (1988), Schmidt (1988), Blackman et al. (1988). The result of this study may be a support for its malleable and situational specific nature of the self-concept.

Most of the studies that investigated the effects of different group experiences on the self-concept reported no significant effects of different types of group experiences on the self-concept (Wright et al., 1974; White, 1974; Ware and Barr, 1977; Finando, Croteau, Sanz and Woodson, 1977; Altman and Black, 1978; Sorsdahl and Sanche, 1985; Parish and Price, 1986; Hadley, 1988). They also indicated that the score of individual on global self or positive self improved after participation of different group experiences but, this was not significant. The finding of this study also supported the above finding. However, contradictory results were also reported in the literature such as Mackeen and Herman (1974), Baker, Thomas and Munson (1983), Summerlin, Hammett, and Payne (1983), Şerifi (1985), and Bayer (1986) found a significant improvement in the global self-concept after group counseling experiences. Since self-concept is a global and comprehensive structure,

the modifications in the global self seem to require interventions both in physical and psychological domains.

Two way ANOVA with repeated measures also revealed no significant time effect for the moral/ethical self, personal self, social self, self-criticism, and behavior subscales of TSCS. These results indicated that no significant improvements were obtained in these subscales over a 10 week treatment program. Although the scores of these subscales for subjects who received physical fitness, group counseling and combined physical fitness training with group counseling tend to increase over time, the results of two way ANOVA with repeated measures failed to show significant improvements.

Like results on moral /ethical self in the present study, some of the previous studies failed to demonstrate the effects of physical fitness training (Plummer and Koh, 1987; Blackman et al., 1988; Olu, 1990; Stein and Motta, 1992; Mclnman and Berger, 1993) ; different group experiences (White, 1974) on the moral/ethical self. On the other hand, Tucker (1983), and Marsh et al (1986 a, b) found a significant effect of physical fitness training on the moral self. In addition, Hilyer and Mitchel (1979) reported the effect of running with group counseling on the moral/ethical self in contrast to the result of the present study.

The results on the self-criticism showed similarity with the result of moral self. In literature, most of the previous studies (Wright et al., 1974; White, 1974; Altman and Black, 1978; Plummer and Koh, 1987; Blackman et al., 1988; Olu, 1990) supported the result of the present study founding no significant effects of group counseling and physical fitness training on the self-criticism.

The reasons for not finding any significant change in moral/ethical self and self-criticism might be attributed to the nature of these subscales. Moral/ethical self subscale is interpreted as an individual's feelings of being "good" or "bad", his relationship to God, and satisfaction with a chosen religion. Self-criticism scale generally tests the honesty of the test takers. Therefore; these two subscales are expected as indirectly related to exercise and group experience and may not have an immediate effect on the moral / ethical self.

It appears that no significant improvement was recorded for social self and personal self of subjects in different treatment groups. These findings are not consistent with other studies which found improvement in the social self (Tucker, 1983; Hawkins and Gruber, 1982; Blackman et al., 1988; Olu, 1990; Stein and Motta, 1992) and in the personal self (Plummer and Koh, 1987; Olu, 1990; Stein and Motta, 1992; Mclnman and Berger, 1993) associated with participation in physical activity or exercise. In addition, the finding of the present study showed dissimilarity with the results of Wright et al. (1974) and Summerlin et al. (1983) studies which found a significant improvement in social self and personal self associated with group experiences. The result of Hilyer and Mitchel's (1979) study was also inconsistent with the result of the present study, since they (1979) reported significant improvements in personal self and social self after participation in an 10 week running combined with group counseling program.

Although the contradictory results are presented in literature, some consistent results are presented as well. For example; Brown and Harrison (1986) and Blackman et al. (1988) did not find significant change in personal self after physical

fitness training. The studies of Brown and Harrison (1986) and Stein and Motta (1992) also failed to report significant change in social self associated with physical activity or exercise. Furthermore, White (1974) did not obtain significant change in personal self and social self after group experiences.

As it can be seen, conflicting results appeared on the personal self and social self in the literature. This might result from some differences in methodology of studies such as different sample, different age groups , different types of group experiences and physical fitness training, different experimental design and statistical procedures. Furthermore, these students might have had more positive social, personal self prior to the treatment. For example; The mean scores of the social self on pretest for COMG, PFG, and GCG were 66.8 ± 6.16; 66.8 ± 5.31 and 64.3 ± 5.91 respectively. These values for personal self were 67.2 ± 4.69 for COMG; 65 ± 8.16 for PFG and 67.5 ± 6.02 for GCG. Therefore, the treatment may not lead significant and drastic changes in their social self, and personal self.

Another finding of this study revealed no significant changes in the behavior scores for subjects in GCG, PFG and COMG. Some studies found no significant change in the behavior scores after participating in physical activities (Brown and Harrison, 1986; Blackman et al., 1988; Olu, 1990) and different group experiences supported the finding of the present study (Wright et al., 1974; White, 1974; Ware and Barr, 1977; Sorsdahl and Sanche, 1985). Some contradictory findings are also presented by different researchers. For example; Tucker (1983), Plummer and Koh (1987) reported significant improvement in the behavior associated with the physical activity while Cangelosi et al. (1980), Schetman, Weiser and Kurtz (1993) reported

changes in this score associated with the group experience. Hilyer and Mitchel (1979) also reached contradictory results about the effects of running with group experience on behavior subscale. As it was indicated in some other subscales, the students had significant change in their perception of themselves, however; these perception may not have been reflected in their behavior.

5.2. The Effects of Group Counseling, Physical Fitness Training, Combined Physical Fitness Training with Group Counseling on the Physical self-concept

As previously mentioned, examining the effects of 10 week physical fitness training, group counseling and combined physical fitness training with group counseling on the physical self-concept of female university students by using domain specific instrument was the another aim of the present study. Two way ANOVA with repeated measures on 11 subscales of MPSDQ was performed to determine this aim.

According to two way ANOVA with repeated measures, there was a significant main effect for group, time and group by time interactions on the activity subscale of MPSDQ. Follow-up tests showed that the activity scores of both COMG and PFG increased over time and both COMG and PFG had higher scores on the activity at the midtest and post-test than GCG and CONG. Group by time interactions also showed that time differences or improvements of activity scores over time changed among four treatment groups. Therefore, the gain scores of COMG and PFG over time were higher than CONG and GCG. All of these results were expected

because most of the subjects in four treatment groups were sedentary females before these treatments. Subjects in COMG and PFG have not regularly participated in any systematic exercise programs before that time. Subjects in COMG and PFG regularly participated two times step and one times aerobic dance session per week over 10 week periods while GCG and CONG did not. That is why , the activity scores of both COMG and PFG were higher than CONG and GCG and also COMG and PFG showed higher improvements in their perceived activity level over time than CONG and GCG.

Another finding of the present study revealed significant differences in coordination scores among four treatment groups. The follow up test indicated that the coordination scores of both COMG and PFG were higher than CONG and GCG at mid-test and post-test. Although the coordination scores of four treatment groups at the pretest were similar, at the mid-test and post-test significant changes and differences were explored among them. This might result from the nature of the activity. Both step dance and aerobic dance require coordination of legs and arms. Especially, in the first week and the second week, subjects experienced difficulty in performing basic movements as observed in aerobic and step sessions. However, as time went by, they gained proficiency in performing these movements and they also began to perform more complex movements that require more coordination. Therefore, it was expected to increase the perceived coordination level of both COMG and PFG.

Another finding on the coordination subscale revealed significant group by time interactions. The follow-up test indicated that the coordination scores of PFG

and CONG were different over time. In other words, improvement of coordination score from pre to post-test for PFG was higher than CONG. No other significant time differences in gain scores over time were obtained among four treatment groups. It is interesting to note that, although COMG score changed over time and COMG had a higher score at the mid-test and post-test than CONG and GCG, gain scores or improvement over time did not differ from CONG and GCG and also PFG. This can be explained by the amount of change occurred in the mean score of coordination. The amount of coordination score changes for COMG was only 8% while these changes for PFG was 30%. This may be due to the nature of the self-perceptions demands of this group in relation to coordination. Although they had improvements in score changes , their expectancies could be higher or different.

Two way ANOVA with repeated measures on the flexibility showed significant time effect. One way repeated measures revealed time differences in flexibility score for PFG but not other groups. Tukey follow-up test indicated a significant improvement in flexibility score from pre to post-test for the PFG. Large amount of score changes observed in PFG because their perceived flexibility level increased approximately 30% while this improvement was only approximately 15% for COMG. In addition, no improvement observed in CONG and GCG. Their perceived flexibility levels were similar from pre to post test. The physiological measures of flexibility also supported the result of this study. The flexibility performance of PFG increased from 26.25 cm. to 31.35 cm. while other groups did not demonstrate observable and significant improvements. Although the flexibility performance of COMG improved over time, there was no significant change in their

perceived level of flexibility. The change in the flexibility performance was not enough for them to feel competence in the flexibility. The PFG had more opportunity to observe significantly their flexibility whereas the others, due to their individual differences may not be sensitive to those changes.

A significant group by time interaction was obtained on the strength score. This revealed that improvement in strength score over time showed differences among four treatment groups. The follow-up test of one way ANOVA reported significant differences in the gain scores of pre and mid-test between PFG and CONG. The gain scores of PFG was higher than CONG. Like flexibility performance, PFG showed greater strength performance than CONG. The improvement in strength performance physically for PFG increased their satisfaction and their perceived competence in strength. The result of the present study was also supported by the results of Page, Fox, McManus and Armstrong (1993) founding significant change in perceived strength after 8 week aerobic training. In addition, Aşçı, Kin and Koşar (1996) reported a significant change in the perception of strength after 8 week step and aerobic dance programs. The result on strength showed dissimilarity with the result of Caruso and Gill (1992)'s study. They failed to find a change in strength after 10 week weight training program. This might due to the use of different training program, content of training, emphasis of training, intensity and duration of training.

Group x Time ANOVA with repeated measures on the sport competence indicated significant group by time interactions. One way ANOVA and Newman Keuls test as a follow up represented significant differences in that gain scores of pre

and post test among four treatment groups. The gain scores of pre and post for COMG and PFG were higher than CONG and GCG while the gain score of mid and post-test for COMG and PFG were higher than only CONG. There was no significant difference in the gain scores of mid and post-test among COMG , PFG and GCG. The similar results were also obtained by Jasnoski et al. (1981), Marsh et al. (1986 a, b), Marsh and Peart (1988), Mclnman and Berger (1993) revealing a significant improvement in perceived level of sport ability. Acquiring sport skills or gaining some proficiency over sport skills through participating any physical activity increased subject's sport competence. The result of the present study was also supported by Aşçı et al. (1996)'s study reported a significant change in the sport competence associated with 8 week aerobic and step dance program. However, the result of the present study on the sport competence was dissimilar with Caruso and Gill (1992) and Page et al. (1993)'s studies.

Two way ANOVA with repeated measures failed to indicate any significant effect for time, group and group by time interaction on the appearance subscale of MPSDQ. Although the score of perceived appearance increased for COMG and PFG, the improvement in these scores were not significant over time and did not show a difference among groups. The result of the present study supported the result of Page et al. (1993) and Caruso and Gill (1992)'s study obtaining no significant change in the body attractiveness after physical fitness training. Even though similar results were presented in the literature, some contradictory results were also obtained by Hatfield et al. (1985), Marsh et al. (1986 a, b), Marsh and Peart (1988), Mclnman and Berger (1993). This might result from using different psychological inventories for

measuring perceived appearance. Studies that obtained similar results with the present study used domain specific instruments of PSPP and MPSDQ, while the previous studies obtaining dissimilar results with the present study mostly used the appearance subscale of the global self-concept instruments. Another point may be due to their age level characteristics. Since they may still be considered in a process of ego-identity development, they may be still experiencing adolescent awkwardness and may be very sensitive and preoccupied with physical changes in their physical appearance.

Furthermore, no significant effect for group, time and group by time interaction were recorded on the body fat subscale according to two way ANOVA with repeated measures. Perceiving body fat is generally associated with losing weight after physical fitness program. The weight measurements which were taken from treatment groups supported the result of the present study, since there was a little change in weight associated with the physical fitness training. The results of this study also supported the results of Caruso and Gill (1992) and Page et al. (1993). On the other hand, the result of the present study did not support the result of Aşçı et al. (1996)' s study obtaining a significant change in the body attractiveness after training. Besides weight measurements, percent body fat is another physiological measure that is closely related to the perceived body fat. Although significant differences occurred in the percent body fat of COMG and PFG from pre to post-test, these changes did not increase their satisfaction level for their body fat, since it is difficult to change the perception of adolescent females on the body fat and body

shape and the perception of herself since fat is a major problem for most of the females during the university years.

Another finding of this study indicated no significant main effect for group, time and group by time interaction on the endurance subscale. Although the perceived endurance level increased over time for COMG and PFG, no significant difference was obtained among measurements and also among groups. Similar result was also obtained by Caruso and Gill (1992) and Aşçı et al. (1996) founding no significant change in the physical condition after physical training program. Using a similar type of training and similar duration of activities might have caused a similar result. However, Page et al. (1993) found a dissimilar result because they used an 8 week aerobic training program which included 3 x20 min. sessions on a bicycle ergometer. Therefore, types of training offering in this study was different from its in that study.

According to two way ANOVA with repeated measures on the health subscale, main effect for time, group and group by time interaction were not significant. Health subscale generally includes items that asked susceptibility of subjects to illness. Through 10 week period, different environmental factors and conditions such as becoming ill, being injured in the training may have affected the health status of subjects and this may have affected the above result.

An interesting result was obtained on the global physical self-worth subscale. No significant improvement and group differences were recorded on this subscale. Although significant time improvement in the physical self subscale of TSCS was obtained for the PFG in this study, the result on the global physical self-worth

subscale failed to demonstrate significant improvement over time. Items in the physical self subscale of TSCS and global physical self-worth subscale of MPSDQ are different from each other. This may be one of the reasons for this dissimilar finding. In addition, the result of the present study showed dissimilarity with the results of Page et al. (1993)'s studies because of different training procedures. However, the result of the present study did not support the result of Aşçı et al. (1996)'s study , even though the same types of training procedures were used. The result of the present study was also not in line with the most of the previous studies such as Wilfley and Kunce (1986), Marsh and Peart (1988), Blackman et al. (1988), Gysin (1989), O'Neill (1989), Olu, (1990), McInman and Berger (1993). All of the above studies used the physical self subscale of TSCS and they did not use domain specific instruments, therefore, conflicting and contradictory results may be due to the nature of the instrument. Besides contradictory results, a similar result was also obtained by Caruso and Gill (1992). In the present study and these two studies, domain specific instruments of MPSDQ and PSPP were used. That might be a reason for the results obtained.

Like the result on the global physical self-worth, no significant main effect for time , group and group by time interaction were obtained on the self-esteem subscale of MPSDQ. The result of the present study was supported by the results of Caruso and Gill (1992), Page et al. (1993)'s studies. The results indicated that significant changes in some components of the physical self-perception were not transferred to the global self-esteem. In addition, the result of the present study was similar with the results of Hatfield et al. (1985), Lee (1988), Schmidt (1988), Blackman et al.

(1988)'s studies which used the total scores of TSCS. This result may be a support for the stable nature of self-concept as previously mentioned. Also no significant improvements in the self-esteem score was obtained for group counseling group. This result also found support from the most of the previous studies (White, 1974; Ware and Barr, 1977; Finando et al., 1977; Altman and Black, 1978; Parish and Price, 1986; Hadley, 1988). The nature of the subscales of self-esteem in the MPSDQ may not be as comprehensive and sensitive as TSCS.

It was expected to observe a significant change in some subdomains of the physical self-perception for COMG and PFG over time, because physical fitness training has focused on the development of awareness of components of physical fitness. However, these expectations were not hold for GCG since in group counseling process main emphasis was on global self-esteem but not on some specific aspects of physical fitness. The results that was observed in GCG could be in the expected direction. Therefore, the insignificant changes could be due to the content and focus of the GCG focusing on global self-esteem rather than specifically on the physical self-concept.

5.3. Concluding Remarks

In general, physical fitness training had more influence on the improvement of specific subdomains of physical self-concept while combination of physical fitness with group counseling and also physical fitness training facilitated improvement in the subdomains of global self-concept. On the other hand, self-enhancement group counseling experiences may not have a significant influence either on subdomains of

global self-concept and physical self-concept, since the focus is not on the development of specific skills rather on more global self. The results of the present study showed similarity with some of the previous studies but also showed dissimilarity with the some of the other studies in the literature. In addition, the results of the present study could be supported by some results of different of studies while some results of the same studies showed contradictions to the result of the present study. It is possible to attribute the reasons for obtaining similar results and dissimilar results to using different methodological procedures such as different sample, different training methods and group experiences, different content of training and group experiences, some differences in the duration's of the studies, using different instruments for assessing global self-concept and physical self-concept, using different statistical procedure for analyzing the data, uniqueness of the individual, specific and unique demands of different groups of people.

In the previous studies, generally most of them investigated the effects of weight training, aerobic dance training and different physical activities such as swimming, dance, jogging on the self-concept. However, in this study, the combination of two types of aerobic training -step and aerobic dance - was used as a training method. Most of the previous studies preferred to use only one type of training for investigating its effect on subdomains of self-concept but in this study combination of two effective types of training was preferred for testing effects of physical fitness training on the subdomains of self-concept. Since the content of the training program was different, some dissimilar results were obtained with the results of the previous studies. Also another reason for finding dissimilar results with the

previous studies can be attributed to intensity and duration of the training methods. It is possible to see some variations in the duration of the training program in the literature changing between 8 to 12 weeks. In addition, the intensity of the training methods was determined differently in different studies. Some of the studies preferred to determine training intensity by using target heart rate as their nature of training but some others used maximum weight that individual lifted at one time as their nature of training. Also some variation could be seen in the target heart rate. Some studies preferred to use 60- 70 percent of target heart rate as an intensity but some other used 70 - 80 percent of target heart rate of subjects. In addition, most of the studies conducted on college males, children and college females therefore, some findings of the presents study were in line with the previous studies and also not in line with some of the others, since gender differences may have affected the training in a different way.

In recent years, researchers began to study the physical self-concept by using domain specific instruments. Until recent years, changes in the physical self-concept associated with the physical activity was studied by using the subscales of global self-concept instruments. Therefore, some contradiction occurred between the results of this study and the studies in the literature. In this study, domain specific instrument of MPSDQ was used for assessing the physical self-concept. In addition, there were few studies examined the effects of physical training on physical self-concept by using domain specific instruments in the literature. The present study showed similarity with the results of current research. However, to obtain clear and certain findings, further a lot of studies needed in this area.

The results on the effects of group counseling also showed dissimilarity and similarity with the results of the previous studies because of methodological differences. Generally, content and emphasis or focus of group experiences were different from one study to another study. Most of the previous studies preferred to use encounter group, gestalt group, training group experiences for exploring their effects on the global self-concept. In this study, unstructured self-enhancement group experiences were preferred for testing its effect on the global self-concept and physical self-concept. The group experiences like physical fitness training included a combination of some aspects of encounter group and behavioral group experiences. The differences in the group experiences might have lead to dissimilar results. Similar results were obtained with the results of studies which used encounter group experiences and some type of training group experiences. The dissimilarity among previous studies and the present study may also due to using subjects from different gender and age groups. Most of the studies used subjects from elementary school, secondary school and high school in which self-concept is easily affected by different experiences. However, in this study, college females were used as subjects and their self-concept are more stable than younger ages. Using different types of group experiences such as cognitive or existential approaches lead different results.

Physical self-concept was not a major focus of the studies investigating the effects of different group experiences on the self-concept. No studies in the literature directly investigated the effects of group counseling on the physical self-concept. Although in this study, the major emphasis of group experiences was on the global self-esteem, the major aim was to test the improvement in the physical self-concept

as a result of improvement in the global self-concept. However, no significant changes were obtained in either global self-concept and physical self-concept as a result of this kind of group experiences. Further studies with different design, different methodology might be needed.

It was expected to obtain more significant changes in subdomains of self-concept and physical self-concept for the group who received both effective treatments of physical fitness training and group counseling. The results of the present study were in this expected direction especially for the subdomains of self-concept. The significant changes obtained in more subdomains of self-concept for COMG than other treatment groups. However, on the subdomains of the physical self-concept, PFG showed improvement in more subdomains of physical self-concept than COMG, CONG and GCG, although COMG received the same training through the 10 week period . This indicated that different subjects may be affected by the same training in a different way. This may be attributed to individual differences. PFG's focus was only on physical fitness training and physical self whereas in COMG their perceptions and focus were on both physical and psychological self. These results also indicated that receiving extra two hour group counseling experiences did not influence the subdomains of the physical self-concept. This may be due to the content of group experiences.

Furthermore, the results on the subdomain of self-concept for COMG partially supported by the previous studies because of methodological differences as previously mentioned. For example, Hilyer and Mitchel (1979) used running as a training method and one hour group experiences emphasized the experiences related

to training as a group counseling process. Neal (1981) combined the cardiovascular training with structured group experiences which included filmstrip and story with the elements of self-esteem in his study. These methodological differences may be the of cause of different results.

As a conclusion, the physical fitness training and combination of physical fitness training with group counseling experiences seem to be more effective intervention than group counseling experiences for improving the different aspests of the self-concept and physical self-concept.

CHAPTER VI

CONCLUSION AND IMPLICATIONS

6.1. Conclusion

Within the scope and limitations of this study and based on the null hypothesis statements, the results have suggested the following conclusions:

1. There was no significant difference in the total self concept or positive self among group counseling group, physical fitness training group, combined physical fitness training with group counseling group and control group after the 10 week treatment period.

2. There were no significant differences in the following subscales of the self-concept among group counseling group, physical fitness training group, combined physical fitness and group counseling group and control group after the 10 week treatment period:

    physical self, personal self, social self, family self, moral/ethical self, self-criticism, self-satisfaction, behavior, identity.

3. There was a significant difference in the following subscales of the self-concept among pre, mid and post test measurements of female university students in the physical fitness training group:

    physical self, family self.

4. There was a significant difference in the following subscales of the self-concept among pre, mid and post test measurements of female university students in the combined physical fitness training with group counseling group:

family self, self-satisfaction.

5. There was a significant difference in the total self-concept or positive self among pre, mid and post test measurements of female university students in the combined physical fitness training with group counseling group.

6. There was no significant difference in the total self-concept or positive self among pre, mid and post test measurements of female university students in the group counseling group, physical fitness training and control group.

7. There were no significant differences in the following subscales of the self-concept among pre, mid and post test measurements of female university students in the group counseling group and control group:

physical self, personal self, social self, family self, moral/ethical self, self-criticism, self-satisfaction, behavior, identity.

8. There were no significant differences in the following subscales of the self-concept among pre, mid and post test measurements of female university students in the physical fitness training group:

personal self, social self, moral/ethical self, self- criticism, self-satisfaction, behavior, identity.

9. There were no significant differences in the following subscales of the self-concept among pre, mid and post test measurements of female university students in the combined physical fitness training with group counseling group:

physical self, personal self, social self, moral/ethical self, self-criticism, behavior, identity.

10. There were significant differences in the following subscales of physical self-concept among group counseling group, physical fitness training group, combined physical fitness training with group counseling group and control group after the 10 week treatment period:

activity, coordination

11. There were no significant differences in the following subscales of physical self-concept among group counseling group, physical fitness training group, combined physical fitness training with group counseling group and control group after the 10 week treatment period:

endurance, flexibility, body fat, appearance, sport competence, health, strength, global physical self-worth, self-esteem

12. There were significant difference in the following subscales of the physical self-concept among pre, mid and post test measurements of female university students in the physical fitness training group:

activity, flexibility

13. There were significant difference in the following subscales of the physical self-concept among pre, mid and post test measurements of female university students in the combined physical fitness training with group counseling group:

activity

14. There were no significant differences in the following subscales of physical self-concept among pre, mid and post test measurements of female university students in the group counseling group and control group:

activity, coordination, endurance, flexibility, body fat, appearance, sport competence, health, strength, global physical self-worth, self-esteem.

15. There were no significant differences in the following subscales of physical self-concept among pre, mid and post test measurements of female university students in the physical fitness group:

coordination, endurance, body fat, appearance, sport competence, health, strength, global physical self-worth, self-esteem.

16. There were no significant differences in the following subscales of physical self-concept among pre, mid and post test measurements of female university students in the combined physical fitness training with group counseling group:

coordination, endurance, flexibility, body fat, appearance, sport competence, health, strength, global physical self-worth, self-esteem.

17. There was a significant time and group interaction on the following subscales of the physical self-concept based on 10 week treatment :

activity, sport competence, coordination, strength.

6.2. Implications for Practice and Research

1. It is recommended that narrower, situation -specific self-concept scales should be employed customarily along with global self-concept scale to accurately investigate the effects of any types of treatment.
2. It is recommended that the value of the measured concepts to the individual should be assessed in detail with various techniques, for understanding the contribution of each component to the global self-concept.
3. Since there are different approaches and techniques in the physical fitness training and group counseling, it would be better to determine the effects of these different

physical fitness training and group counseling approaches on the self-concept and physical self-concept.

4. It would be better to use longer training periods and group experiences to help the individuals to explore the significant changes in their psychological self and physical self.
5. For testing the effects of physical fitness training on the self-concept and physical self-concept, it would be better to relate self-concept and physical self-concept changes with physical fitness parameter changes. In other words, to correlate both measures could provide more detailed information about the changes in both selves of the individual.
6. It is recommended that follow-up assessment should be employed to determine the permanence or centrality of the experimental effects. In order to find out the post interpretations of the subjects some questionnaires or interview strategies could be recommended.
7. It is recommended that the effects of the physical fitness training , group counseling and combination group counseling and physical fitness training on the self-concept and physical self-concept should be examined with regard to gender. In other words, gender differences should be explored in future studies.
8. As well as gender, subjects at different age levels could be included in the studies for comparative purposes.
9. For testing the effects of group experiences on the self-concept and physical self-concept qualitative approaches as well as quantitative approaches are recommended.

10. It is recommended that individual and subgroup changes and change patterns should be examined, as well as total group mean changes.
11. Group contents could be designed according to the specific needs of the subjects to increase the effectiveness of the programs.

REFERENCES

American College Sport Medicine. (1991). Guidelines for exercise testing and prescription (4th. Edition). London: Lea and Febiger.

American College Sport Medicine. (1993). Resource manual for guidelines for exercise testing and prescription. Philadelphia: Lea and Febrger.

Aşçı, F.H., Aşçı, A., & Zorba, E. (1995). Kendini fiziksel algılama envanterinin geçerlilik ve güvenirlik çalışması (Summary). Proceedings of the 5th National Sport Medicine Congress, 44.

Aşçı, F. H., Kin, A., and Koşar, N. (1996). 8 haftalık aerobik ve step etkinliğine katılımın fiziksel algılama ve beden imgesinden hoşnut olma üzerine etkisi (Summary). Proceedings of the IV Sport Science Congress, 72.

Altmann, H.A., and Black, D.B. (1978). Enhancing student self-concept with communication skill training. Small Group Behavior, 9, 1, 80-91.

Anshel, M.H. , Muller, D., and Owens, V.L. (1986). Effect of a sports camp experience on the multidimensional self-concepts of boys. Perceptual and Motor Skills, 63, 363-366.

Baker, S. B., Thomas, R. N., and Munson, W. W. (1983). Effects of cognitive restructuring and structured group discussion as primary prevention strategies. The School Counselor, September, 26-33.

Bayer, D. L (1986). The effects of two methods of affective education on self-concept in seventh-grade students. The School Counselor, November, 123-133.

Betz, N. E. (1994). Self-concept theory in career development and counseling. The Career Development Quarterly, September, 43, 32-42.

Bıyıklı, L. (1989). Bedensel özürlü çocukların benlik kavramı (Aile kabul düzeyi açısından). Ankara Üniversitesi Eğitim Bilimleri Fakültesi, Ankara.

Blackman, L., Hunter, G., Hilyer, J., and Harrison, P. (1988). The effects of dance team participation on female adolescent physical fitness and self-concept. Adolescence, XXIII, 90, 437-447.

Bolton, B. (1976). Factorial validity of TSCS. Psychological Reports, 39, 947-954.

Bompa, T. O. (1994). Theory and methodology of training: The key to athletic performance. Iowa: Kendal Hunt Publishing Company.

Bothwell, J. H. (1989). The effects of an aerobic exercise program on self-concept, health, locus of control and health related behaviors of Indians. Dissertation Abstracts International, 50, 6, 2613 (B).

Brane, R., and Reznikoff, M. (1989). Strength gains, locus of control and self-description of college football players. Perceptual and Motor Skills, 69, 483-493.

Braucht, S., and Weime, B. (1992). The school counselor as consultant on self-esteem: An example. Elementary School Guidance and Counseling, 26, 229-236.

Brown, R. D., and Joyce, M.H. (1986). The effects of a strength training program on the strength and self-concept of two female age groups. Research Quarterly for Exercise and Sport, 57, 4, 315-320.

Brown, E. Y., Morrow, J. R., and Livingston, S. M. (1982). Self-concept changes in women as a result of training. Journal of Sport and Exercise Psychology, 4, 354-363.

Bucaria, L. J. (1989). The relation of sport status to body image, self-esteem and fearfulness in high school adolescents. Dissertation Abstract International, 50, 9, 3086 A.

Burn, R. (1982). Self-concept development and education. New York: Holt, Rinehart and Winston.

Byrne, B. M., and Shavelson, R. J. (1986). On the structure of adolescent self-concept. Journal of Educational Psychology, 78, 6, 474-481.

Calhoun, G. (1987). Enhancing self-perception through bibliotherapy. Adolescence, XXII, 8, 939-943.

Can, G. (1990). Lise Öğrencilerinin Benlik Tasarımlarını Etkileyen Etmenler. Eskişehir: Anadolu Üniversitesi Yayınları

Cangelosi, A., Gressard, C. F., and Mines, R. A. (1980). The effects of a rational thinking group on self-concepts in adolescents. The School Counselor, May, 357-361.

Caruso, C. M., and Gill, D. L. (1992). Strengthening physical self-perceptions through exercise. The Journal of Sports Medicine and Physical Fitness, 32, 4, 416-427.

Cocklin, J. C. (1988). The effects of physical fitness and body cathexis on self-concept change in women after aerobic conditioning. Dissertation Abstracts International, 49, 19, 4594 B.

Colingwood, T. R., and Willet, L. (1971). The effects of physical training upon self-concept and body attitude. Journal of Clinical Psychology, 27, 411-412.

Combs, A. W., and Snygg, D. (1959). Individual Behavior. A Perceptual Approach to Behavior (Rev. Ed.). New York: Harper and Row Publishers.

Cooker, P. G., and Caffey, C. A. (1984). Addressing the cognitive and affective needs of college athletes: Effects of group counseling on self-esteem, reading skills, and coaches perceptions of attitude. Journal of Sport Psychology, 6, 377-384.

Emresoy, H. (1995). The comparison of self-concept and attitudes toward people with disabilities of the parents of normal children and children with mild mental disabilities. Unpublished master's thesis, METU, Ankara.

Epstein, S. (1973). The self-concept revisited: Or a theory of a theory. American Psychologist, 28, 404-416.

Ersanlı, K. (1991). Benliğin gelişimi ve görevleri. Ondokuz Mayıs Üniversitesi.

Finando, S. J., Croteau, J. M., Sane, D., and Woodson, R. (1977). The effects of group type on changes of self-concept. Small Group Behavior, 8, 2, 123-134.

Fleming, J. S. And Courtney, B. E. (1984). The dimensionality of self-esteem: II. Hierarchical facet model for revised measurements scales. Journal of Personality and Social Psychology, 46, 404-421.

Folkins, C. H., and Sime, W. E. (1981). Physical Fitness Training and Mental Health. American Psychologist, 36, 4, 373-389.

Fox, K. (1988). The child's perspective in physical education. The Self-Esteem Complex. The British Journal of Physical Education, 19, 6, 247-252.

Fox, K. R. (1990a). The physical self-perception profile. Manual, Northern Illinois University.

Fox, K. R. (1990b). Physical education and development of self-esteem in children. N. Armstrong (Ed.), New Direction in Physical Education. Champaign: Human Kinetics.

Fox, K. R., and Corbin, C. B. (1989). The physical self-perception profile: Development and preliminary validation. Journal of Sport and Exercise Psychology, 11, 408-430.

Geist, C. R. And Borecki, S. (1982). Social avodiance and distress as a predictor of perceived locus of control and level of self-esteem. Journal of Clinical Psychology, 38, 611-613.

Gençtan, E. (1984). Psikanaliz ve sonrası. Ankara: Maya Yayıncılık.

Gergen, K. J. (1971). The Concept of Self. New York: Holt, Rinehart and Winston, Inc.

Gysin, O. J. (1989). Effects of a weight training conditioning program on the self-concepts of selected male students. Dissertation Abstracts International, 50, 7, 3204 B.

Hadley, H. R. (1988). Improving reading scores through a self-esteem intervention program. Elementary School Guidance and Counseling, 22, 3, 248-252.

Hamacheck, D. E. (1971). Encounters with the self. New York: Holt, Rinehart and Winston Inc.

Hansen; J. C., Warner, R. W., & Smith, E. J. (1980). Group Counseling: Theory and Process. Boston: Houghton Mifflin Company.

Hansford, B. C., & Hattie, J. A. (1982). The relationship between self and achievement / performance measures. Review of Educational Research, 52, 1, 123-142.

Harter, S. (1982). The perceived competence scale for children. Child Development, 53, 87-97.

Harter, S. (1985a). Self-Perception Profile For Children. Manual, University of Denver.

Harter, S. (1985b). Competence as a dimension of self-evaluation: Toward a comprehensive model of self-worth. In R. Leahy (Ed.) The Development of Self. Orlonda: Academic Press.

Harter, S. (1986). Process underlying the construction and enhancement of self-concept in children. In J. and Suls, A. G. Greenwald (Eds.), Psychological Perspectives on the self. Vol. 3. Hillsdale N. J: Lawrence Erbaum Associates.

Harter, S. (1987). The determinants and nediational role of global self-worth in children. In N. Eisenberg (Eds.), Contemporary topics in developmental psychology. New York: John Wiley and Sons.

Harter, S. (1988 a). Issues in the assessment of the self-concept of children and adolescents. In A. La Greca (Ed.), Childhood Assessment: Through the Eyes of Child. New York: Allyn and Bacon. 292-235.

Harter, S. (1988 b). The Self-Perception Profile for Adolescent. Manual, University of Denver.

Harter, S. (1990). Causes, correlates and functional role of global self-worth: A life span perspective In J. Kolligan and R. Sternberg (Eds.), Perceptions of Competence and Incompetence Across The Life Span. New Haven, CT. : Yale University Press.

Hatfield, B. D., Vaccara, P., & Benedict, G. J. (1985). Self-concept responses of children to participate in an 8 week precision jump rope program. Perceptual and Motor Skills, 61, 1275-1279.

Hawkins, D. B., and Gruber, J. J. (1982). Little league baseball and player's self-esteem. Perceptual and Motor Skills, 55, 1335-1340.

Henderson, P.A., Kelbey, T. J., and Engebretson, K. M. (1992). Effects of a stress control program on children's locus of control, self-concept, and coping behavior. The School Counselor, 40, 125-130.

Heyward, V. H. (1991). Advanced fitness assessment & exercise prescription. Illinois: Human Kinetics Books.

Hilyer, J. C., Jenkins, C. W., Deaton, W. L, Dillon, C., Meadows, M. E., and Wilson, G. D. (1980). Physical dimensions of counseling: perspective for the helping professions. Counselor Education and Supervision, December, 101-116.

Hilyer, J. C., and Mitchell, W. (1979). Effect of systematic physical fitness training combined with counseling on the self-concept of college students. Journal of Counseling Psychology, 26, 5, 427-436.

Hockey, R.V. (1989) Physical fitness: The pathway to healthful living. Toronto: Times Mirror/ Mosby College Publishing.

Jackson, S., and Marsh, H. W. (1986). Athletic or antisocial: The female sport experience. Journal of Sport Psychology, 8, 198-211.

Jasnoski, M. L., Holmes, D. S., Solomon, S., and Aguiar, C. (1981). Exercise, change in aerobic capacity and changes in self-perceptions: An experimental investigation. Journal of Research in Personality, 15, 460-466.

Jones, R. N. (1995). The theory and practice of counseling. London: Casel Company.

Kaplan, L. S. (1995). Self-esteem is not our national wonder drug. The School Counselor, 42, 341-345.

Kelly, E. W., and Matthews, D. B. (1971). Group counseling with discipline problem children at the elementary school level. School Counselor, 18, 273-278.

Klemke, L. W. (1977). Sociological perspectives on self-concept changes in sensitivity training groups. Small Group Behavior, 8, 2, 135-147.

Koacher, G. P. (1971). Swimming, Competence, and Personality Change. Journal of Personality and Social Psychology, 18, 3, 275-278.

Koyuncu, N. (1979). Üstün yetenekli öğrencilerin benlik tasarımı ve rehberlik hizmetleri. Yayınlanmamış Yüksek Lisans Tezi, Ankara Üniversitesi, Ankara.

Lee, J. M. (1988). An investigation of the effects of selected physical education activities upon self-concept of college students. Dissertation Abstracts International, 49, 10, 2963 A.

Levin, J., Karnie, E. and Frankel, Y. (1978). Analysis of the TSCS as a faceted instrument. Psychological Reports, 43, 619-623.

Mackeen, B. A. , and Herman, A. (1974). Effects of group counseling on self-esteem. Journal of Counseling Psychology, 21, 3, 210-214.

Marsh, H. W. (1990). A multidimensional, hierarchical self-concept: Theoretical and emprical justification. Educational Psychology Review, 2, 77-171.

Marsh, H. W. (1992). Self-Description Questionnaire II: Manual. Sydney: University of Western Sydney, Macarthur, Faculty of Education, Publication Unit.

Marsh, H. W. (1993). Physical fitness self-concept: relations of physical fitness to field and technical indicators for boys and girls aged 9-15. Journal of Sports and Exercise Psychology, 15, 184-206.

Marsh, H. W. (1994). The importance of being important: Theoretical models of relations between specific and global components of physical self-concept. Journal of Sport and Exercise Psychology, 16, 306-325.

Marsh, H. W. (1996). Construct validity of physical self-description questionnaire responses: Relations to external crtiteria. Journal of Sport and Exercise Psychology, 18, 111-134.

Marsh, H. W., Barnes, J., Cairns, L., and Tidman, M. (1984). Self-description questionnaire: Age and sex effects in the structure and level of self-concept for preadolescent children. Journal of Educational Psychology, 76, 5, 940-956.

Marsh, H. W., Barnes, J., and Hocevar, D. (1985). Self-other agreement on multidimensional self-concept ratings: Factor analysis and multimethod analysis. Journal of Personality and Social Psychology, 49, 5, 1360-1377.

Marsh, H. W., and Jackson, S. A. (1986). Multidimensional self-concepts, masculinity and femininity as a function of women's involvement in athletics. Sex Roles, 15, 391-416.

Marsh, H. W., and Parker, J. W. (1984). Determinants of student self-concept: Is it better to be a relatively large fish in a small pond even if you don't learn to swim as well. Journal of Personality and Social Psychology, 47, 213-231.

Marsh, H. W. and Peart, N. D. (1988). Competitive and cooperative physical fitness training programs for girls: Effects on physical fitness and multidimensional self-concept. Journal of Sport and Exercise Psychology, 10, 390-407.

Marsh, H. W., Perry, C., Horsely, C., and Roche, L. (1995). Multidimensional self concept of elite athletes: How do they differ from the general population? Journal of Sport and Exercise Psychology, 17, 70-83.

Marsh, H. W., and Redmayne, R. S. (1994). A multidimensional physical self-concept and its relations to multiple components of physical fitness. Journal of Sport and Exercise Psychology, 16, 43-55.

Marsh, H. W., Relich, J. D., and Smith, I. D. (1983). Self-Concept: The construct validity of interpretations based upon the SDQ. Journal of Personality and Social Psychology, 45, 1, 173-187.

Marsh, H. W., and Richards, G. E. (1988). Tennessee self-concept scale: Reliability, internal structure and construct validity. Journal of Personality and Social Psychology, 35, 4, 612-624.

Marsh, H. W., Richards, G. E., and Barnes, J. (1986 a). Multidimensional self-concepts: A long term follow-up of the effect of participation in an outward bound program. Personality and Social Psychology Bulletin, 12, 475-492.

Marsh, H. W., Richards, G. E., and Barnes, J. (1986 b). Multidimensional self-concept: The effect of participation in an outward bound program. Journal of Personality and Social Psychology, 50, 195-204.

Marsh, H. W., Richards, G. E., Johnson, S., Roche, L., and Tremayne, P. (1994). Physical self-description questionnaire: psychometric properties and an multitrait-multimethod analysis of relations to existing instruments. Journal of Sport and Exercise Psychology, 16, 270-305.

Marsh, H. W.,and Shavelson, R. J. (1985). Self-concept: Its multifaceted, hierarchical structure. Educational Psychologist, 20,107-125.

Marsh, H. W.,and Smith, I. D. (1982). Multitrait-multimethod analyses of two self-concept instruments. Journal of Educational Psychology, 74, 430-440.

Marsh, H. W., Smith, I. D., Barnes, J., and Butter, S. (1983). Self-concept: Reliability, stability, dimensionality, validity and the measurement of change. Journal of Educational Psychology, 75, 5, 772-790.

Marsh, H. W., and Sonstroem, R. J. (1995). Importance ratings and specific components of physical self-concept: Relevance to predicting global components of self-concept and exercise. Journal of Sport and Exercise Psychology, 17, 84-104.

McDonald, D. G., and Hodgdon, J. A. (1991). The psychological effects of aeorobic fitness tarining: Research and theory. NewYork: Springer-Verlag.

McDonald, R. G. , and Howe, C. Z. (1989). Challenge/initiative recreation program for low self-concept children. Journal of Leisure Research, 21,3, 242-253.

McGowan, R. W., Jarman, B. O., and Pedersen, D. M. (1974). Effects of a competitive endurance training program on self-concept and peer approval. The Journal of Psychology, 86-57-60.

Mclnman, A. D., and Berger, B. G. (1993). Self-concept and mood changes associated with aerobic dance. Australian Journal of Psychology, 4, 5, 3, 134-140.

Miller, B. S. (1988). Dance/Movement: effects on elderly self-concept. Journal of Physical Education, Recreation and Dance, May June, 42-46.

Miller, R. (1989). Effects of sports instruction on children self-concept. Perceptual and Motor Skills, 68, 239-242.

Nash, J. (1970). Developmental Psychology: A psychobiological Approach. New Jersey: Prentice Hall.

Neal, R . B. (1981). The effect of group counseling and physical fitness programs on self-esteem and cardiovascular fitness. Educational Resources Information Centre.

O'Dell, S., and Seiler, G. (1975). The effects of short-term personal growth groups on anxiety and self-perception. Small Group Behavior, 6, 3, 251-271.

Olu, S. S. (1990). Effects of training in basketball and field hockey skills on self-concepts of Nigerian adolescents. International Journal of Sport Psychology, 21, 121-137.

Olu, S. S. (1994). Positive change in self-concept as a function of improved performance in sports. Perceptual and Motor Skills, 78, 752-754.

O'Malley, P. , and Bachman, J. (1983). Self-esteem: Change and stability between ages 13 and 23. Developmental Psychology, 19, 257- 268.

O'Neill, M. P. (1989). Physical self-concept and psychological mood state: Their relationship to aerobic exercise. Dissertation Abstract International, 50, 10, 4780 B.

Öner, U. (1982). Benlik kavramı ile mesleki benlik kavramı arasındaki farkın akademik başarı ile ilişkisi. Yayınlanmamış Doktora Tezi, Ankara Üniversitesi, Ankara.

Öner, U. (1985). Benlik gelişimine ilişkin kuramlar. In B. Onur (Ed.) Ergenlik Psikolojisi. Ankara: Hacettepe Taş Kitapçılık.

Page, A., Fox, A. , McManus, A., and Armstrong, N. (1993, November). Profiles of self-perception change following an eight week aerobic training programme (Summary). UK Sport: Partners in Performance. Book of Abstracts, 27-28.

Pangrazi, R. (1982). Physical education, self-concept, and achievement Journal of Physical Education, Recreation and Dance, November/December, 16-18.

Parish, T. S. And Price, B. E. (1986). A comparison of self-concepts between those who have and have not sought psychological couseling. The Journal of genetic Psychology, 147, 277-278.

Philipps, S. E. (1992). Self-concept and participation in leisure activities. Perceptual and Motor Skills, 75, 1358.

Piskin, M. (1996). Self-Esteem and locus of control of secondary school children both in England & Turkey. Unpublished doctoral dissertation. University of Leicester, Leicester.

Plummer, O. K., and Koh, Y. O. (1987). Effect of "aerobics" on self-concepts of college women. Perceptual and Motor Skills, 65, 271-275.

Reddy, W. B., and Beis, T. (1977). Sensitivity training and the healthy become self-actualized. Small Group Behavior, 8, 4, 525-532.

Roid, G. H., and Fitts, W. H. (1991). Tennessee self-concept scale: Revised Manual. Western Psychological Series: USA.

Rosenberg, M. (1965). Society and Adolescent Self-Image. Princeton: Princeton University Press.

Ryckman, R. M. (1993). Theories of Personality. Fifth Edition. California: Brooks/Cole Publishing Company.

Scheirer, M. A., and Kraut, R. E. (1979). Increasing educational achievement via self-concept change. Review of Educational Research, 49, 131-150.

Scherman, A. (1989). Physical fitness as a mode for intervention with children. The School Counselor, May, 36, 328-332.

Schmidt, R. J. (1988). The effects of shotakan karate training on self-concept and eastern cultural value orientation of college men and women. Dissertation Abstracts International, 49, 10, 2952-2953-A.

Shavelson, R. J., and Bolus, R. (1982). Self-Concept: The interplay of theory and methods. Journal of Educational Psychology, 74, 1, 3-17.

Shechtman, Z., Weiser, L., and Kurtz, H. (1993). A Value clarification intervention aimed at affective education. Journal of Humanistic Education and Development, 32, 30-40.

Shindi, J. A. (1988). The effect of participation in an encounter group on the self-concepts of maladjusted children. Small Group Behavior, 19, 1, 162-168.

Sonstroem, R. J. (1984). Exercise and self-esteem. Exercise and Sport Sciences Reviews, 12, 123-155

Sonstroem, R. J., and Morgan, W. P. (1989). Exercise and self-esteem: Rationale and model. Medicine and Science in Sports and Exercise, 21, 3, 329-337.

Sonstroem, R. J., Speliotis, E. D., and Fava, J. L. (1992). Perceived physical competence in adults: An examination of the physical self-perception profile. Journal of Sport and Exercise Psychology, 14, 207-

Sosdahl, S. N., and Sanche, R. P. (1985). The effects of classroom meetings on self-concept and behavior. Elementary School Guidance and Counseling, 20, 1, 49-56.

Stake, J. E., and Pearlman, J. (1980). Assertiveness training as an intervention technique for low performance self-esteem women. Journal of Counseling Psychology, 27, 3, 276-281.

Stein, P.N., and Motta, R. W. (1992). Effects of aerobic and nonaerobic exercise on depression and self-concept. Perceptual and Motor Skills, 74, 79-89.

Stokes, R. , Moore, A. C. , Moore, C. , and Schultz, S. L. (1992). Fitness. North Carolina: Hunter Textbooks Inc.

Summerlin, M. L., Hammett, V. L., and Payne, M. L. (1983). The effect of magic circle participation on a child's self-concept. The School Counselor, September, 49-52.

Şerifi, D. (1985). Grupla psikolojik danışmanın lise öğrencilerinin problemleri ve benlik tasarımlarına olan etkisi. Unpublished doctoral dissertations. Hacettepe Üniversitesi, Ankara.

Tan, H. (1970). Akademik psikolojide ego veya benlik (self) kavramı. Hacettepe Sosyal Bilimler Dergisi, 2,1.

Trent, L. M. Y., Russell, G., and Cooney, G. (1994). Assessment of self-concept in early adolescence. Australian Journal of Psychology, 46, 1, 21-28.

TruJillo, C. M. (1983). The effect of weight training and running exercise intervention programs on the self-esteem of college women. International Journal of Sport Psychology, 14, 162-173.

Tucker, L. A. (1982). Effect of a weight training program on the self-concepts of college males. Perceptual and Motor Skills, 54, 1055-1061.

Tucker, L. A. (1983). Effect of weight training on self-concept: A profile of those influenced most. Research Quarterly For Exercise and Sport, 54, 4, 389-397.

Tucker, L. A. (1987). Effect of weight training on body attitude: Who benefits most. Journal of Sport Medicine and Physical Fitness, 27, 70-78.

Ware, J. R., and Barr, J. E. (1977). Effects of nine-week structured and unstructured group experience on measures of self-concept and self-actualization. Small Group Behavior, 93-100.

Weiss, M. R. (1987). Self-esteem and achievement in children's sport and physical activity. In G. Gould and M. R. Weiss (Eds.), Advances in Pediatric Sport Sciences. Vol. II. Behavioral Issues. Champaign Illinois: Human Kinetics Publishers.

Wells, L. E., and Marwell, G. (1976). Self-esteem: Its conceptualization and measurement. London: Sage Publications.

White, K. R. (1974). T-Groups revisited: Self-concept change and the "Fish-Bowling" technique. Small Group Behavior, 5, 4, 473-485.

Widra, J. M., and Amidon, E. (1987). Improving self-concept through intimacy group training. Small Group Behavior, 18, 2, 269-279.

Wiggins, J. D., and Wiggins, M. M. (1992). Elementary students' self-esteem and behavioral ratings related to counselor time-task emphases. The School Counselor, May, 39, 377-383.

Wilfley, D., and Kunce, J. (1986). Differential physical and psychological effects of exercise. Journal of Counseling Psychology, 33, 3, 337-342.

Wright, W. , Morris, K. T., and Fettig, B. (1974). Comparative effects of social skill development. Small Group Behavior, 5, 2, 211-221.

Wylie, R. C. (1974). The self-concept: A review of methodological consideration and measuring instrument. Lincoln: University of Nebraska Press.

Wylie, R . C. (1979). The self-concept: Theory and research on selected topics (rev. ed.). Volume II. London: University of Nebraska Press.

Zorba,E. and Ziyagil, M. A. (1995). Vücut Kompozisyonu ve Ölçüm Metodları. Trabzon.

APPENDIX A

TENNESSEE SELF-CONCEPT SCALE
(TENNESSE BENLİK KAVRAMI ÖLÇEĞİ)

YÖNERGE:

Buradaki cümleler, sizin kendinizi nasıl gördüğünüzü anlatmaya yarayan cümlelerdir. Bu soruları kendinizi kendinize anlatıyormusunuz gibi düşünerek cevaplandırınız. Hiçbir maddeyi atlamayınız, hepsine cevap vermeye çalışınız. Her maddeyi dikkatle okuyup size en uygun seçeneği cevap kağıdında seçiniz eğer ilk cevabınızı değiştirmek isterseniz lütfen üzerine X işareti koyun yeni cevabınızı daire için seçiniz. Teşekkürler.

Tamamen Yanlış 1	Çoğunlukla Yanlış 2	Bazen doğru ve Bazen yanlış 3	Çoğunlukla doğru 4	Tamamen doğru 5

1. Sağlıklı bir vücuda sahibim
3. Çekici bir kişiyim
5. Kendimi peşmürde ve dağınık biri olarak görürüm.
19. Terbiyeli bir kişiyim
21. Dürüst bir kişiyim
23. Kötü bir kişiyim
37. Neşeli bir kişiyim.
39. Sakin ve rahat bir kişiyim.
41. Ben hiçbir işe yaramayan biriyim.
55. Bana her problemimde yardım edecek bir ailem var
57. Mutlu bir ailenin üyesiyim.
59. Arkadaşlarımın bana güveni yok.
73. Arkadaş canlısı biriyim.
75. Erkekler arasında popüler biriyim.
77. Başkalarının ne yaptığı ile ilgilenmem

91. Her zaman doğruyu söylemem
93. Bazen kızarım
2. Her zaman hoş ve temiz görünmeyi isterim
4. Ağrılarım ve sızılarım var
6. Hasta bir kişiyim
20. Dindar bir kişiyim
22. Ahlaki yönden başarısızım.
24. Ahlaki değerleri zayıf bir insanım
38. Kendimi çok iyi kontrol ederim
40. Nefret dolu bir insanım.
42. Aklımı kaçırmak üzereyim.
56. Arkadaşlarım ve ailem için önemli biriyim.
58. Ailem tarafından sevilmiyorum.
60. Ailemin bana güvenmediğini hissediyorum.
74. Kadınlar arasında popüler biriyim
76. Bütün dünyaya kızgınım
78. Arkadaş olunması güç biriyim
92. Bazen konuşulmayacak derecede kötü şeyler düşünürüm.
94. Bazen kendimi iyi hissetmediğim zamanlar çekilmez olurum.
7. Ne çok şişmanım ne de çok zayıf
9. Görünüşümden memnunum
11. Vücudumun bazı kısımlarını değiştirmeyi isterdim
25. Ahlaki değerlerim açısından kendimden memnunum
27. Tanrı ile olan ilişkimden memnunum
29. Daha çok ibadet etmeliyim.
43. Kendimden şu andaki halimle memnunum
45. Olmam gerektiği kadar iyi biriyim.
47. Kendimi hor görürüm.
61. Aile ilişkilerimden memnunum
63. Ailemi gerektiği kadar iyi anlıyorum.
65. Aileme daha çok güvenmeliyim
79. Olmak istediğim kadar sosyal biriyim.
81. Başkalarını memnun etmeye çalışırım, ancak aşırıya kaçmam
83. Sosyal yönden hiç iyi değilim
95. Tanıdığım her kişiyi sevmem
97. Ara sıra, ayıp (açık-seçik) şakalara gülerim.
8. Ne çok uzunum ne de çok kısa
10. Kendimi olmam gerektiği gibi hissetmiyorum.
12. Daha seksi görünüşlü olmalıyım
26. Olmak istediğim kadar dindarım.
28. Daha güvenilir olmayı isterdim.
30. Çok fazla yalan söylememeliyim.
44. Olmak istediğim kadar akıllı biriyim.
46. Olmak istediğim gibi biri değilim.
48. Kolayca pes eden biri olmamayı tercih ederdim.
62. Aileme gerektiği kadar iyi davranıyorum.

64. Ailemin söylediği şeylere karşı çok hassasım.
66. Ailemi daha çok sevmeliyim.
80. Başkalarına karşı davranış biçimimden memnunum.
82. Başkalarına karşı daha nazik olmalıyım.
84. Başkalarıyla daha iyi geçinmeliyim.
96. Bazen dedikodu yaparım.
98. Bazen küfretmek istediğimi hissederim.
13. Kendime iyi bakarım.
15. Dış görünüşüme dikkat etmeye çalışırım.
17. Sık sık aptalmışım gibi davranırım.
31. Günlük yaşamımda dinimin kurallarına bağlıyımdır.
33. Birşeyleri yanlış yaptığımı hissettiğimde değiştirmeye çalışırım.
35. Bazen kötü şeyler yaparım.
49. Her zaman her durumda kendimi idare edebilirim.
51. Kızmadan kusurumu kabul ederim.
53. Üzerinde önce düşünmeden yaptığım şeyler olur.
67. Arkadaşlarıma ve aileme dürüst davranmaya çalışırım.
69. Ailemle çok ilgiliyimdir.
71. Annem ve babama itiraz etmem
85. Başkalarının bakış açılarını anlamaya çalışırım
87. Diğer insanlarla iyi geçinirim
89. Başkalarını kolay kolay affetmem
99. Bir oyunda kaybetmek yerine kazanmayı yeğlerim
14. Çoğu zaman kendimi iyi hissederim
16. Sporda ve çeşitli oyunlarda pek başarılı değilimdir
18. İyi uyuyamam
32. Çoğu zaman doğru olanı yaparım
34. Bazen yolumda ilerlemek için haksız yollara başvururum
36. Doğru olanı yapmakta zorluk çekerim
50. Problemlerimi oldukça kolay çözerim
52. Çok sık fikir değiştiririm
54. Problemlerimden kaçmaya çalışırım
68. Evde bana düşen işleri yaparım
70. Ailemle münakaşa ederim
72. Ailemin uygun gördüğü gibi davranmam
86. Tanıştığım herkeste iyi yönler görürüm
88. Başkalarının yanında kendimi rahat hissetmiyorum
90. Yabancılarla konuşmakta güçlük çekerim
100. Bazen bugün yapmam gerekeni yarına bırakırım

APPENDIX B

MARSH PHYSICAL SELF-DESCRIPTION QUESTIONNAIRE (KENDİNİ FİZİKSEL TANIMLAMA ENVANTERİ)

AÇIKLAMA

Bu sizin kendinizi tanımanızın için bir fırsattır.. Bir test değildir. Burada doğru cevap yoktur ve herkes farklı cevaplara sahip olacaktır. Cevaplarınızın kendinizi nasıl algıladığınızı yansıtmasını bekliyoruz. Lütfen cevaplarınızı başka kimse ile konuşmayın. Cevaplarınız gizli tutulacaktır.

Bu çalışmanın amacı, kişilerin kendilerini fiziksel olarak nasıl tanımladığını görmektir. İleriki sayfalarda, fiziksel olarak kendiniz hakkında nasıl düşündüğünüz sorulacaktır. Örneğin; kendinizi nasıl gördüğünüz, ne kadar güçlü olduğunuz, sporda ne kadar başarılı olduğunuz, düzenli olarak egzersiz yapıp yapmadığınız, fiziksel olarak koordineli olup olmadığınız, sık sık hasta olup olmadığınız. Her cümleyi o anda hissetiğiniz gibi üzerinde uzun uzun düşünmeden cevaplandırın. Hiç bir cümleyi boş bırakmayın.

Hazır olduğunuzda başlayın, lütfen her cümleyi okuyun ve cevabınıza karar verin. Her cümle için olası olan 6 cevap vardır- tamamen doğru, tamamen yanlış - ve bunların arasında 4 cevap. Her cümlenin yanında 6 cevap vardır, her cümle için birini işaretleyin. Cevabınızı seçin ve seçtiğiniz cevabın numarasını daire içine alın. Cevabınızı yüksek sesle söylemeyin veya başka biri ile cevabınızla ilgili konuşmayın.

Başlamadan önce aşağıda 3 örnek vardır. Sizin için 3 cümleden ikisini nasıl cevaplandıracağınızı göstermek için cevaplandırdım. Siz de üçüncü cümle için cevabınızı seçin ve onu daire içine (0) alın.

Tamamen Yanlış	Genellikle Yanlış	Kısmen Yanlış	Kısmen Doğru	Genellikle Doğru	Tamamen Doğru
1	2	3	4	5	6

Komik kitaplar okumaktan hoşlanırım.

(6 numaralı cevabı yani Tamamen Doğru cevabını daire içine alsam, bunun anlamı komik kitaplar okumaktan gerçekten hoşlandığımdır. Eğer komik kitaplar okumaktan hoşlanmasaydım 1 veya 2 numaralı cevabı daire içine alırdım)

Tamamen Yanlış	Genellikle Yanlış	Kısmen Yanlış	Kısmen Doğru	Genellikle Doğru	Tamamen Doğru
1	2	3	4	5	6

Genel olarak, temiz ve düzenliyimdir.

(Kısmen yanlışı işaretledim çünkü , ne kesinlikle tamamen düzenliyim ne de tamamen gerçekten dağınığım).

Tamamen Yanlış	Genellikle Yanlış	Kısmen Yanlış	Kısmen Doğru	Genellikle Doğru	Tamamen Doğru
1	2	3	4	5	6

TV seyretmekten hoşlanırım.

(Bu cümle için size en uygun olanı seçin ve cevaplandırın. Önce, cümlenin sizin için tamamen doğru-tamamen yanlış veya bunları arasında mı olduğuna karar verin. Eğer gerçekten TV seyretmekten hoşlanıyorsanız ***Tamamen Doğru*** *cevabını, 6 numarayı daire içine alın. Eğer TV seyretmekten nefret ediyorsanız,* ***Tamamen Yanlış*** *cevabını, 1 numarayı daire içine alın. Eğer TV seyretmeyi çok sevmiyorsanız ama arasıra seyrediyorsanız, 2 numarayı veya 3 numarayı daire içine alın).*

Eğer cevabınızı değiştirmek istiyorsanız işaretlediğiniz dairenin üstüne çarpı koyun ve size uygun yeni cevabı daire içine alın. Daire içine aldığınız cevabın cümle ile aynı çizgide olmasına dikkat edin. Her cümle için bir cevabı daire içine alın. Cümleleri hangi numarayı daire içine alacağınızdan emin olmasanız bile boş bırakmayın. Eğer bir sorunuz varsa el kaldırın, sorunuzu sorun ve daha sonra başlayın. Gösterceğiniz ilgi ve özene teşekkür ederim.

KENDİNİ FİZİKSEL TANIMLAMA ENVANTERİ

	Tamamen yanlış	Genellikle yanlış	Kısmen yanlış	Kısmen doğru	Genellikle doğru	Tamamen doğru
1. Hastalandığımda kendimi o kadar kötü hissederimki, yataktan bile çıkamam	1	2	3	4	5	6
2. Koordinasyon gerektiren hareketleri yaparken kendimi rahat hissederim.	1	2	3	4	5	6
3. Haftada birkaç kez soluk soluğa kalacak kadar şiddetli egzersiz yapar ya da oynarım	1	2	3	4	5	6
4.Çok şişmanım	1	2	3	4	5	6
5. Diğer insanlar sporda iyi olduğumu düşünürler	1	2	3	4	5	6
6.Sahip olduğum fiziki görünüşümden memnunum.	1	2	3	4	5	6
7. Yaşıma göre çekiciyim.	1	2	3	4	5	6
8. Fiziksel olarak güçlü biriyim	1	2	3	4	5	6
9. Vücudumu eğme, bükme ve döndürmede oldukça iyiyim.	1	2	3	4	5	6
10. Hiç durmadan uzun mesafe koşabilirim.	1	2	3	4	5	6
11. Genelde, yaptığım şeylerin çoğu iyi sonuç verir.	1	2	3	4	5	6
12.Genellikle etrafta ne hastalık (grip, virüs, soğukalgınlığı vs) varsa yakalanırım.	1	2	3	4	5	6
13.Benim için vücut hareketlerimi kontrol etmek kolaydır.	1	2	3	4	5	6
14. Sık sık nefes açıcı hareketler ve egzersizler yaparım.	1	2	3	4	5	6
15. Belim çok kalındır	1	2	3	4	5	6
16. Birçok spor dalında iyiyimdir.	1	2	3	4	5	6
17. Fiziksel olarak kendimden memnunum.	1	2	3	4	5	6
18. Hoş görünen bir yüzüm var.	1	2	3	4	5	6
19. Çok enerji doluyum.	1	2	3	4	5	6

20. Vücudum esnektir	1	2	3	4	5	6
21. Fiziksel dayanıklılık gerektiren testleri iyi yapabilirim.	1	2	3	4	5	6
22. Kendimle gurur duyabileceğim çok fazla şeyim yok.	1	2	3	4	5	6
23. O kadar sık hasta oluyurum ki yapmak istediğim şeylerin çoğunu yapamıyorum.	1	2	3	4	5	6
24. Koordineli etkinliklerde iyiyim.	1	2	3	4	5	6
25. Haftada 3 veya 4 defa, en az 30 dakika süren nefes açan egzersiz ve hareketler yaparım.	1	2	3	4	5	6
26. Vücudum yağlıdır.	1	2	3	4	5	6
27. Sporların çoğu benim için kolaydır.	1	2	3	4	5	6
28. Görünüşümden ve fiziksel olarak yapabildiklerimden memnunum.	1	2	3	4	5	6
29. Arkadaşlarımın çoğundan daha iyi görünümlüyüm.	1	2	3	4	5	6
30. Yaşıtlarımın çoğundan daha kuvvetliyim.	1	2	3	4	5	6
36. Haftada en az 3 kez fiziksel hareketler yaparım (Jogging, dans, bisiklete binmek, aerobik, jimnastik, yüzmek)	1	2	3	4	5	6
37. Fazla kilolarım vardır.	1	2	3	4	5	6
38. İyi spor becerilerine sahibim.	1	2	3	4	5	6
39. Fiziksel olarak kendimi iyi hissederim.	1	2	3	4	5	6
40. Çirkinim	1	2	3	4	5	6
41. Zayıfım ve kaslarım güçsüzdür.	1	2	3	4	5	6
42.Vücudum birçok yönde iyi şekilde bükülebilir ve hareket eder.	1	2	3	4	5	6
43.Hiç yorulmadan uzun mesafe koşabileceğimi düşünüyorum.	1	2	3	4	5	6
44. Genelde başarılı değilim.	1	2	3	4	5	6
45. Çok hastalanırım.	1	2	3	4	5	6
46.Koordineli hareketleri yaparken vücudumun zorlanmadığını hissederim	1	2	3	4	5	6

47. Sporların çoğunu yaparım, dansederim, jimnastik veya diğer fiziksel etkinlikleri yaparım.	1	2	3	4	5	6
48. Göbeğim çok fazladır.	1	2	3	4	5	6
49. Sporda birçok arkadaşımdan daha iyiyim.	1	2	3	4	5	6
50.Kim olduğumdan ve fiziksel olarak yapabileceklerimden hoşnutum.	1	2	3	4	5	6
51. İyi bir görünüşe sahibim.	1	2	3	4	5	6
52. Bir kuvvet testinde iyi sonuç alırım.	1	2	3	4	5	6
53. Birçok spor dalı için yeterince esnek olduğumu düşünüyorum.	1	2	3	4	5	6
54. Yorulmadan uzun bir süre fiziksel olarak aktif olabilirim.	1	2	3	4	5	6
55. Yaptığım şeylerin çoğunu iyi yaparım.	1	2	3	4	5	6
56. Hasta olduğumda iyileşmem uzun sürer.	1	2	3	4	5	6
57. Spor ve buna benzer değişik etkinlikler yaparken koordineli ve mükemmelimdir.	1	2	3	4	5	6
58. Hemen hemen hergün spor yaparım, dans ederim veya diğer fiziksel hareketleri yaparım.	1	2	3	4	5	6
59. İnsanlar şişman olduğumu düşünüyor.	1	2	3	4	5	6
60. Sporda başarılıyım.	1	2	3	4	5	6
61.Fiziksel kimliğim konusunda kendimi iyi hissederim.	1	2	3	4	5	6
62. Hiç kimse iyi görünüşlü olduğumu düşünmüyor.	1	2	3	4	5	6
63 Ağırlık kaldırmada iyiyim.	1	2	3	4	5	6
64. Bence bir esneklik testinde iyi sonuç alırım.	1	2	3	4	5	6
65. Uzun mesafe koşusu, aerobik bisiklete binme, yüzme gibi mukavemet gerektiren etkinliklerde başarılıyım.	1	2	3	4	5	6
66. Genel olarak, kendimle gurur duymak için çok şeye sahibim.	1	2	3	4	5	6

67. Hastalıklar yüzünden yaşıtlarımın çoğundan daha fazla doktora gitmek zorunda kalıyorum.	1	2	3	4	5	6
68. Genelde başarısızım.	1	2	3	4	5	6
69. Arkadaşlarım hasta olsalar bile genellikle ben sağlıklı kalırım.	1	2	3	4	5	6
70. Yaptığım hiçbirşey yolunda gitmeyecekmiş gibi görünüyor.	1	2	3	4	5	6

APPENDIX C

PHYSICAL SELF-PERCEPTION PROFILE
(KENDİNİ FİZİKSEL OLARAK ALGILAMA ENVANTERİ)

AÇIKLAMA:

Burada sizin kendinizi tanımlamanıza imkan veren bazı cümleler verilmiştir. Her birey diğer bireylerden farklı olduğundan bu ankette doğru veya yanlış cevap yoktur. Öncelikle yapmanız gereken farklı iki bireyi anlatan cümlelerden sizi en iyi tanımlayanı seçmektir; daha sonra seçtiğiniz cümlenin tarafında "TAM BANA UYGUN" ve "BANA KISMEN UYGUN" ifadeleri ile belirtilen benzeşme derecelerinden birisini işaretlemektir.

Göstereceğiniz ilgi ve özene şimdiden teşekkür ederiz.

ÖRNEK:

TAM BANA UYGUN [ ]	BANA KISMEN UYGUN [ ]				BANA KISMEN UYGUN [ ]	TAM BANA UYGUN [ ]
		Bazı kişiler çok yarışçıdırlar.	FAKAT	Diğerleri o kadar yarışçı değillerdir.		

TANIMLAR:

FİZİKSEL UYGUNLUK: Spora katılımda temel oluşturan, hastalıklara ve günlük yaşamın zorluklara karşı koymak için gerekli olan kalp-dolaşım dayanıklılığı, kas kuvveti ve dayanıklılığı, esneklik vücut kompozisyonu gibi faktörlerin fizyolojik olarak sağlıklı olma hali.

FİZİKSEL ÖZELLİKLER: Kişinin fiziki görünüşü, spor faaliyetlerindeki becerisi, fiziksel davranışları, sportif faaliyetleri sürdürmek için gerekli olan dayanıklılık, hareketlilik, esneklik ve sürat gibi hareket faktörlerinin hepsini içeren kavram.

*** HER SORU İÇİN DÖRT KUTUDAN SADECE BİR TANESİNİ İŞARETLEMENİZ GEREKTİĞİNİ UNUTMAYINIZ.***

TAM BANA UYGUN	BANA KISMEN UYGUN				BANA KISMEN UYGUN	TAM BANA UYGUN
1-[ ]	[ ]	Bazı kişiler, konu spor olunca çok iyi olmadıklarını hissederler.	FAKAT	Diğerleri bütün sporlarda kendilerini gerçekten iyi hissederler.	[ ]	[ ]
2-[ ]	[ ]	Bazı kişiler fiziksel kondüsyon düzeyleri ve fiziksel uygunlukları konusunda çok rahat değillerdir.	FAKAT	Diğerleri her zaman mükemmel bir kondüsyon ve fiziksel uygunluğu sağladıklarından kendilerini rahat hissederler.	[ ]	[ ]
3-[ ]	[ ]	Bazı kişiler diğerlerine göre çekici vücuda sahip olduklarını hissederler.	FAKAT	Diğerleri başkalarına göre vücutlarının o kadar da çekici olmadığını hissederler.	[ ]	[ ]
4-[ ]	[ ]	Bazı kişiler kendi cinsiyetindeki insanların birçoğundan fiziksel olarak daha kuvvetli olduklarını düşünürler.	FAKAT	Diğerleri kendi cinsiyetinden birçok insanla karşılaştırdıklarında fiziksel kuvvetlerinin yetersiz olduğunu düşünürler.	[ ]	[ ]
5-[ ]	[ ]	Bazı kişiler fiziksel olarak yapabildiklerinden ve kim olduklarından aşırı gurur duyarlar.	FAKAT	Diğerleri fiziksel olarak yapabildiklerinden ve kim olduklarından o kadar da gurur duymazlar.	[ ]	[ ]
6-[ ]	[ ]	Bazı kişiler konu atletik yeteneğe geldiğinde en iyilerden birisi olduklarını düşünürler.	FAKAT	Diğerleri konu atletik yetenek olunca en iyiler arasında yer almadıklarını düşünürler.	[ ]	[ ]
7-[ ]	[ ]	Bazı kişiler düzenli ve ağır fiziksel egzersizlerin bazı çeşitlerine katılabileceklerinden emindirler.	FAKAT	Digerleri çoğunlukla düzenli ve ağır fiziksel egzersizleri sürdürmeyi başaramazlar.	[ ]	[ ]
8-[ ]	[ ]	Bazı kişiler çekici bir vücudun sağlanmasında zorlukları olduğunu hissederler.	FAKAT	Diğerleri vücutlarının çekici görünüş-ünü kolaylıkla sağlayabileceklerini düşü-nürler.	[ ]	[ ]

9-[ ]	[ ]	Bazı kişiler kendi cinsiyetindeki birçok kişiden kaslarının daha güçlü olduğunu düşünürler.	FAKAT	Diğerleri tüm kaslarının kendi cinsiyetindeki birçok kişininki kadar güçlü olmadığını hissederler.	[ ]	[ ]
10-[ ]	[ ]	Bazı kişiler bazen oldukları görünümden veya fiziksel olarak yapabildiklerinden o kadar da hoşnut değillerdir.	FAKAT	Diğerleri her zaman fiziksel olarak olduk-ları görünümlerinden hoşnutturlar.	[ ]	[ ]
11-[ ]	[ ]	Spor aktivitelerine katılmak söz konusu olduğunda bazı kişiler o kadar rahat değillerdir.	FAKAT	Diğerleri ise spor aktivitelerine katılma söz konusu olunca en rahat olanlar arasındadırlar.	[ ]	[ ]
12-[ ]	[ ]	Bazı kişiler çoğunlukla yüksek düzeyde dayanıklılığa ve fiziksel uygunluğa sahip değillerdir.	FAKAT	Diğerleri herzaman yüksek düzeyde dayanıklılığa ve fiziksel uygunluğa sahiptirler.	[ ]	[ ]
13-[ ]	[ ]	Bazı kişiler vücut hatlarını belirten giysileri giymeye gelince vücutlarından utanç duyarlar.	FAKAT	Diğerleri vücut hatlarını belirten giysileri giydiklerinde vücutlarından utanç duymazlar.	[ ]	[ ]
14-[ ]	[ ]	Bazı kişiler kuvvet gerektiren ortamlara ilk katılandırlar.	FAKAT	Bazı kişiler ise Kuvvet gerektiren ortamlara gelince son katılanlardandır.	[ ]	[ ]
15-[ ]	[ ]	Konu kişilerin kendi fiziksel özelliklerine geldiğinde bazı kişiler rahatsızlık hissederler.	FAKAT	Diğerleri kendi fiziksel özellikleri ile ilgili gerçekten rahat duyguya sahiptirler.	[ ]	[ ]
16-[ ]	[ ]	Bazı kişiler konu spor etkinliklerine katılma olunca herzaman en iyilerden biri olduklarını hissederler.	FAKAT	Diğerleri konu spor etkinliklerine katılma olunca en iyilerden biri olmadıklarını hissederler.	[ ]	[ ]
17-[ ]	[ ]	Bazı kişiler fiziksel uygunluk ve egzersiz ortamlarında biraz endişeli olma eğilimindedirler.	FAKAT	Diğerleri herzaman fiziksel uygunluk ve egzersiz ortamlarında güven ve rahatlık hissederler.	[ ]	[ ]

18-[ ]	[ ]	Bazı kişiler fiziki yapılarını çekici olarak kabul ettiklerinden çoğunlukla kendilerini beğenilmeye değer hissederler.	FAKAT	Diğerleri vücutlarının görünüşleri için nadiren beğeni aldıklarını hissederler.	[ ]	[ ]
19-[ ]	[ ]	Bazı kişiler fiziksel kuvvetleri konu olunca kendilerine güvensizlik eğilimi gösterirler.	FAKAT	Diğerleri ise fiziksel kuvvetleri konu olunca aşırı derecede rahattırlar.	[ ]	[ ]
20-[ ]	[ ]	Bazı kişiler herzaman kendi fiziksel özellikleri hakkında olumlu hislere sahiptirler.	FAKAT	Diğerleri nadiren kendi fiziksel özellikleri hakkında olumlu hislere sahiptirler.	[ ]	[ ]
21-[ ]	[ ]	Bazı kişiler spor ortamındaki yeni becerileri öğrenmede diğerlerinden biraz daha yavaştırlar.	FAKAT	Diğerleri yeni spor becerilerini öğrenmede her zaman en hızlılar arasında yer alırlar.	[ ]	[ ]
22-[ ]	[ ]	Bazı kişiler egzersizleri düzenli sürdürmede ve fiziksel kondüsyonu korumadaki yetenekleri hakkında aşırı rahatlık hissederler.	FAKAT	Diğerleri egzersizleri düzenli sürdürmede ve fiziksel kondüsyonu korumadaki yetenekleri hakkında o kadar çok rahatlık hissetmezler.	[ ]	[ ]
23-[ ]	[ ]	Bazı kişiler diğerleri ile karşılaştırdıklarında, vücutlarının en iyi şekilde görünmediğini hissederler.	FAKAT	Diğerleri başkaları ile karşılaştırdıklarında, vücutlarının her zaman mükemmel bir fiziksel görünümde olduğunu hissederler	[ ]	[ ]
24-[ ]	[ ]	Bazı kişiler birçok insanla karşılaştırdıklarında kendilerini çok güçlü ve iyi gelişmiş kaslara sahip olduklarını hissederler.	FAKAT	Diğerleri kendilerinin o kadar güçlü olmadıklarını ve kas-larının da gelişmemiş olduğunu hissederler.	[ ]	[ ]
25-[ ]	[ ]	Bazı kişiler fiziksel özellikleri için daha fazla saygı görmek isterler.	FAKAT	Diğerleri fiziksel özellikleri için her zaman büyük saygı gördüklerine inanırlar.	[ ]	[ ]

26-[ ]	[ ]	Bazı kişiler fırsat verildiğinde herzaman spor etkinliklerine ilk katılanlardandırlar.	**FAKAT**	Diğer kişiler bazen geride kalırlar ve çoğunlukla da spora ilk katılanlardan değillerdirler.	[ ]	[ ]
27-[ ]	[ ]	Bazı kişiler diğerleri ile karşılaştırdıklarında her zaman yüksek düzeyde fiziksel kondüsyona sahip olduklarını hissederler.	**FAKAT**	Diğerleri birçok insanla karşılaştırdıklarında çoğunlukla fiziksel kondüsyon düzeylerinin o kadar yüksek olmadığını hissederler.	[ ]	[ ]
28-[ ]	[ ]	Bazı kişiler vücutlarının görünüşünden aşırı rahattırlar.	**FAKAT**	Diğerleri vücutlarının görünüşleri hakkında biraz sıkılgandırlar.	[ ]	[ ]
29-[ ]	[ ]	Fiziksel kuvvet gerektiren durumlarla ilgilenmede bazı kişiler diğerleri kadar iyi olmadıklarını hissederler.	**FAKAT**	Diğerleri fiziksel kuvvet gerektiren durumlarla ilgilenmede en iyiler arasında olduklarını hissederler.	[ ]	[ ]
30-[ ]	[ ]	Bazı kişiler fiziksel olarak bulundukları hallerinden aşırı hoşnutluk duyarlar.	**FAKAT**	Diğerleri fiziksel özelliklerinden biraz hoşnutsuzdurlar.	[ ]	[ ]

APPENDIX D

COPPERSMITH SELF-ESTEEM INVENTORY
(COPPERSMITH BENLİK KAVRAMI ENVANTERİ)

YÖNERGE:

Aşağıda her insanın zaman zaman hissedebileceği bir takım durumlar maddeler halinde sıralanmıştır. Bu maddelerde belirtilen ifadeler eğer sizin genellikle hissettiklerinizi tanımlıyor ve size çoğunlukla uygun geliyorsa cevap kağıdında ilgili sorunun karşısındaki EVET sütununa bir çarpı işareti (X), bu ifadeler eğer sizin genellikle hissettiklerinizi tanımlıyor ve size çoğunlukla uygun gelmiyorsa bu durumda HAYIR sütununa bir çarpı işareti (X) koyunuz.

Bu maddelerin doğru ve yanlış cevapları yoktur. Bu nedenle yanıtlarınızı verirken mantığınızdan çok duygularınıza kulak veriniz. Araştırmaya olacak katkınızın, yanıtlarınızın dürüstlüğü oranından olacağını unutmayınız.

EVET HAYIR

( ) ( )1. Olanlara genellikle fazla bozulmam.
( ) ( )2. Sınıfın önünde konuşma yapmak bana oldukça zor gelir.
( ) ( )3. Eğer gücüm yetse değiştirmek isteyeceğim pek çok özelliğim var.
( ) ( )4. Fazla zorlanmadan karar verebilirim
( ) ( )5. Benimle birlikte olmak zevkli ve eğlencelidir.
( ) ( )6. Evde iken kolayca canım sıkılır, moralim bozulur.
( ) ( )7. Yeni birşeye alışmam çok zaman alır.
( ) ( )8. Yaşıtlarım arasında popülerim.
( ) ( )9. Annem ve babam genellikle duygularımı dikkate alır
( ) ( )10. Genellikle pek direnmeden kolayca vazgeçme gibi bir huyum var.
( ) ( )11. Ailemin benden beklentisi çok fazla
( ) ( )12. Benim yerimde olmak oldukça zordur
( ) ( )13. Hayatımdaki herşey karmakarışık
( ) ( )14. Arkadaşlarım genellikle benim fikirlerimi izlerler
( ) ( )15. Kendime ilişkin olumsuz bir imajım var
( ) ( )16. Pekçok kere evden ayrılmayı (kaçmayı) düşündüm
( ) ( )17. Okulda iken sık sık canım sıkılır
( ) ( )18. Çoğu insan kadar güzel görünüşlü biri değilim
( ) ( )19. Söyleyecek bir şeyim olduğunda genellikle onu çekinmeden söylerim
( ) ( )20. Anne ve babam beni anlayabiliyorlar
( ) ( )21. İnsanların çoğu benden daha çok seviliyor.
( ) ( )22. Çoğu zaman anne ve babamın beni sanki zorladıklarını hissediyorum.
( ) ( )23. Okulda çoğu zaman cesaretim kırılır.
( ) ( )24. Sık sık keşke başka birisi olsam diye arzularım.
( ) ( )25. Güvenilir biri değilim (bana bel bağlanılmaz).
( ) ( )26. Hiçbir şey için asla kaygı duymam
( ) ( )27. Kendimden oldukça eminim.
( ) ( )28. Sevecen birisiyim (başkaları tarafından kolayca sevilirim)
( ) ( )29. Anne ve babamla birlikte eğlencemiz neşemiz boldur.
( ) ( )30. Hayal kurmaya çok zaman harcıyorum.
( ) ( )31. Keşke daha genç olsaydım.
( ) ( )32. Her zaman doğru olanı yaparım
( ) ( )33. Okuldaki başarılarımla gurur duymaktayım.
( ) ( )34. Birileri her zaman bana ne yapmam gerektiğini bana söylemeli.
( ) ( )35. Yaptıklarım için sıkça pişmanlık duyarım.
( ) ( )36. Hiçbir zaman mutlu olmam.
( ) ( )37. Derslerimle ilgili olarak yapabileceğim en iyisini yapıyorum.
( ) ( )38. Genellikle kendime dikkat edebilirim.
( ) ( )39. Oldukça mutluyum.
( ) ( )40. Oyunu yaşça kendimden daha küçüklerle oynamayı tercih ederim.
( ) ( )41. Tanıdığım herkesi seviyorum.
( ) ( )42. Sınıfta ön plana çıkmaktan hoşlanırım.
( ) ( )43. Kendi kendimi anlayabiliyorum.

( ) ( )44. Evde hiç kimse bana fazla ilgi göstermiyor.
( ) ( )45. Hiçbir zaman asla azarlanmam.
( ) ( )46. Okulda, olmak istediğim kadar başarılı değilim.
( ) ( )47. Kendi kendime bağımsız karar verebilir ve ona bağlı kalabilirim.
( ) ( )48. Cinsiyetimden memnun değilim (erkek ya da kız olmaktan).
( ) ( )49. Başkaları ile birlike olmaktan hoşlanmıyorum.
( ) ( )50. Hiçbir zaman asla utanmam.
( ) ( )51. Sık sık kendimden utandığımı hissederim
( ) ( )52. Arkadaşlarım sık sık benimle uğraşırlar.
( ) ( )53. Her zaman doğruyu söylerim.
( ) ( )54. Öğretmenlerim bana yeterince başarılı olmadığımı hissettiriyorlar.
( ) ( )55. Bana ne olacağı hiç umrumda değil.
( ) ( )56. Hayatta başarısız biriyim
( ) ( )57. Azarlandığım zaman kolayca bozulurum
( ) ( )58. Kime ne söyleyeceğimi her zaman bilirim.

APPENDIX E

INFORMED CONSENT

There will be series of tests that will evaluate body composition, leg circumference, flexibility, muscular endurance, cardiorespiratory fitness. Body composition will be determined by taking several skinfold measures to calculate body fat percentage. Leg circumference will be determined by taking thigh and calf circumferences. Flexibility will be determined by the sit and reach test. Muscular endurance will be determined by one minute, bent knee sit-up test. Cardiorespiratory fitness will be evaluated by a treadmill walk/run test using Bruce protocol in that the grade and speed of the treadmill will be increased in every 3 minutes.

You are responsible for monitoring your own condition throughout the tests and should any symptoms occur, you should cease participating and inform the instructor about the symptoms.

I hereby agree that in signing this consent form, I have read this form in its entirety and understand the description of the tests and their components.

Name:---------- Date: ----------

Signature : ----------

APPENDIX F

FITNESS TEST RECORD

Pre **Post**

Name: ---------- Age: ---------- Sex: ---------- Date.....

TEST AREA	PRE-TEST	POST- TEST
CARDIOVASCULAR		
REST HEART RATE		
REST BLOOD PRESSURE		
TARGET HEART RATE		
BODY COMPOSITION		
WEIGHT		
HEIGHT		
SKINFOLD MEASURE		
SUBSCAPULA		
THIGH		
SUPRAILIAC		
TRICEPS		
ABDOMEN		
CIRCUMFERENCES		
BICEPS		
WRIST		
ABDOMEN		
THIGH		
CALF		
WAIST		
HIP		
FAT WEIGTH		
BODY FAT %		
LEAN BODY WEIGHT		
FLEXIBILITY (CM)		
MUSCULAR STRENGTH		
BACK STRENGTH		
LEG STRENGTH		
MUSCULAR ENDURANCE (MIN)		

VITA

F. Hülya Aşçı was born in Ankara, on June 16, 1969. She received her B. S. and M. S. degrees in Physical Education and Sports from the Middle East Technical University in 1991 and 1993 respectively. She started working as a research assistant in Physical Education and Sport Department in the Black Sea Technical University in 1992. Since 1994, she has been working as a research assistant in the Physical Education and Sport Department of the Middle East Technical University. Her main areas of interest are self-concept, physical self-concept and counseling for an athletes.