THE EFFECTS OF JOGGING AND ASSERTIVENESS TRAINING ON SELF VARIABLES AND ASSERTIVENESS IN WOMEN

BY

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To Jan
and the women who participated in this study, risked extending their limits and realized new possibilities for growth.
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THE EFFECTS OF JOGGING AND ASSERTIVENESS TRAINING ON SELF VARIABLES AND ASSERTIVENESS IN WOMEN

By
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June 1979

Chairmen: Dr. Theodore Landsman
Major Department: Counselor Education

The purpose of this study was to examine the effects of jogging and assertiveness training on selected self variables and assertiveness in women. The self variables included self-complexity, physical self-image, self-concept, self-acceptance and ideal self. A jogging treatment, an assertiveness training treatment, a combined assertiveness training/jogging treatment and a no-treatment control condition were compared in terms of their effects on the self variables and assertiveness. The study also assessed effects of the various treatments on adjustment, which was defined as the difference between an individual's self-concept and his or her concept of the ideal self.

The sample consisted of forty-nine women students and spouses of students who volunteered to participate in the study. Their ages ranged from eighteen to forty-one. Both graduate and undergraduate students demonstrating various levels of physical fitness were included.
Findings included significant increases in physical self-image demonstrated by subjects in the jogging and assertiveness training/jogging treatment conditions following treatment. Significant increases in personal adjustment were reported for the jogging, assertiveness training and assertiveness training/jogging groups. The assertiveness training and assertiveness training/jogging groups also demonstrated significant increases in assertiveness following treatment. No significant changes in self-complexity, self-concept, self-acceptance or ideal self were reported for any group. No significant changes in physical fitness following participation in a jogging or assertiveness training/jogging treatment were indicated.

The following conclusions were derived from data presented in this investigation:

1. Significant increases in physical fitness do not appear to be a necessary condition for the occurrence of positive changes in physical self-image.

2. Personal adjustment may be enhanced by a variety of treatment modalities ranging from the extremes of a didactic assertiveness training program to an experiential jogging program.

3. Assertiveness training appears to significantly increase participants' assertiveness.
CHAPTER I
INTRODUCTION

Counselor trainees learn that a counselor's task is to facilitate personal growth in clients. Trainees are exposed to a variety of personality and counseling theories throughout their training, and they are encouraged to practice an array of counseling techniques, with the expectation that they will effectively promote personal growth in their clients. Carl Rogers has identified three characteristics of personal growth (Rogers, 1961) which lend themselves to use as models in the process of developing personal growth. These are: (1) an increasing openness to experience; (2) increasingly existential living; and (3) an increasing trust in one's organism.

Client-centered therapy, developed by Rogers, has been demonstrated to facilitate personal growth in individuals (Rogers, 1951). Other therapies, while focusing on the development of personal growth along the dimensions similar to those conceptualized by Rogers, employ therapeutic procedures which vary markedly from Rogers' client-centered techniques to achieve the same outcomes of increased openness to experience, increased existential living and increasing trust in one's own organism. These approaches include Gestalt therapy (Perls, 1969), existential therapies (May, 1955; Frankl, 1959), Eastern approaches (Watts, 1957, 1973; Leonard, 1975), bioenergetics (Lowen, 1975), and psychosynthesis (Assagioli, 1965). The Eastern approaches,
bioenergetics and psychosynthesis depart from traditional therapies in their wholistic approach to mental health, with techniques to integrate the body, mind and spirit. Although these approaches strive to facilitate personal growth along the same dimensions conceptualized by Rogers (1961), their body integration techniques differentiate them from client-centered and other therapies.

In 1973 Esalen Institute created a center to explore the possibilities of sport and human growth. Currently, there appears to be widespread interest in the psychological correlates of physical activity as they relate to the process of personal growth similar to that described by Rogers in 1961. For example, Murphy (1977) describes sport as a "liberating discipline of sorts" (p. 21) which joins will, awareness, imagination, emotion, the senses, the intellect and motor control in surpassing previous performance. Inner harmony is found through success in sports. By focusing on the subjective experience of the athlete, Ravizza (1977) indicates emotional and cognitive aspects to sports which can be quite intense. During their greatest moments, athletes achieve expanded views of themselves as fully functioning individuals and report peak experiences similar to those described by Maslow (1968). Leonard (1975) describes the "ultimate athlete" as one who explores both inner and outer being, who joins the body, mind and spirit in the dance of existence, who plays the game of life intensely with freely chosen discipline and a heightened awareness that the prize is the play itself, and who is willing to accept the pain and joy that awareness brings.
In accordance with this quest of spirit through the body, Spino (1976) focuses on running as a way to self-understanding. He believes that running can be a form of meditation and that blending the power of body and mind can induce new plateaus of creative achievement in individuals. Leonard (1975) describes psychological effects of jogging, such as a growth in confidence and "the expanded glow of being" (p. 183). Other positive emotional effects of running are cited by Albin (1978) who, like Spino (1976), suggests that running is similar to meditation. Some of the effects cited by Albin are personal satisfaction, sense of mastery, enhancement of self-esteem, feelings of competence and power, stress reduction, sense of well-being, awareness of body flow, sense of unity with nature and a recapturing of the "joy of the child in myself" (p. 4). Hilyer and Mitchell (1978), by systematically investigating the effects of a facilitative physical fitness (jogging) and counseling program on college students, suggest that both jogging and counseling and jogging alone are able to effect positive changes in the students' self-concepts. Cooper (1968) reports other psychological effects of running which have emerged through systematic research. These include increased optimism, decreased depression, increased insight into problems, improved self-image and feelings of self-satisfaction and well-being.

Most of the popular literature dealing with running and jogging has focused on the effects of physical conditioning on men. Recently, however, a strain of literature has emerged which addresses the implications of women's running (Cooper & Cooper, 1972; Ullyot, 1976). Until 1972, officials of the Boston Marathon (a prestigious 26.2-mile race including the country's top distance runners) declared that women were not able to run such distances and were not allowed to participate,
although Roberta Gibb ran unofficially in the "men only" event in 1966 (Gibb, 1978). In 1972, women were officially recognized as competitors, and 227 women were entered in the 1973 Boston Marathon. Twenty-nine of these women finished the 26.6-mile course in under three hours (Hansen, 1978).

Surprisingly, since races of 800 meters and up for women are a comparatively recent phenomenon, medical evidence suggests that women's physiology gives them an advantage over men in long distances races. Endurance rather than power seems to be their natural strength (Ulliot, 1976). According to Germany's Dr. Ernst Van Aaken, women's physiological advantages for distance running are: (1) lighter bone structure; (2) higher fat-to-muscle ratio (fat is lighter than muscle, and women may burn a higher percentage of fat than men); and (3) enzyme systems which oxidize fat more efficiently than in men (Ulliot, 1976).

From the growing numbers of women participating in the Boston Marathon each year, it appears that many women are expanding their traditionally non-athletic repertoire of behaviors to become more physically active. They have managed to overcome early childhood influences (Baumrind, 1972; Kagan, 1975; Harrison, 1973), school influences (Baumrind, 1972; Kohlberg, 1966; Weitzman, Eifler, Hoåka & Ross, 1972) and the general influences of society in adulthood (Mead, 1970; Tesch, 1972; Whiteley, 1973) which serve to maintain a traditional passive feminine stereotype. Instead, these women have risked entering the traditionally masculine world of long-distance running which allows them to experience for themselves the positive psychological effects which were cited earlier and which relate to the larger process of personal growth as outlined by Rogers (1961). Thus, when women allow
themselves to expand beyond the passive feminine stereotyped behaviors they have been taught, they expand the possibilities of their experience to include the heretofore "men only" sport of distance running which has been demonstrated to enhance personal satisfaction and facilitate personal growth.

There is evidence to suggest that a lack of assertiveness is related to a person's feeling a lack of self-worth (Alberti & Emmons, 1974). Rathus (1975) suggests that nonassertive persons are afraid to try new things and that most clients appear in need of some form of assertiveness training which will instruct them in ways to relate more effectively to others. Salter (1949) indicates that most people who seek therapy are probably in need of some type of assertiveness training, either as a central treatment modality or as an adjunct technique.

The success of assertiveness training as a technique for changing behavior has been fairly well established (Galassi, Galassi & Litz, 1974a; McFall & Marston, 1970; Rimm, Hill, Brown & Stuart, 1974; Wolpe & Lazarus, 1956). However, some therapists contend that changing an individual's behavior is pointless if that person still feels unhappy, worthless and upset (Rogers & Dymond, 1954). Perell, Berwick and Beigel (1974) state that little research attention has been paid to the effects of assertiveness training on the subjects' cognitive structure.

**Rationale for the Study**

Behavior change resulting from assertiveness training has been widely documented. It has been pointed out, however, that the benefits of assertiveness training are questionable if there is no concurrent attitudinal change, and there has been little investigation to date of
changes in self-concept resulting from assertiveness training programs. Humanistic psychology is expanding its methodologies into wholistic treatment approaches which include working with the client's body to achieve personality change. Although supporters of this approach claim significant results in improving clients' self-concepts (Albin, 1978; Collingwood & Willet, 1971; Cooper, 1968; Hammett, 1967; Helliscn, 1969; Hilyer & Mitchell, 1978; Leonard, 1975; Rothfarb, 1970), the research appears scanty and non-substantive.

It may be reasoned that assertiveness is a behavioral skill that can be taught and learned, but that the skill is pointless if it is not used by the client. Several factors may prevent the use of assertiveness skills, once learned: lack of self-confidence; limited self-complexity, causing the client to perceive herself exclusively as non-assertive or aggressive; a cognitive belief system which denies the client certain basic interpersonal rights. For example, if a women believes that she does not possess certain interpersonal rights (e.g., the right to refuse a request without feeling guilty), then her cognitive belief structure will prevent her from using assertiveness skills to establish those interpersonal rights with others.

A jogging program may produce positive changes in a woman's self-concept. She may experience herself as more complex and as having greater physical boundary definition after she completes the program. She may become more confident in her physical abilities and develop greater trust in her body. With these self-concept changes, her cognitive belief structure about herself may change, and she may claim certain basic interpersonal rights, which she previously denied, as her own. This change in belief structure is a necessary condition for the
effective use and internalization of assertiveness skills. Thus, the
blending of a behavioral (assertiveness training) approach with a
wholistic, humanistic approach (jogging) into one treatment modality
holds the potential for exerting a strong impact on both self-concept
and behavior change in clients.

Purpose of the Study

The purpose of this study was to investigate the effects of
jogging and assertiveness training on three self variables (self-
complexity, physical image, and discrepancy between perceived and ideal
self), assertiveness and physical fitness in women. Three treatment
approaches were examined in terms of their effect on these variables.
These included: (1) a jogging program; (2) an assertiveness training
program; and (3) a combined assertiveness training/jogging program.

Importance of the Study

This investigation may have important implications for counseling
practice and theory, counselor training, and for clients who receive
the treatments. The multi-disciplinary approach, which includes the
areas of physical education, counseling and psychology, requires co-
operation of the separate disciplines in creating new possibilities for
education and psychotherapy. Collaboration of these professionals may
become a common procedure. Therapy teams, with each co-therapist rep-
resenting a separate discipline, may be indicated. The use of consultative
services provided by physicians, nutritionists and physical condi-
tioning experts by counselors and psychologists may increase. There
may be an impetus to expand the relatively new subspecialty of sports psychology and increase the number of practicing sports psychologists.

Because of the multi-disciplinary nature of the treatment program, counselor training may be expanded to include the study of physiology and psychophysiological functioning. In addition, counselor educators may recognize the impact of physical fitness on counselors as well as on clients and develop fitness programs for counselor trainees (Hilger & Mitchell, 1978). Thus, counselor educators would become more wholistic in their approach to counselor training.

Theoretically, the blend of behavioral and phenomenological emphases speaks directly to the issue of the primacy of behavioral change versus attitudinal change. The results of this study may lend support to cognitive dissonance theory by indicating that public behavior causes a shift in private attitude (Festinger, 1957). In other words, clients who perceive themselves initially as weak and inept (private attitude) may, after participating successfully in the jogging program (public behavior), resolve the resulting dissonance by relabeling themselves as strong and competent. This could be supportive of Bem's (1967, 1970) position that behavior causes attitudes.

This investigation may have several implications for those who receive the treatments. The clients may learn to respond more effectively, with a higher probability of getting their needs met, through the use of appropriate assertive communication. Their general physical fitness levels may improve, and the jogging program may serve as an introduction to a physically-fit lifestyle which becomes integrated throughout the individual's life. Recipients of the combined assertiveness training/jogging program may learn to appreciate, both experientially
and cognitively, and to attend to the wholistic nature of their psychological functioning. By extending their present physical limits, clients may experience becoming more than what they are. As the possibilities of extending their present behavioral and physical limits are realized by the clients, the concept of extending limits may generalize beyond assertiveness and jogging, thereby opening new avenues for personal growth and change.

**Definition of Terms**

The terms listed below are defined as follows for the purposes of this study.

**Increasing openness to experience** is seen as a movement away from the pole of defensiveness toward the pole of openness to experience. This movement allows an individual to become more able to listen to him- or herself and to experience what is going on within, rather than shutting experiences out of awareness (Rogers, 1961).

**Increasingly existential living** involves an increasing tendency to live fully in each moment. There is fluidity present in existential living, in which the self and personality emerge from experience rather than experience being translated or twisted to fit preconditioned structure. In this way, the individual becomes a participant in and an observer of the ongoing process of organismic experience, rather than being in control of it (Rogers, 1961).

**Increasing trust in one's organism** is a means of arriving at the most satisfying behavior in each existential situation. Essentially, this means that if an individual is fully open to his or her experience, then doing what "feels right" (trusting one's total organismic reaction)
proves to be a competent and trustworthy guide to satisfying behavior in new situations (Rogers, 1961).

Assertive behavior means expressing thoughts, feelings and beliefs in direct, honest and appropriate ways which do not violate another person's rights. Assertion means respect for personal rights and the rights of others (Lange & Jakubowski, 1975).

Nonassertive behavior is illustrated by failure to express honest feelings, thoughts and beliefs which may consequently permit a person to be taken advantage of. In addition, nonassertive behavior is expressive of one's thoughts and feelings in such an apologetic, diffident, self-effacing manner that others can easily disregard them (Jakubowski-Spector, 1973). This behavior shows a lack of respect for one's own needs (Lange & Jakubowski, 1975).

Aggressive behavior means directly standing up for personal rights and expressing thoughts, feelings and beliefs in ways which are usually inappropriate and violate the rights of others. This behavior shows a lack of respect for the rights of others (Lange & Jakubowski, 1975).

Assertiveness training includes the following four procedures which aim to help individuals to: (1) understand the difference between assertion, aggression and nonassertion; (2) identify and accept both personal rights and the rights of others; (3) reduce existing cognitive and affective obstacles to acting assertively; and (4) develop assertiveness skills through active practice methods (Jakubowski-Spector, 1973).

Jog and run are used synonymously to indicate moving steadily with springing steps so that both feet leave the ground for an instant in each step (Webster's New Collegiate Dictionary).
Aerobics refers to a variety of exercises including running, swimming and cycling that stimulate heart and lung activity for a time period sufficiently long to produce beneficial changes in the body (Cooper, 1970).

Aerobic capacity is the maximum amount of oxygen that the body can process within a given time (Cooper, 1970).

Physical fitness indicates an ability to rapidly breathe large amounts of air, forcefully deliver large volumes of blood, and effectively deliver oxygen to all parts of the body. The best indicator of overall physical fitness is aerobic capacity (Cooper, 1970).

Self-concept means how the individual perceives and experiences the self.

Self-complexity refers to the degree of differentiation of the self-concept (Ziller, 1973) and reflects the number of dimensions along which stimuli relevant to the self are ordered (Harvey, Hunt & Schroder, 1961).

Cognitive dissonance exists when a person possesses two cognitions, one of which is the obverse of the other (Festinger, 1957).

Cognitions refer to thoughts, attitudes, beliefs and behaviors of which the person is cognitively aware (Wrightsmann, 1972).

Cognitive dissonance theory holds that a state of dissonance, which arises when a person recognizes that two of his or her attitudes and/or behaviors are in conflict, motivates the person to reduce or eliminate the dissonance. If the dissonance occurs between one's attitude and one's behavior, either could be modified (Festinger, 1957).
Organization of the Study

The remainder of this study is presented in four chapters plus appendices. A review of the related literature in body-mind integration, assertiveness training and self-concept research is presented in Chapter II. Chapter III outlines the methods and procedures for conducting the study. The results of the study are reported in Chapter IV. Chapter V presents a summary and a discussion of the results, limitations of the study and recommendations for further study.
The review of literature includes an overview of assertiveness training, implications of assertiveness training for women and assertiveness training procedures. Relevant literature in body-mind integration, body image and self-concept is also reviewed.

**Overview of Assertiveness Training**

In *Conditioned Reflex Therapy*, Andrew Salter (1949) describes a form of assertiveness training. He calls the outward expression of friendly, affectionate and other nonanxious feelings excitatory and writes that excitatory exercises are antithetical to inhibitory responses. Wolpe (1969) believes that assertive is a more accurate adjective since anxiety, too, is a form of excitation.

The major credit for the current development of assertiveness training is given to Joseph Wolpe (1958, 1969) and Arnold Lazarus (Wolpe & Lazarus, 1966), who distinguish assertion from aggression and use a variety of role-play techniques in their therapy (Lange & Jakubowski, 1975). Rathus (1975) indicates that, in recent years, assertiveness training has received increasing attention in the literature as a behavioral procedure for substituting withdrawing or inhibited behavior with socially appropriate, expressive behavior.
Lange and Jakubowski (1975) contend that assertiveness training is not a fad. Instead, they suggest that assertiveness training is an outgrowth of cultural changes which occurred in the sixties, and they cite two cultural changes which are particularly important. First, personal relationships have become highly valued. These authors suggest that greater emphasis on personal relationships developed because it has become more difficult to achieve self-worth through traditional sources, such as marriage, job advancement and job security, and people have begun exploring other ways of upgrading the quality of their lives. Personal relationships are being valued as a major source of self-worth and satisfaction in life. The second cultural change reported by Lange and Jakubowski (1975) involves a widening range of socially acceptable behaviors. For example, the authors indicate that alternative lifestyles have become more acceptable. As these changes occur, people find themselves deficient in the skills required to make choices and behave appropriately. Individuals also lack the cognitive and behavioral skills to act on their own choices and to defend their choices when criticized or blocked by other people. It is within this cultural context that Lange and Jakubowski see the value of assertiveness training in developing personal growth and enhancing personal relationships.

The advent of the assertiveness training movement was signaled by the publication of Your Perfect Right by Alberti and Emmons in 1970. They express the opinion that if persons go through life inhibited, giving in to the wishes of others, holding in desires or, conversely, destroying others in order to have their own way, their feeling of personal worth will be low. Alberti and Emmons demonstrate concern about
societal tendencies to evaluate and judge persons on scales that make some people "better" than others, and they present the following assumptions for examination:

- adults are better than children
- men are better than women
- bosses are better than employees
- whites are better than Blacks
- physicians are better than plumbers
- teachers are better than students
- government officers are better than voters
- generals are better than privates
- winners are better than losers

The social structure in which we live perpetuates these myths and influences the self-worth of the people in these roles, according to Alberti and Emmons. Assertive persons feel fully in charge of themselves and view their self-worth in terms of personal capabilities and not in terms of a hierarchy of roles. These authors suggest assertiveness training as a means of achieving a positive sense of self-worth, a better life and a happier existence.

A consensus regarding a definition of assertiveness has not been reached (Shelton, 1977). The following is representative of several conceptualizations of assertiveness appearing in the literature. Alberti and Emmons (1970, 1974) and Lazarus (1971) agree that assertiveness is a type of interpersonal behavior which enables a person to stand up for his or her own rights without violating the rights of others. Lange and Jakubowski (1976) add to the definition that assertiveness is the direct, honest expression of personal feelings, thoughts and beliefs in an appropriate way which respects the rights of others. Serber (1972) contributes the ability to express and receive tenderness and affection as a component of assertiveness.
Carkhuff and Berenson (1967) introduce the idea that assertions involve confrontation skills, defined as verbal statements which accurately point out discrepancies in another's behavior or communication without hurting or belittling the other person. Wolpe (1966) speaks of assertiveness as being the outward expression of practically all feelings other than anxiety. According to Wolpe, assertive expression inhibits anxiety. Rathus (1975) defines assertiveness as the expression of oneself in a positive, productive manner, including smiling at others and engaging in small talk about the weather. Rathus describes assertive individuals as those who may insist upon that which they feel is correct, but who will also confess to error without loss of self-esteem.

The descriptions of an assertive person by Alberti and Emmons (1970, 1974), Lazarus (1971), Lange and Jakubowski (1976), Serber (1972), Carkhuff and Berenson (1967), Wolpe (1969) and Rathus (1975) are similar to the description of the fully functioning person described by Carl Rogers. Rogers (1961) describes the fully functioning person as one who is not static, but is flexible and growth-oriented. Such a person is able to trust him- or herself. The process is one of becoming, of openness to experience and the adaptability to exist in the present. Rathus (1975) indicates the nonassertive person is afraid to try new things and is inhibited in the ability to grow. On the other hand, the assertive person is open to new experiences and is willing to try new things. Galassi, Galassi and Litz (1974) describe the assertive person as expressive, spontaneous, well-defended, achievement-oriented, able to influence and lead others and confident. Raimy (1948) finds that, at the onset of therapy, clients refer to themselves in disapproving or ambivalent self-references. As counseling continues, there are
fluctuations in self-approval. The client begins to make more self-approving statements. At the end of counseling, Raimy notes that clients who improve make a greater number of self-accepting statements, while those who have not improved are still ambivalent and disapproving of themselves. Schwartz and Gottman (1976) find that low-assertive persons make more negative than positive self-statements and that high-assertive persons make more positive than negative self-statements. Their research suggests that there is a parallel between the fully functioning person and the assertive individual.

A parallel concept is suggested by Landsman (1967), Maslow (1968) and Shostrum (1964). Landsman conceptualizes self-actualization along three dimensions: relationship to the self, relationship to the environment and relationship to other people. He also postulates an active versus passive dimension to the actualization process. Landsman (1967) describes the beautiful and noble person as one who has inner compassionate and spiritual feelings that must be expressed to others. There appears to be a relationship, then, between assertiveness and self-actualization as it is conceptualized by Landsman. Assertion requires an active stance, an understanding and acceptance of one's own interpersonal rights, and a recognition of one's needs. Assertion directly affects one's relationship to other people.

Shostrum (1964) presents the self-actualized person as able to experience and incorporate opposites into a personal lifestyle. According to Shostrum, this person is able to appropriately express such feelings as anger, tenderness, caring, lust, weakness and power. The assertive person, as described by Lange and Jakubowski (1975), is able to express feelings, thoughts and beliefs in a direct, honest and
appropriate way that considers the rights of others. The literature, therefore, suggests that the fully functioning person has the skills emphasized in assertiveness training.

Implications of Assertiveness Training for Women

Differential treatments of men and women at all stages of growth, from childhood on, teach women to be nonassertive and dependent, and they are rewarded for this behavior (Baumrind, 1972). Early childhood influences, school influences and the general influences of society in adulthood are examined in this section.

Even before a girl infant is born, she is disadvantaged because, generally, both men and women express a preference for having male children (Dinitz, Dynes & Clarke, 1954). That is not surprising, since both sexes rate men as more worthwhile than women (McKee & Sheriffs, 1957). Parents have higher achievement expectations for boys than for girls, and the higher expectations of parents for their male children may result in a self-fulfilling prophecy, with male children achieving greater goals than their sisters because they were expected to (Baumrind, 1972). It follows that mothers are more achievement-oriented toward their sons and adopt a more business-like posture toward them. Today's mothers are too frequently models of resignation and self-effacing generosity to their daughters (Baumrind, 1972), and poor mothers seem to project their greater sense of impotence and inadequacy onto their daughters (Kagan, 1975).

Lipman-Blumen (1972) suggests that differences in sex-role ideology are a function of very subtle factors. Harrison (1973) suggests that parental biases are most evident in the toys which
parents buy their children. She asserts that traditional "boy" toys (chemistry sets, trucks, guns) allow the child to learn to manipulate his environment, while traditional "girl" toys (dolls, play ironing boards, toy make-up kits) perpetuate the dependent, nonassertive female image.

Baumrind (1972) contends the pattern of teaching girls to be dependent and nonassertive blossoms in the schools, where sex-role stereotyping is probably the major cause of assertive inadequacy in girls. Baumrind continues by stating that teachers continue to mirror society's sex stereotyped attitudes by ignoring the subtle as well as blatant ways in which girls are rewarded for nonassertive behavior.

Not only is it suggested that teachers influence a girl's perception of sex roles, but there is evidence that books used in schools also depict sex-role stereotypes. Weitzman, Eifler, Hodaka and Ross (1972) report that between 1967 and 1972 the ratio of male to female characters in prize-winning picture books for preschoolers (which has long favored males) has increased. Weitzman et al. believe the prevalence of male characters suggests that males are more interesting than females. Beginning readers show girls and boys playing with different toys, men working and women staying at home (Baumrind, 1972), again reinforcing the assertive male and nonassertive female stereotypes.

The impact of sex-role stereotyping in the schools is made very clear by Kohlberg (1966), who suggests that high general intelligence appears to predispose young children toward high same-sex-typing on standard measures of sex-typed interests. Yet, adolescents are predisposed toward low same-sex-typing on such interest measures.
Kohlberg's evidence indicates that there is considerable influence from the schools and homes which causes children to differentiate sex roles on the basis of projected stereotypes, and that highly intelligent children quickly perceive the appropriate sex-role stereotypes and adopt them.

There is evidence that school counselors are not free of sex bias (Mitchell, 1973; Schlossberg & Goodman, 1972; Schlossberg & Pietrofesa, 1973). Schlossberg and Pietrofesa (1973) indicate that female counselors are as biased as male counselors against women entering masculine professions, and that they unwittingly tend to influence the career decisions of female students toward traditionally feminine areas. Severe limitations of the Strong Vocational Interest Blank are documented by Schlossberg and Goodman (1972), who suggest that there is a tremendous amount of sex bias in the instrument. It is possible that biased instruments which are used in vocational planning and development may compound the sex bias in counselors demonstrated by Schlossberg and Pietrofesa (1973).

Mitchell (1973) claims that the sex-role stereotyping to which young children are exposed has an impact on their psychological growth. According to Harrison (1973), dependence and nonassertion are being cultivated in female school children, and it is not surprising that many women are either finding themselves nonassertive and therefore ill-equipped for independent living or they find themselves with a need to invent a self, since they exist only in connection with their men. "Checking it out with the man" (p. 30) is what these women do with their decisions, ideas, plans and values in order to see if they are okay and approved of by a higher authority (Whiteley, 1973).
Tesch (1972) finds that many contemporary women are confused because the old nonassertive stereotype they adopted during school years does not serve them in adulthood. According to Tesch, these women find their nonassertion a handicap to gaining the personal power necessary to be an independent person. As one woman explains, "I am a woman. I have been socialized to want to be desirable to men, to be 'feminine.' Yet to be successful in my chosen field and in school, I must exhibit 'masculine' traits. It is confusing and disruptive to me" (Tesch, 1972, p. 3). A similar idea is expressed by Mead (1970), who suggests that women are traditionally unsexed by success.

According to Zinberg (1972), many educated women are seeking to fulfill their need for accomplishment outside the home, since relatively few of these women perceive domestic roles as a long-term source of a sense of achievement. Zinberg demonstrates that the need to acquire a feeling of accomplishment is a developmental need associated with ego strength and is independent of sex; in other words, a woman's need for a sense of accomplishment is as strong as a man's. Women are recognizing their need for accomplishment, as indicated by rising career aspirations of college women (Wilson, 1971). More than half expect to work outside the home for a significant number of years, and the proportion anticipating or desiring large families is sharply declining. According to the Women's Bureau (1969), chances are two in five that a married woman with one to three years of college and living with her husband will be in the labor force; if she's divorced, chances are two out of three that she's working; chances are better than one in two that she's working if she has four years of college or more; and the chances of finding a woman holding a doctorate or comparable degree in
the labor force are eight in ten (Whiteley, 1973). No direct association between career success and marital status in women has been found (Aregger, 1966; Astin, 1971).

**Assertiveness Training Procedures**

Assertiveness training involves the therapist in attempts to directly foster assertive behavior in clients. Rathus (1975) states that people develop an increasing tendency to exhibit new behavior patterns when they perceive them to have more of an effect than the old patterns. Jakubowski-Spector (1973) views assertiveness training as including four basic procedures:

1. teaching people the difference between assertion, aggression, nonassertion and politeness;
2. helping people identify and accept both their own personal rights and the rights of others;
3. reducing existing cognitive and affective obstacles to acting assertively;
4. developing assertive skills through active practice. (p. 2)

Morris (1973) tests three primary components of assertiveness training: role-playing, modeling and social reward/coaching. He describes role-playing as having the client rehearse how he or she should act in a particular situation. The client usually plays him- or herself and the therapist plays the person to whom the client reacts. Morris indicates that modeling and role reversal are used to allow the client to observe how a more assertive person would respond in a specific situation. Social reward and coaching from the therapist includes comments on the progress the client is making and providing feedback to facilitate further improvement.
Bandura (1969, 1971) refers to the use of modeling in group assertiveness training and indicates that by observing the model's assertion and the consequence for such behavior the nonassertive person can vicariously learn the assertive behavior in a similar manner to acquiring it from direct experience. According to Lange and Jakubowski (1976), "Modeling procedures provide a short-cut method for giving information about various assertive behaviors, especially complex assertive behavior. Modeling may also provide permission for nonassertive persons to engage in similar assertive behavior. This procedure may reinforce the nonassertive person's existing assertive skills" (p. 177).

Evidence presented by Bandura (1969) and his associates (Bandura, Grusec & Menlove, 1967; Blanchard, 1970; Lovaas, Freitag, Nelson & Whalen, 1967) has consistently demonstrated modeling to be an effective, reliable and relative to other procedures, rapid technique for both the development of new responses and the strengthening or weakening of previously acquired responses. The exact contribution of modeling to assertiveness training is questioned by McFall and Twentyman (1973), however. They note that modeling research often includes the aspects of coaching and instruction, and that these aspects may play an important, heretofore underestimated role in producing behavioral outcomes. Lacks and Jakubowski (1975) note individual researchers' differences in modeling, as one researcher includes reinforcement and another does not.

Eisler, Hersen and Ågrás (1973) support the use of modeling in assertiveness training, finding that modeling is more effective in increasing clients' assertiveness than practice alone. Others,
including Gutride, Goldstein and Hunter (1973) indicate that modeling with rehearsal and feedback is more effective than no treatment. McFall and Twentyman (1973) find that modeling adds little to either behavioral rehearsal or coaching in training subjects to assertively refuse requests. An explanation of their results is offered by Lange and Jakubowski (1975), who suggest their results occurred because of the simplicity of the task. These authors further suggest that modeling could be more important in training assertive responses in complex situations.

Behavior rehearsal is another technique that has received a great deal of attention in the assertiveness training literature. Lange and Jakubowski (1976) outline seven components of this procedure:

1. Modeling. The participant observes the trainer or other person exhibiting an assertive response and vicariously learns the behavior.

2. Covert modeling. The participant imagines another person responding assertively.

3. Rehearsal. The participant practices responding assertively while the trainer or another person role-plays others in the situation. The participant repeats the assertive responses until well-learned.

4. Covert rehearsal. The participant imagines how he or she would act assertively.

5. Role reversal. The participant assumes the role of the recipient of the assertive response.

6. Reinforcement. The trainers and others involved in the training provide positive feedback to specific assertive behavior.

7. Coaching. The trainers and others involved give explicit descriptions of what constitutes an assertive response. (p. 155)

The specific components of effective behavior rehearsal have received a good deal of attention in the literature from several
authors (Eisler, Hersen & Agras, 1973; Friedman, 1971a, 1971b; Kazdin, 1973; McFall & Lillesand, 1971; McFall & Marston, 1970; McFall & Twentyman, 1973; Rimm & Masters, 1974; Young, Rimm & Kennedy, 1973). This literature does not suggest that one component is more effective than another or which combinations are most effective.

Videotape procedures are also used in assertiveness training, and their relative effectiveness has not been fully established (Lange & Jakubowski, 1976). McFall and Twentyman (1973) find no difference between the usefulness of audio and video modeling tapes, although both yield significant results in their study. Goldstein and Goldhart (1973) find that telling clients to respond independently and providing them with two detailed verbal descriptions of such behavior is as effective as elaborate audiotaped procedures. Lange and Jakubowski (1976) claim that many trainers believe video modeling is superior to audio modeling. They note that videotaped modeling procedures permit clients to observe nonverbal behaviors such as facial expression and hand gestures, nonverbal behaviors which play an important role in assertion and which cannot be presented on audiotape.

Mahoney (1974) and Meichenbaum (1975) note that several modeling videotapes could be beneficial if they demonstrate a model using cognitive coping strategies while engaging in an assertive encounter. McFall and Twentyman (1973) indicate the need for video modeling tapes to give exact descriptions of what makes up an appropriate assertive response.

Galassi, Galassi and Litz (1974) investigate a multifaceted approach to assertiveness training and measure videotape feedback as one
component. Although the individual contribution of video feedback to assertiveness training is not clearly assessed by this study, subjects in the study rank videotape feedback as number one and number four in importance among ten components of the assertiveness training program. Bailey and Sowder (1970) also support the importance of video feedback in modifying behavior. Lange and Jakubowski (1976) suggest that trainers might adopt the technique of interpersonal process recall (Kagan, 1975) to help trainees focus during the videotape playback on thoughts and feelings during the behavior rehearsal, and thus get at internal dialogs that may prevent the accomplishment of an assertive response.

Lange and Jakubowski indicate that assertiveness training may be accomplished individually or in groups and that "research has yet to compare the relative effectiveness of group assertiveness training with individual training" (Lange & Jakubowski, 1976, p. 3). These authors express a preference for group training and believe it to be more effective, and they present four basic types of assertiveness training groups:

1. exercise-oriented groups which involve a set of exercises for participants;
2. theme-oriented groups that focus on a particular type of assertive activity such as giving constructive criticism;
3. semi-structured groups that use a variety of intervention techniques such as values clarification and conflict resolution; and
4. unstructured groups in which the role-play situations are oriented to the needs brought to each group by the participants.

Goldstein and Goldhart (1973) view the group as a more efficient application of the procedure to larger numbers of individuals, but point out that the trainer must be able to keep the group moving on course. Bodner (1975) suggests that assertiveness training groups seem to
function best when they consist of from eight to ten members and two therapists. He indicates that both homogenous and heterogenous groups have been conducted with successful results.

Rimm, Hill, Brown and Stuart (1974) report that group treatment has the advantage of efficiency. Lazarus (1971) points out that the group may be used as an effective forum for deciding what responses are appropriate in a given situation. Lazarus also suggests that a group may be used to provide relatively massive social reinforcement for more effective behavior. Rimm et al. (1974) provide additional support for the value of assertiveness training presented in a group setting, offering an assertiveness training program for subjects exhibiting antisocial aggression in certain social situations.

Body-Mind Integration

Michael Murphy (1977) suggests some surprising and significant similarities between sport and religion. Murphy claims that, for some people, sport is a liberating discipline which allows transcendant experiences similar in many ways to those of shamans, Sufis, Zen masters and yogis. Murphy categorizes reports by athletes of altered states of consciousness which they experience as follows:

- extraordinary clarity
- extraordinary focus and concentration
- emptiness
- deautomatization
- equality
- access to larger energies, insights and behaviors
- communication with or perception of disembodied entities
- ecstasy, delight, supreme aesthetic enjoyment

Murphy likens the extraordinary powers which are stimulated by sport to "siddhi," a Sanskrit word for extraordinary powers or
capacities which emerge with the practice of a liberating discipline. According to Murphy, every game or athletic pursuit makes a demand upon its participants: one must submit to particular rules, ordeals and requirements, and to do this one must relinquish old patterns. Murphy claims that when you play wholeheartedly you are stretched and extended, and this leads to a sense of grace and power. To perfect skill, responses and habits that impede performance must be given up, and to some extent the individual must acquire (or open to) another nature. Such success in sports elicits inner harmony. The will, awareness, imagination, emotion, the senses, the intellect and motor control are often joined in surpassing one's previous performance. According to Murphy, yoga means joining, and "to join the soul with God requires that we join our many parts" (Murphy, 1977, p. 33).

In The Ultimate Athlete, Leonard (1975) claims that there is an inner athlete that dwells within each of us. More than an abstract ideal, this inner athlete is a living presence that can change the way we feel and live, going beyond fitness and entering the realms of "music and poetry, of the turning of the planets, of the understanding of death" (p. 8). Leonard calls for a oneness of body, mind and spirit, claiming the ideal unity of the spiritual and physical was lost long ago in specialization, professionalism and the obsession with winning. He looks for a workable approach to athletics which "will revive the tingling aliveness of every limb, and the connectedness with nature and other people that only a full appreciation of embodiment can bring" (p. 9).

Leonard criticizes coaches and physical education instructors for their emphasis on performance at the expense of experience, using coldly scientific methods to coax every last centimeter or half-second from the
athlete, who is treated essentially as a machine. He further describes a split between body and spirit which results in athletes' becoming insensitive and authoritarian and in intellectuals' becoming disembodied brains, unaware of the consequence of their thinking. Another criticism of traditional athletics has to do with the institutionalization of and overemphasis on competition, where winning has become a way of life in sports, blinding us to its other possibilities.

In *Beyond Jogging*, Spino (1976) attempts to show how blending the power of body and mind can carry us to new plateaus of creative achievement. He suggests that the experience of running is similar to meditation and that the mind has more chance for expansion as the individual becomes physically fit. As the individual becomes more fit and spends less time concentrating on the physical activity of running, the possibility of transcendence emerges. Altered states of consciousness are possible with optimum fitness.

Spino further suggests that heightened awareness in running can be achieved by integrating meditation practices with physical activity. The goal is to close the gap between states of awareness achieved while meditating and the reality of running. Spino calls for visualization techniques that enable the natural running consciousness to grow richer. He explains that these mental techniques could be as basic to conditioning as physical activities.

The traditional emphasis of research on sports has been to develop techniques to improve physical performance. The major emphasis in sports research has been on motor performance, and the subjective experience of the athlete has been minimized (Kleinman, 1973; Park, 1973). Ravizza (1977) presents an investigation of the personal experiences
of athletes which attempts to achieve a characterization of those experiences involved in an athlete's greatest moment while participating in sport. Ravizza's subjects are 16 men and four women athletes ranging in age from 13-40 who relate experiences in different sports (football, volleyball, lacrosse, hockey, golf, swimming, track and field, jogging, surfing, skiing). Five of the athletes describe experiences which took place while participating in informal activities, such as recreational and intramural activities, while the remaining 15 describe experiences related to formal activities such as interscholastic, intercollegiate or international contests.

Ravizza presents the qualities used by subjects to characterize the experience of their greatest moment. Loss of fear and ability to execute basic skills were reported by 100% of the subjects. Ninety-five % report no thinking of performance, total immersion in activity, narrow focus of attention, perfect experience, temporary phenomenon, God-like (in control) feelings and self-validating experience. Ninety % of Ravizza's subjects characterize their experience as involuntary, unique, unified and integrated perception of the universe and passive (effortless) perception. Eighty-five % of the athletes report time-space disorientation, and 80% experience awe and wonder of the experience and transcendence of ordinary self.

According to Ravizza, the athletes' reports contain many similarities to Maslow's (1968) description of peak experience. Athletes give their experiences total attention, resulting in temporary ego loss, union with the experience as a whole and disorientation in time and space. Some describe feeling in total control of the situation, which is similar to Maslow's report of the feeling of being Godlike.
Ravizza describes the reported experience as being perfect; consequently, the athlete is passive in the experience since it is effortless. The usual fears associated with the activity are non-existent. Another parallel to Maslow's description found by Ravizza is the awe and wonder that accompanies the experience and the sense that it is an involuntary and ecstatic phenomenon.

Ravizza's study indicates that, in addition to the motor aspects of sport, there is also an emotional and cognitive aspect which can be quite intense. He finds that during athletes' greatest moments they obtain expanded views of themselves as fully functioning individuals. Ravizza suggests that the inclusion of athletes' subjective experiences along with more traditional sport research will allow for a more complete investigation of the total sport experience than has been previously possible.

Glasser (1976) suggests that running can be a positive addiction, an important pathway to inner strength and a satisfying life. Glasser defines any positive addiction according to six criteria:

1. it is something noncompetitive that you choose to do and you can devote an hour (approximately) a day to it;

2. it is possible for you to do it easily and it doesn't take a great deal of mental effort to do it well;

3. you can do it alone or rarely with others but it does not depend upon others to do it;

4. you believe it has some value (physical, mental or spiritual) for you;

5. you believe that if you persist at it you will improve, but this is completely subjective—you need to be the only one who measures that improvement;
6. the activity must have the quality that you can do it without criticizing yourself. (Glasser, 1976, p. 93)

Glasser asserts that positive addiction develops inner strength in the individual which serves to overcome or greatly reduce symptoms of emotional distress, which Glasser claims are choices of the weak. People lacking inner strength may choose to give up, to act out (tantrums, delinquency, crime), to become involved with their own emotions (depression, fear, anxiety, anger, suspicion), to become crazy (psychotic, paranoid, delusional), to become psychosomatic (headaches, neckaches, migraine) or to develop a negative addiction (to alcohol or heroin, for example). Those with strength, however, live with more confidence, more creativity, more happiness and usually have much better health than nonpositively addicted people who lead similar lives. They are able to see what they need to do and how to do it in the struggle to achieve love and worth. Most important, they have the strength to follow through and do those things which will make them happy.

Glasser claims that running produces the non-self-critical state more effectively than any other practice. By working up to a point where one can run an hour without fatigue, it is almost certain that the positive addiction state will be reached. "If it were up to me to suggest a positive addiction for anyone no matter what his present state of strength, from the weakest addict to the strongest among us, I would suggest running" (Glasser, 1976, p. 123).

Body Image

The relationship of body image, how an individual perceives his or her body, to self-concept has been empirically investigated. According
to Snygg and Combs (1959), the physical body is the most constant aspect of experience and plays a large role in defining the self. Zion (1965a) indicates that the security one has in one's body is related to the security with which one faces one's self and the world. Zion correlates personality indices and social adjustment factors with feelings towards the body and suggests that environmental adjustment may be correlated with self-image acceptance. In her study of college freshman women, Alexander (1972) concludes that accepting the environment appears to be related curvilinearly to accepting one's self-image. In other words, extreme levels of self-image acceptance and rejection significantly relate to satisfaction with other people in the individual's environment.

Snygg and Combs (1959) contend that the physical body is the most constant aspect of experience and plays a large role in defining the self, and their contention is supported further by Zion (1965b). Secord and Jourard (1953) suggest that the cathexis (defined by Secord and Jourard as one's perceived degree of satisfaction or dissatisfaction) of the body and the cathexis of the self tend to be commensurate. Even more important than actual body physique is the way in which a person experiences his or her body (Haronian & Sugerman, 1964). Rosen and Ross (1968) suggest that the relationship between self attitudes and body attitudes is a function of the aspects entering into their measurement. According to these authors, the more important the aspect to the individual, the higher the correlation. Body image appears to be a highly subjective phenomenon which becomes integrated into the individual's self-concept.

Jourard and Remy's (1957) findings indicate that the appearance of the body as a determiner of both self-esteem and acceptability to
others is more important among women than among men. Fisher (1964) suggests that women have greater awareness of their bodies than men. In his investigation of six differences in body perception, Fisher examines the assumptions that women are less satisfied with their bodies and less able to arrive at an articulated, realistic body concept. Fisher's data indicate that a person with definite body image boundaries is goal-oriented, self-steering and possesses an articulated sense of identity. Clear-cut boundaries seem to be accompanied by the ability to behave as a distinct and unique person. The degree of body awareness in women, which is positively related to boundary definiteness, appears to be an expression of individualism and differentiation. A woman who is highly aware of her body may be viewed as one who expresses herself with a clear sense of self-identity. Conversely, a woman with little body awareness may be characterized as being only a hazily-defined individual.

**Fitness Programs**

Collins (1972) illustrates the importance of self-improvement, in general, as an instrument of self-concept change. Using the Tennessee Self-Concept Scale, she finds a significant positive change in the self-concepts of adolescent girls who present various combinations of economic and emotional problems. The girls participate in a self-improvement program focusing on knowledge of and skill in personal health, hygiene, grooming and social behavior.

Collingwood and Willet (1971) present a classic study relating the overall effect of physical conditioning on both the physiological and psychological realms. The subjects are five obese males, ages
thirteen to fifteen, who participate in a three-week conditioning program which includes jogging, gym exercise, floating, sprints, distance swimming and group counseling. Assessment instruments include physical measures, the Body Attitude Scale (a 15-item modification of the Osgood Semantic Differential) and the Index of Adjustment and Values (measures self-concept, self-acceptance and ideal self). Significant improvement is demonstrated in most physical measures, and significant positive changes in self-concept and self-acceptance are noted. Collingwood and Willet attribute the changes to actual success experiences enjoyed by the subjects throughout the conditioning program and to positive feedback from peers in the group counseling situation.

Hellison (1969) compares two physical conditioning programs in terms of their effect on attitudes toward the self, the body and physical fitness. Subjects are college students. Both conditioning groups meet for a total of eight weeks with one group meeting for 30 minutes four times per week and the other group meeting for 30 minutes two times per week. Physical fitness is measured by the 12-minute run, dominant hand grip strength, timed sit-ups and the maximum number of pull-ups possible. Attitude toward the self is measured by Rosenberg's 10-item Guttman scale and two open-ended questions. Body attitude is determined by the evaluative dimension of a semantic differential. Hellison's results indicate greater physical and affective improvement in the four times per week group. Two meeting times per week appears to be sufficient for physical but not for affective attitudinal change. Hellison concludes that body conditioning has greater effects on self-attitude than on body attitude and, like Collingwood and Willet (1971), suggests that attitude change is a
function of the conditioning experience rather than of the outcomes of increased strength and endurance.

Still other investigations indicate a positive relationship between physical fitness programs and positive self-concept changes (Hammett, 1967; Hilyer & Mitchell, 1978; Rothfarb, 1970). Hilyer and Mitchell (1978) systematically investigate the effects of a facilitative physical fitness (running) and counseling program on college students and suggest that both running and counseling and running alone are able to effect positive changes in the students' self-concepts as measured by the Tennessee Self-Concept Scale. Rothfarb (1970) also uses the Tennessee Self-Concept Scale to show a positive relationship between self-esteem and the amount of exercise undertaken by college men. Significant differences in self-esteem are found between a group who exercise regularly or systematically and a group of non-exercisers. Hammett (1967) indicates that high school girls demonstrating a high level of physical fitness show a significant positive correlation between enhanced body image and fitness when contrasted with girls who demonstrate a low level of physical fitness. Hammett's self-esteem measures include the Draw A Person Test and a semantic differential. Cooper (1968) reports several psychological effects of running. These include increased optimism, decreased depression, increased insight into problems, improved self-image and feelings of self-satisfaction and well-being.

The literature presents conflicting evidence to support the positive relationship between physical fitness and self-concept. Neale, Sonstroem and Metz (1969) compare high-level and low-level fitness adolescent boys and report no significant difference in general
self-esteem. Holycak and Allen (1972) describe an exploratory physical education program which fails to produce any significant changes in the professed self-concepts of junior high school girls as measured by the How I See Myself Scale. Further studies by Green (1970) and Christian (1969) also tend to support a poor relationship between physical fitness programs and positive changes in self-concept. One possible explanation for these nonsignificant results is the suggestion that the positive experience of participation in conditioning programs is more influential in changing self-concepts than the actual physical outcomes of increased strength and endurance (Collingwood & Willet, 1971; Hellison, 1969). Some conditioning programs may allow more positive experiences for the participants than others.

In addition to physical fitness programs offered to school children and college students through departments of physical education, other non-traditional fitness programs are beginning to emerge. For example, the Department of Counselor Education at Auburn University now offers "Physical Dimensions of Counseling," a five-credit-hour graduate course designed to acquaint counselor trainees with the physical aspects of the helping relationship. The course is justified by the Counselor Education Department as follows:

The use of basic physical fitness and challenge response activities as both a direct and indirect counseling tool to help others gain self-esteem or improve their self-concept has been well-documented. Counselors may use this tool to help others gain self-esteem or improve their interpersonal skills in counseling while teachers and coaches may utilize the same skills in their teaching procedures. The need for helpers to be physically fit so as to better meet the demands placed upon them in the helping relationship has also been documented. The energy level of the helper is an important factor in being facilitative and in helping others take appropriate action steps.
This course will increase the knowledge and insight of the students into their own physical being and personal fitness and will also give them the experience of using this tool in an actual helping relationship. (from the request for addition of a new course, CED/HPR 551 - Physical Dimensions of Counseling, Department of Counselor Education, Auburn University, 1976)

Another new non-traditional fitness program is a course titled "Management of Stress via Running and Physical Fitness" offered at the Medical University of South Carolina. According to the course director Dr. Lois Veronen (1978), the course is designed for management level personnel with the philosophy that an individual who is physically fit, alert, and who understands the mechanics of stress will be able to handle stressful situations. The course will aid the participants to identify job-related situations which create stress, to cite detrimental aspects of stress on the human organism, to cite three benefits of physical fitness as represented by current research, to practice and acquire cognitive and physical relaxation techniques and to encourage and promote physical fitness through running.

**Self-Concept**

Ruth Wylie (1974) calls the current status of theory concerning self-referent constructs primitive. She contends that neither the existentialists nor the behaviorists (both relative newcomers in the area of personality study) have been concerned with contributing to a scientific psychology of personality which makes use of self-referent constructs. According to Wylie, the existentialists employ self-referent constructs but deliberately avoid scientifically useful clarification of terms and propositions. The Skinnerians, by contrast,
stress the importance of the scientific approach but argue vigorously against the scientific utility of introducing any constructs, including self-referent constructs. Wylie suggests that the continuing primitive state of formal theories involving self-referent constructs has serious implications for the adequacy of methodology in research relevant to the self-concept.

The word self is used in many different ways, and these usages can be dichotomized into those which refer to self as agent or process and those which refer to self as object of the person's own knowledge and evaluation (English & English, 1958; Hall & Lindzey, 1970; Symonds, 1951). Most research today refers most closely to the second (self as object) meaning, although the self-concept variables under consideration are hypothetically assigned behavior-determining roles as well (Wylie, 1974).

The self-concept is defined as what an individual sees about him- or herself and includes the totality of ways of seeing oneself (Combs, Courson & Soper, 1963). According to Rogers (1951), the self-concept may be thought of as an organized configuration of perceptions of the self which are admissable to awareness. Rogers' definition of the self-concept includes such elements as the perceptions of one's characteristics and abilities, the percepts and concepts of the self in relation to others and to the environment, the value qualities which are perceived as associated with experiences and objects, and goals and ideals which are perceived as having positive or negative valence.

Aspy (1971) claims that good self-concepts are the result of positive experiences, and this has been supported by studies (Collingwood & Willet, 1971; Hellison, 1969) which indicate that the
positive experience of participation in conditioning programs is more influential in changing self-concepts than the actual physical outcomes of increased strength and endurance. Snygg and Combs (1959) closely examine the effects of body conditioning on self-concept and reject the notion that changes in the self often occur by seeking to achieve the ideal. These authors present evidence to suggest that maximal change is brought about not by rejecting the present or longing for goals beyond possible achievement, but through first accepting the present and bringing both ends of the continuum together. According to Snygg and Combs, whether or not an individual in a body conditioning program perceives a change in the self depends upon:

1. the place of the new concept in the person's present self-organization;
2. the relation of the new concept to the person's basic need;
3. the clarity of the experience of the new perception.

Benjamins (1950) suggests that not only is the self-concept influenced by the individual's behavior, but also that self-concept reciprocally provides some influence on behavior. Bem (1967, 1970) proposes a radical notion in his self-perception theory: attitudes do not cause behavior—behavior causes attitudes. According to Bem's theory, then, we infer our own attitudes about ourselves (self-concept) from the way we behave. In other words, we do not jog because we perceive ourselves as strong and confident; rather, we perceive ourselves as strong and confident because we jog.
Self-Complexity

Ziller, Martell and Morrison (1977) propose that the self-concept may be described in terms of complexity, the degree of differentiation of the self-concept. Complexity of the self is one aspect of cognitive style, and it reflects the number of dimensions along which stimuli relevant to the self are ordered. Ziller et al. assume that facilitation of ordering and organizing stimuli is associated with attending to a wider range of stimuli and suggest that individuals with complex self-concepts may be aware of or consider a great number of stimuli as being potentially associated with the self. In terms of interpersonal perception, the complex person has a higher probability of matching some facet of the self with a facet of the other person, since for the multifaceted person there are a larger number of possible matches. Ziller et al. hypothesize that the complex individual is more inclined toward assimilation of self and others or perceiving some similarities between self and others. In general then, Ziller et al. suggest that persons with more complex self-concepts attend to a broader range of social stimuli, perceive more similarities between self and others, are more open to feedback from others and are more responsive to a wide variety of others.

Self-Report Measurement of Self-Concept

Historically, self-concept has been measured by self-report methods. Rogers (1951) claims that self-reports are valuable sources of information about the individual. Strong and Feder (1961) agree with Rogers, stating that each evaluative statement a person makes about
the self can be considered a sample of self-concept from which inferences may be made about the various properties of that self-concept. Allport (1937) asserts that the individual has a right to be believed when reporting feelings about him- or herself and suggests that if an investigator wants to know more about a person, the investigator should ask that person directly.

Combs and Soper (1957) suggest that the degree to which the self-report can be relied upon as an accurate indication of the self-concept depends upon such factors as the clarity of the subject's awareness, command of adequate symbols for expression, social expectancy, the cooperation of the subject and the subject's freedom from threat.

Wylie (1961) lists other influences on self-report responses: the subject's intent to select what he or she wishes to reveal to the examiner; the subject's intent to say that he or she has attitudes or perceptions which the subject does not have; the subject's response habits, particularly those involving introspection and the use of language; situational and methodological factors which may exert other superficial influences on the responses obtained.

Purkey (1970) criticizes the use of self-report to measure self-concept. He believes that while the self-concept is what one believes about oneself, the self-report represents only what one is willing and able to disclose to someone else. Wylie (1974) also criticizes the status of self-concept measurement. She recognizes that no one instrument intended to measure self-concept variables has been developed by the process of beginning with close attention stating rigorous conceptual definitions, followed by item building or item selection relevant to the conceptual definitions and followed by the
application of all appropriate modern procedures for refining a purported index of a construct and establishing its construct validity. Wylie identifies two especially noteworthy shortcomings which characterize even the most thoroughly studied instruments: (1) lack of clarity in the establishment of the basic construct definitions; and (2) failure to apply multitrait-multimethod analyses and other techniques for establishing discriminate validity. Wylie further suggests that part of the difficulty stems from inadequate delineation of the constructs by personality theorists.
CHAPTER III
METHODS AND PROCEDURES

Overview

This study investigated the effects of a jogging and assertiveness training program on self variables and assertiveness in women. Three treatment approaches were examined and compared: a jogging program, an assertiveness training program and a combined assertiveness training/jogging program. A no-treatment control group was used for further comparisons. The research design for this study was a nonrandomized control group pretest/posttest design (Isaac & Michael, 1971).

This chapter describes the hypotheses which were tested, population and sampling procedures, instrumentation, procedures, experimental treatments, data analysis and limitations of the study.

Hypotheses

Hypothesis 1.
There is no difference in self-complexity among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

Hypothesis 2.
There is no difference in physical self-image among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.
Hypothesis 3. There is no difference in self-concept among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

Hypothesis 4. There is no difference in self-acceptance among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

Hypothesis 5. There is no difference in ideal self among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

Hypothesis 6. There is no difference in assertiveness among women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

In addition to the above null hypotheses which were tested in this study, another had originally been included:

There is no difference in physical fitness among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

This hypothesis was unable to be tested because only one-half of the total subjects completed the physical fitness pretest. It appears the researcher failed to sufficiently motivate subjects in the control and assertiveness training conditions to participate in the physical fitness assessment. Appointments for the testing were broken, with subjects claiming forgetfulness and schedule conflicts. The decision was therefore made to exclude this hypothesis from the study.
Population

The population for this study was women who were enrolled as either parttime or fulltime students or who were spouses of students enrolled at the University of Florida or Santa Fe Community College. There were no restrictions based on age, race or level of educational classification. The population was restricted to women who would volunteer to participate in an assertiveness training/jogging program, since the sample was drawn from women who voluntarily responded to advertisements of the training program.

The sample was selected by the following procedures. The researcher advertised the availability of an assertiveness training/jogging program through student-related news media including the student newspaper and campus radio and television stations:

Two women's groups focusing on jogging and assertiveness skills will begin on Tuesday, October 17, 7:00-9:00 p.m. and Wednesday, October 18, 4:00-6:00 p.m. at the University Counseling Center in 311 Little Hall. An attempt will be made to overcome whatever blocks exist to acting assertively and assertive behaviors will be developed and refined through active practice methods. Individual jogging programs for each woman will be developed and carried out with group support and encouragement. All women students and student spouses are invited to participate. Please call the Counseling Center, 392-1575, to register.

Women who responded to the advertisements were screened according to guidelines for selecting assertiveness training group members outlined by Lange and Jakubowski (1976). These authors suggest the group leaders explain the goals and format of the training and identify the prospective subject's need for assertiveness training. Subjects were
questioned as to their expectations and needs related to assertiveness training and jogging, and the group leaders determined the subjects' motivation for assertiveness training and jogging and that the procedures used were acceptable to the subjects.

Women accepted as subjects after the initial screening were randomly assigned according to a table of random numbers to either:

1. Experimental Condition 1, which received the jogging program. These subjects received the assertiveness training program after the study was completed.

2. Experimental Condition 2, which received assertiveness training. These subjects received the jogging program after the study was completed.

3. Experimental Condition 3, which received both the jogging program and the assertiveness training program.

4. Control Condition, which received pretesting and post-testing, but had no treatment. These subjects had treatment delayed (same treatment as Experimental Condition 3) until the study was completed.

Subjects were asked to sign an informed consent statement (Appendix A), a waiver releasing the University of Florida from any liability for injury or accident that might have occurred during the training (Appendix B), and to submit a permission statement from a physician stating that the subject was physically capable of participating in the jogging activities (Appendix C). The signing of all release forms was completed before the treatment programs began in order for participants to be accepted as subjects. Three experimental and one control group were formed, making a total N of 49 for the study.
Procedures

After the initial screening interview, subjects in all experimental and control conditions were pretested with the Self-Complexity Task (SCT) of the Self Social Symbols Task, the Physical Image Scale (PIS) of the Alexander Self-Concept Inventory, the Index of Adjustment and Values (IAV, including the self-concept scale, self-acceptance scale and ideal self scale) and the College Self Expression Scale (CSES). The Run/Walk One-Mile Test was administered to subjects in Experimental Conditions 1 and 3. An appointment for pretesting (about one hour required for paper-pencil measures) was made with each subject during the initial screening interview. Subjects were asked to come to the University Counseling Center testing room at a convenient time to complete the pretests and the demographic data form (Appendix D) before the first treatment session. The Run/Walk One-Mile Test was administered during the first jogging sessions at the University track.

Posttesting was completed during the final sessions for both assertiveness training (Experimental Conditions 2 and 3) and jogging (Experimental Conditions 1 and 3) groups. The control group was administered posttests during Week 8 of the training program. Individual appointments were made, and those who were unable to keep the appointments were mailed their posttests and asked to return them. Posttesting for the Run/Walk One-Mile Test was carried out during the final jogging sessions for subjects in the jogging and assertiveness training/jogging conditions.

Two of the experimental conditions (2 and 3) in this study required assertiveness training, which was provided by the researcher and
four other trainers, all of whom met the following requirements for trainers:

1. Be a counseling psychologist or a graduate student in counselor education or counseling psychology;
2. Have had a course in group procedures;
3. Participate in a one-hour workshop to acquaint them with the format of the study and to insure that each leader understands the treatment program;
4. Be acquainted with the assertiveness training literature (by reading at least one assertiveness training book) and have participated in and/or led an assertiveness training group.

Trainers were provided written instructions for conducting each session. Two trainers were assigned to each assertiveness training group, and the researcher consulted weekly with all trainers to insure the program was being conducted according to the outlined procedures.

The jogging component of the program was led by the researcher and one other trainer who was a graduate student in counselor education, was knowledgable in the area of exercise physiology and was an experienced jogger. Consultation for the jogging component was provided by Dr. Ruth Alexander, Professor of Physical Education and Coordinator of Women's Athletics at the University of Florida.

Two sections of assertiveness training were offered each quarter for subjects in the assertiveness training and assertiveness training/jogging groups. Subjects in these two experimental conditions were able to choose which of the sections' meeting times was most convenient and to attend the session of choice. Each section contained
a blend of subjects assigned to both the assertiveness training and assertiveness training/jogging conditions. Similarly, two sections of jogging were provided each quarter for subjects in Experimental Conditions 1 and 3, and subjects were allowed to choose the most convenient section. Again, both jogging sections contained a blend of subjects assigned to both the jogging and assertiveness training/jogging conditions.

Subjects were assured by the interviewer during the initial screening interview that all information would remain confidential and was to be used only for the purposes of this research. Subjects were also informed that the assessment data would aid in evaluating the effectiveness of the training program. A copy of a statement summarizing the treatment program and results was available to all participants upon request when the study was completed.

The importance of attendance was stressed by the interviewer during the screening interview. Assertiveness training and assertiveness training/jogging subjects who missed more than two assertiveness training sessions were excluded from the study although they were allowed to continue the training. Joggers in the jogging and assertiveness training/jogging groups who failed to jog at least three times each week were also dropped from the study even though they were allowed to continue in the program.
**Jogging Program**

Subjects assigned to the jogging and assertiveness training/jogging conditions met for approximately one hour each week at the University track. The groups jogged (and walked, as necessary) around the two-mile vita parcour at the University of Florida. In addition to the weekly group meetings, subjects were expected to jog at least two other times each week individually, either before or after the group meeting. Competence levels for each subject were determined by the Walk/Run One-Mile Test during the first jogging session. General objectives were established for each competence level (Alexander, 1977), as follows:

1. Beginner (runs one mile in more than 10 minutes):
   To develop the novice jogger to a level whereby regular jogging could be participated in for conditioning, endurance and fun.

2. Intermediate (runs one mile in 8-10 minutes):
   To develop the present jogger to a level of distance running to challenge and benefit the individual.

3. Advanced (runs one mile in less than 8 minutes):
   To provide a regular jogging and running program for the already identified jogger.

Alexander further delineates 20 specific objectives for each competence level which may be used as individual guidelines (Appendix E). Subjects were expected to keep a record of their weekly jogging experiences (Appendix F), and these experiences were shared during weekly group meetings. Exercise physiology information, problems and frustrations encountered, successes and feelings about running were also shared during the weekly group meetings in a nondirective counseling mode following each session's run.
Assertiveness Training Program

The goals of the assertiveness training program were:

1. to teach the participants the necessary skills to increase their frequency of assertive responses;
2. to teach the participants to understand, clarify and express their feelings, opinions and attitudes;
3. to help the participants accept their own rights and distinguish personal rights from the rights of others;
4. to teach the participants the difference between assertive, nonassertive and aggressive responses;
5. to help the participants develop an assertive attitude that fits with their own personal style;
6. to help the participants feel less anxiety in social interactions.

Groups met for one two-hour session each week. The eight-week training program was conducted according to the following format:

Session 1 - Introduction

Objectives: 1. to present the goals of the training to the participants;
2. to define and present the components of assertive behavior, nonassertive behavior and aggressive behavior;
3. to establish rapport and build group trust.

Format: 1. Introductory exercise. Trainees pair off and get to know each other, then introduce partner to the large group.
2. Minilecture. This includes an explanation of the eight-session program, methods to be used and expectations for attendance and posttesting.

3. Class discussion. Explore group definitions of assertiveness, nonassertiveness and aggressiveness and identify their behavioral components (Appendix G).

4. Class exercise. Divide the group into triads to practice assertive, nonassertive and aggressive responses to given situations such that each member of the triad has an opportunity to practice all three responses and receive feedback.

5. Class discussion. Allow trainees to discuss their expectations and anxieties arising from participation in an assertiveness training program.

Session 2 - Interpersonal Rights

Objectives: 1. to recognize and act on interpersonal rights;

2. to understand one's belief system in relation to personal rights and how this determines which type of response is chosen.


2. Interpersonal rights exercise. Divide the class into two smaller groups and comment on interpersonal rights within the small group, identifying those which are blocks to assertive behavior.
3. Class discussion. In the large group, have representative members from each small group share their perceptions of interpersonal rights.

Session 3 - Rational-Emotive Principles and Cognitive Restructuring

Objective: 1. to present a conceptual framework for using cognitive restructuring procedures with behavior rehearsal procedures.

Format: 1. Rational-emotive principles exercise. This includes a presentation of Ellis' A-B-C paradigm (Ellis, 1962).

2. Class exercise. Apply Ellis' paradigm to situations in the Assertiveness Questionnaire (Appendix I) and identify blocks to assertive responding.

3. Class discussion. Allow trainees to explore, share and rehearse relevant personal situations and apply Ellis' paradigm.

Session 4 - Assertiveness Skills

Objectives: 1. to learn how to make and refuse requests;

2. to learn how to deal with persistent persons;

3. to understand personal rights related to refusals and requests.

Format: 1. Minilecture. Identify cognitive steps in assertiveness and explain basic techniques for responding (Appendix J).

2. Making and refusing requests exercise. Provide practice making and refusing requests, emphasizing the type of relationship involved in the situation.
3. Dealing with persistent persons exercise. Provide additional practice in making and refusing requests when the other person does not accept the first response.

Session 5 - Positive and Negative Assertion

Objectives: 1. to identify and importance of both positive and negative assertion;
2. to learn how to show recognition of the other person's situation and/or feelings;
3. to learn how to express caring, appreciation, praise;
4. to learn how to criticize and to receive criticism;
5. to learn how to confront another person assertively.

2. Class exercise. Allow trainees to share personal situations requiring empathic and confrontative assertion and rehearse these situations. Elicit group feedback.

Session 6 - Videotaped Behavior Rehearsal

Objective: 1. to increase assertiveness skills.

2. Class activity. Select pertinent life situations for videotaped behavior rehearsal. Use video playback to elicit group feedback.
Session 7 - Videotaped Behavior Rehearsal

Objective and Format same as for Session 6.

Session 3 - Summary

Objectives: 1. to identify continuing blocks to assertive responding;
2. to reinforce skill acquisition.

Format: 1. Class discussion. Discuss present blocks to assertive communication and identify success experiences.
2. Positive feedback exercise. Every trainee makes a positive statement to another trainee in the group.
3. Posttesting.

Assertiveness Training/Jogging Program

This program included both the Jogging program as outlined for Experimental Conditions 1 and 3 and the Assertiveness Training Program as outlined for Experimental Conditions 2 and 3.

Instrumentation

The instruments used in this research were the Self-Complexity Task of the Self Social Symbols Task, the Self-Image Scale of the Alexander Self-Concept Inventory, the Index of Adjustment and Values, the College Self-Expression Scale and the Run/Walk One-Mile Test.
The Self-Complexity Task (SCT) is part of the Self Social Symbols Task described by Ziller, Hagey, Smith and Long (1969). The SCT was designed to measure the number of facets of the self perceived by the individual. Complexity of the self-concept is assumed to be measured by enumerating the number of adjectives checked as descriptive of the self. The complexity measure consists of 109 high-frequency adjectives selected from the Thorndike-Lorge Word Book which are presented in adjective checklist form. The subject is asked to check each adjective which he or she thinks is self-descriptive. The complexity of the self-concept is defined operationally as the number of facets of the self perceived by the individual. The number of adjectives checked is totaled to yield a numerical score (range is 0-109) for each subject.

Split-half reliability (odd-even, corrected for length) was established at .92 in a study involving 100 randomly-selected students from grades 7-12 (Long, Henderson & Ziller, 1968). Test-retest reliability after one month for a group of college sophomores was .72 (Ridgeway, 1965).

Research substantiating the validity of the Self-Complexity Task shows that the index is not associated with intelligence or self-esteem, but is associated with self-ratings of complexity as well as with ratings of the complexity of photographs taken by the subject to describe the self with person orientation as measured by the California Psychological Inventory (Ziller, 1973; Ziller, Martell & Morrison, 1977; Ziller, Stone, Jackson & Terbavich, 1977). The SCT also correlates significantly with Pettigrew's measure of category width (1958), a measure frequently included within the cognitive complexity-simplicity
category \((r = .26, p < .05)\). Normative data for this instrument has not been reported.

**Physical Image Scale (PIS)**

The Physical Image Scale is part of the Alexander Self-Concept Inventory developed by Ruth Alexander (1967). The PIS consists of 25 questions designed to measure physical self-image acceptance. The questions yield "yes-no" and "satisfied-dissatisfied" answers; subjects receive one point for each positive answer and one point for each "satisfied" answer. Points are totaled to yield one numerical score for each subject. A reliability coefficient of .71 was attained by using an odd-even split-half technique and applying the Spearman-Brown formula to the data. Validity and normative data for this instrument has not been reported.

**Index of Adjustment and Values (IAV)**

The Index of Adjustment and Values is a self-report instrument constructed by Robert Bills (Bills, Vance & McLean, 1951) to provide a measure of self-concept, self-acceptance and ideal self. It also suggests a measure of adjustment, which is defined as the discrepancy between self-concept and ideal self scores.

The adult form of the IAV consists of 49 adjectives, and the subject is instructed to respond to each adjective as it relates to him or her. Each adjective is used in two different sentences. The subject is asked to rate the frequency with which each sentence is true of him or her using a Likert-type scale with five choices: seldom,
occasionally; about half the time; a good deal of the time; most of
the time. Subjects are asked to use each adjective in the following
sentence: "I am a (an) ________________ person" and then to use
the adjective in a second sentence: "I would like to be a (an) __
______________ person."

Split-half reliability was measured by giving the IAV to 237
students and correlating the odd-numbered items with the even-numbered
items (r=.91, \( p < .001 \)). The index was readministered to 175 of the
same 237 students six weeks later to yield a test-retest reliability
of .83, \( p < .001 \). Self-acceptance scores were further tested using 568
college students. This procedure yielded a test-retest correlation of
.83 after a six-week interval and a .68 and .79 correlation for two
samples after a sixteen-week interval (Wylie, 1974).

The validity of the IAV was determined by using independent raters
to evaluate responses to the IAV compared to the Rorschach. A correla-
tion of \( r=.60, \ p < .05 \) was obtained. Wylie (1974) also reports mod-
erate to high construct and convergent validity of the IAV.

**College Self-Expression Scale (CSES)**

The College Self Expression Scale (Appendix D) was developed by
Galassi, Delc, Galassi and Bastien (1974) and has been widely accepted
as a measure of assertiveness (Bodner, 1975; Lacks & Jakubowski, 1975;

The CSES is a 50-item self-report inventory which was designed
to assess assertiveness in college students. The scale attempts to
measure positive assertiveness, negative assertiveness and self-denial.
The CSES items indicate the subject's level of assertiveness in a variety of social situations which the average college student encounters with family, strangers, roommates, business relations, authority figures and opposite-sex peers.

The CSES utilizes a 5-point Likert-type format with responses ranging from 0 to 4: 0 is almost always or always; 1 is usually; 2 is sometimes; 3 is seldom; 4 is rarely or never. Subjects are asked to choose one of these five categories as a response for each item on the scale. Twenty-nine items are negatively-worded and 21 items are positively-worded. Theoretically, the range of scores possible is from 0 to 200 with high scores being indicative of a generalized assertive response pattern.

Galassi et al. (1974) report normative data collected on 120 males and 141 females. The overall mean for this group was 123.84. The mean score for males was slightly higher than that reported for females, 127.29 and 121.11.

Test-retest reliability collected over a two-week period yielded correlation coefficients for two samples of .89 and .90.

Galassi et al. (1974) report two forms of validity obtained for the scale. The CSES was correlated with the 24 scales of the Adjective Checklist to provide concurrent validity. It correlated positively and significantly (correlation coefficients not reported) with 11 scales that Gough and Heilburn (1965) suggest measure dynamics considered to be parts of assertiveness. The CSES correlated negatively (correlation coefficients not reported) with scales of the Adjective Checklist that indicate negative or inadequate self-evaluation. The CSES was unrelated to the subscale of aggression on the Adjective Checklist (r=.17),
an important finding since assertiveness is often confused with aggressiveness. Concurrent validity data was obtained by correlating student teachers' scores on the CSES with their supervisors' ratings of their assertiveness. The correlation was low but significant ($r=.19; p < .005$). Although the concurrent validity of the CSES is low in absolute terms, it is comparable to the concurrent validity data reported for other similar scales (Lacks & Jakubowski, 1975).

**Run/Walk One-Mile Test**

This is a modification of Cooper's (1968) 1.5-mile test, shortened by .5 miles for the purposes of this study. Subjects are asked to run (and walk, as necessary) a distance of one mile as quickly as possible, and finishing times are recorded. This appears to be a practical method for measuring and comparing the aerobic capacity of large numbers of people. The One-Mile Test is used as a screening procedure to assign subjects to either beginning, intermediate or advanced jogging levels. Beginners generally run/walk the mile in ten minutes or more; intermediate joggers generally run the mile in eight to ten minutes; advanced joggers generally complete the one-mile distance in less than eight minutes.

**Data Analysis**

A one-way analysis of covariance was computed for each scale, including the SCT, PIS, IAV (Self-Concept, Self-Acceptance and Ideal Self Scales) and the CSES. Pretest scores for each scale were used as covariates to control initial uncontrolled differences between
groups on each relevant variable. Analysis of covariance added statistical control (Kirk, 1966) to this study since subjects assigned to the three experimental groups and one control group were not equated at the beginning of the study on relevant variables (self-complexity, physical self-image, self-concept, self-acceptance, ideal self and assertiveness). The acceptable significance level for each analysis was .05.

Limitations

Although the analysis of covariance technique helped to equalize uncontrolled pretest differences between groups on the variables of self-complexity, physical self-image, self-concept, self-acceptance, ideal self and assertiveness, it was possible that some overlooked variable biased the experiment.

Because the subjects in this study were not randomly selected from the general population of female university students and student spouses, a possible source of invalidity is an interaction of selection and maturation factors which may be mistaken for effects of the experimental treatments. It may be that, because they volunteered for the training, subjects comprising the sample would become more assertive and experience more complex self-concepts and more positive self-images and self-acceptance without participating in the treatment programs, whereas women who did not volunteer for the program would not.
CHAPTER IV
THE FINDINGS

This study sought to examine the effects of jogging and assertiveness training on self variables and assertiveness in women. Three treatment approaches were examined and compared in terms of differences reported on instruments which measure self-complexity, physical self-image, self-concept, self-acceptance, ideal self and assertiveness. A no-treatment control group was also used for comparisons. The Statistical Package for the Social Sciences (SPSS) was used for the analyses of covariance, \( t \)-test analyses and chi-square analyses of scores on the selected measures and on demographic variables. The acceptable level of significance for all analyses was \( p < .05 \).

Sample

The study initially included 91 women who were either University of Florida students, spouses of University of Florida students or Santa Fe Community College students. Fifty-four \%\ of the subjects dropped out of the study, leaving a total of 49 women who completed the program. The drop-out rate for the jogging group was 41\%; 37\% dropped out of the assertiveness training group; 42\% dropped out of the assertiveness training/jogging group; 56\% of the subjects assigned to the control group failed to complete the program. Drop-out data is presented in Table 1.
<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
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<tr>
<td>Experimental Group 1</td>
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<td>(Jogging)</td>
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<td>Experimental Group 2</td>
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<td>(AT)</td>
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<td>Experimental Group 3</td>
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</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>54%</td>
</tr>
</tbody>
</table>
Table 2 provides demographic information for the sample by group. The sample included 20 graduate students, 24 undergraduates, 4 spouses of University students and 1 Santa Fe Community College student. Thirty-seven were single, 12 were married, and their ages ranged from 18 to 41. Thirty-five of the subjects (71%) were 18-25 years old, and 14 (29%) were over 25.

Fourteen subjects in the jogging and assertiveness training/jogging groups were beginning joggers according to criteria established in Chapter III. Eight subjects were intermediate joggers and 2 were classified as advanced joggers. Subjects in the assertiveness training and control groups were not tested for physical fitness; therefore, there is no fitness data reported for these two groups.

The amount of weekly exercise reported by the subjects upon entry into the program was varied. Twelve % reported no weekly exercise; 51% reported 1-2 hours of weekly exercise; 24% reported 3-4 hours of weekly exercise; 12% reported spending 5 or more hours in weekly exercise. Major types of exercise reported by the subjects were jogging (24%), bicycling (18%), walking (12%) and calesthenics (10%). Other exercise activities reported were racquetball, swimming, dance, horseback riding, yoga, tennis, karate and volleyball.

Subjects were randomly assigned to three experimental conditions and to a control condition. Exceptions to the randomization procedure were made for students who were finishing their last quarter on campus and who wished to complete both the jogging and assertiveness training components before they left. They were assigned to Experimental Condition 3, assertiveness training/jogging. Another exception was made for a woman who was pregnant and originally assigned to the assertiveness
<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Experimental Condition 1 (Jog)</th>
<th>Experimental Condition 2 (AT)</th>
<th>Experimental Condition 3 (AT/Jog)</th>
<th>Control Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>3 25.0%</td>
<td>3 23.1%</td>
<td>3 25.0%</td>
<td>3 25.0%</td>
</tr>
<tr>
<td>Single</td>
<td>9 75.0%</td>
<td>10 76.9%</td>
<td>9 75.0%</td>
<td>9 75.0%</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grad. Student</td>
<td>6 50.0%</td>
<td>5 41.7%</td>
<td>5 46.2%</td>
<td>8 67.0%</td>
</tr>
<tr>
<td>Undergrad.</td>
<td>5 42.0%</td>
<td>6 41.7%</td>
<td>5 46.2%</td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>0 0.0%</td>
<td>2 15.4%</td>
<td>1 8.3%</td>
<td>1 8.0%</td>
</tr>
<tr>
<td>SFCC Student</td>
<td>1 8.0%</td>
<td>0 0.0%</td>
<td>0 0.0%</td>
<td>0 0.0%</td>
</tr>
<tr>
<td>Jogging Classification</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning</td>
<td>6 50.0%</td>
<td>-</td>
<td>8 66.7%</td>
<td>-</td>
</tr>
<tr>
<td>Intermediate</td>
<td>6 50.0%</td>
<td>-</td>
<td>2 16.7%</td>
<td>-</td>
</tr>
<tr>
<td>Advanced</td>
<td>0 0.0%</td>
<td>-</td>
<td>2 16.7%</td>
<td>-</td>
</tr>
<tr>
<td>Weekly Exercise</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>2 16.7%</td>
<td>1 7.7%</td>
<td>1 8.3%</td>
<td>2 16.7%</td>
</tr>
<tr>
<td>1-2 hours</td>
<td>7 58.3%</td>
<td>8 61.5%</td>
<td>5 41.7%</td>
<td>5 41.7%</td>
</tr>
<tr>
<td>3-4 hours</td>
<td>2 16.7%</td>
<td>2 15.4%</td>
<td>5 41.7%</td>
<td>3 25.0%</td>
</tr>
<tr>
<td>5+ hours</td>
<td>1 8.3%</td>
<td>2 15.4%</td>
<td>1 8.3%</td>
<td>2 16.7%</td>
</tr>
</tbody>
</table>
training/jogging group. She was allowed to join the control condition. Twelve subjects assigned to the jogging condition completed the program; 13 subjects assigned to the assertiveness training condition completed the program; 12 subjects assigned to the assertiveness training/jogging condition completed the program; and 12 subjects assigned to the control condition completed the program.

Chi-square analysis was computed across groups for marital status, education level, jogging classification and amount of time spent exercising each week (self-reported) to determine whether or not the groups differed significantly on these variables. The chi-square revealed no significant differences among groups. A one-way analysis of variance was computed to determine any difference among groups in age of subjects. No significant differences in mean age were revealed. Results of the chi-square analysis and the analysis of variance suggested no significant differences among groups on demographic variables.

Findings Related to the Null Hypotheses

Differences between women participating in a jogging program, an assertiveness training program, a combined assertiveness training/jogging program and those who received no treatment were examined in terms of differences in self variables and assertiveness. Findings regarding the null hypotheses follow.

Hypothesis 1.

There is no difference in self-complexity among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program, or women who receive no treatment.
The Self-Complexity Task was used to assess differences in self-complexity among groups, with high scores on the SCT indicating high self-complexity. Individual scores ranged from 10 to 77. Table 3 presents a comparison of mean differences between pretest and posttest scores on the SCT for each group as well as a paired *t*-test for mean differences. The two-tailed *t*-test revealed no significant differences between pretest and posttest measures for any group, suggesting no change in subjects' self-complexity as a result of treatment.

Table 4 reports a *t*-test (two-tailed) for significant differences between pretest and posttest mean Positive scores for the SCT. This score reflects the number of positive adjectives checked by subjects on the SCT to describe themselves. The *t*-test indicated no significant changes in Positive scores, suggesting that subjects experienced no significant changes in the number of positive adjectives they used to describe themselves.

Table 5 reports a *t*-test for significant differences between pretest and posttest mean Negative scores for the SCT. This score reflects the number of negative adjectives checked by subjects on the SCT to describe themselves. The *t*-test indicated no significant differences in number of negative items checked, revealing that subjects experienced no significant changes in number of negative adjectives used to describe themselves.

An analysis of covariance using SCT pretest scores as the covariate is reported in Table 6. The analysis yielded no significant main effects, indicating no significant differences in self-complexity among groups following treatment. Hypothesis 1 was therefore not rejected.
<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental Condition 1</strong> (Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>27.33</td>
<td>29.17</td>
<td>.83</td>
<td>11</td>
<td>.35</td>
</tr>
<tr>
<td>SD</td>
<td>10.54</td>
<td>12.04</td>
<td>8.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>3.04</td>
<td>3.48</td>
<td>2.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Experimental Condition 2</strong> (AT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>32.69</td>
<td>34.39</td>
<td>1.69</td>
<td>12</td>
<td>.56</td>
</tr>
<tr>
<td>SD</td>
<td>15.16</td>
<td>17.46</td>
<td>9.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>4.21</td>
<td>4.84</td>
<td>3.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Experimental Condition 3</strong> (AT/Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>32.33</td>
<td>31.67</td>
<td>-.67</td>
<td>11</td>
<td>-.30</td>
</tr>
<tr>
<td>SD</td>
<td>17.48</td>
<td>17.23</td>
<td>7.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>5.05</td>
<td>4.97</td>
<td>2.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Control Condition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>40.03</td>
<td>38.25</td>
<td>-2.58</td>
<td>11</td>
<td>-.88</td>
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<tr>
<td>SD</td>
<td>18.64</td>
<td>14.25</td>
<td>10.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>5.38</td>
<td>4.11</td>
<td>2.94</td>
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</tr>
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### TABLE 4

Mean Differences in Self-Complexity Task (Positive Scores) by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Condition 1 (Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>24.25</td>
<td>25.75</td>
<td>1.50</td>
<td>11</td>
<td>.56</td>
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<tr>
<td>SD</td>
<td>11.51</td>
<td>12.28</td>
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<tr>
<td>SE</td>
<td>3.32</td>
<td>3.55</td>
<td>1.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental Condition 2 (AT)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>27.92</td>
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<td>4.00</td>
<td>12</td>
<td>1.43</td>
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<td>16.88</td>
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<td>Experimental Condition 3 (AT/Jog)</td>
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<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>25.83</td>
<td>27.33</td>
<td>1.50</td>
<td>11</td>
<td>1.22</td>
</tr>
<tr>
<td>SD</td>
<td>14.73</td>
<td>14.46</td>
<td>8.97</td>
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</tr>
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<td>SE</td>
<td>4.25</td>
<td>4.18</td>
<td>3.85</td>
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</tr>
<tr>
<td>Control Condition</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>32.00</td>
<td>31.50</td>
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<td>11</td>
<td>-0.23</td>
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<td>SD</td>
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<td>3.98</td>
<td>3.26</td>
<td>2.98</td>
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<td></td>
</tr>
</tbody>
</table>
TABLE 5

Mean Differences in Self-Complexity Task 
(Negative Scores) by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Condition 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>3.08</td>
<td>2.42</td>
<td>-.67</td>
<td>11</td>
<td>-.94</td>
</tr>
<tr>
<td>SD</td>
<td>2.59</td>
<td>2.91</td>
<td>2.46</td>
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<tr>
<td>SE</td>
<td>.73</td>
<td>.84</td>
<td>.71</td>
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<td>Experimental</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Condition 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(AT)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>4.77</td>
<td>2.46</td>
<td>-2.31</td>
<td>12</td>
<td>-3.29</td>
</tr>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>(AT/Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>5.75</td>
<td>4.33</td>
<td>-1.42</td>
<td>11</td>
<td>-1.10</td>
</tr>
<tr>
<td>SD</td>
<td>4.05</td>
<td>3.65</td>
<td>4.46</td>
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</tr>
<tr>
<td>SE</td>
<td>1.17</td>
<td>1.05</td>
<td>1.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>8.75</td>
<td>6.75</td>
<td>-2.00</td>
<td>11</td>
<td>-1.51</td>
</tr>
<tr>
<td>SD</td>
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<td>Sum of Squares</td>
<td>Mean Square</td>
<td>F-ratio</td>
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</tr>
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<td>----</td>
<td>----------------</td>
<td>-------------</td>
<td>---------</td>
<td></td>
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<td>Covariate (SCT pretest)</td>
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<td>7793.379</td>
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<tr>
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<td>Explained</td>
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<td>1962.168</td>
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<td>Residual</td>
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<td>3555.270</td>
<td>80.802</td>
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<tr>
<td>Total</td>
<td>48</td>
<td>11403.941</td>
<td>237.582</td>
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</tr>
</tbody>
</table>

*p < .05
Hypothesis 2.

There is no difference in physical self-image among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program, or women who receive no treatment.

The Physical Image Scale provided a measure of physical self-image, with individual scores ranging from 10 to 49 and high scores indicating positive physical self-image. Table 7 presents a comparison of mean differences in pretest and posttest scores among groups. The two-tailed paired \( t \)-test indicates significant changes in physical self-images among subjects in the jogging and assertiveness training/jogging groups. This suggests that subjects who participated in the jogging component of the treatment program demonstrated significant positive increases in physical self-image. Subjects in the assertiveness training and control groups demonstrated no significant changes. Table 8 presents an analysis of covariance with pretest scores on the PIS as the covariate which demonstrates significant effects resulting from treatment. Both the analysis of covariance and paired \( t \)-tests demonstrated significant differences in physical self-image among groups.

This increase in physical self-image suggests that subjects who completed the jogging component of the treatments both perceived their bodies more positively and demonstrated more satisfaction with their physical appearance than controls and subjects who received only assertiveness training. Hypothesis 2 was therefore rejected.
### TABLE 7

Mean Differences in Physical Image Scale by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental Condition 1</strong> (Jog)</td>
<td>29.67</td>
<td>34.75</td>
<td>5.08</td>
<td>11</td>
<td>2.92*</td>
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<tr>
<td></td>
<td>7.41</td>
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</tr>
<tr>
<td></td>
<td>2.14</td>
<td>1.02</td>
<td>1.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Experimental Condition 2</strong> (AT)</td>
<td>35.31</td>
<td>36.31</td>
<td>1.00</td>
<td>12</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
<td>8.35</td>
<td>8.60</td>
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</tr>
<tr>
<td></td>
<td>2.32</td>
<td>2.38</td>
<td>.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Experimental Condition 3</strong> (AT/Jog)</td>
<td>22.83</td>
<td>28.92</td>
<td>6.08</td>
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</tr>
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<td>11.77</td>
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<td>2.08</td>
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<tr>
<td><strong>Control Condition</strong></td>
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<td>.96</td>
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<td>10.49</td>
<td>12.41</td>
<td>8.52</td>
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<td></td>
<td>3.03</td>
<td>3.58</td>
<td>2.46</td>
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</tr>
</tbody>
</table>

*p < .05*
TABLE 8

Physical Image Scale: Analysis of Covariance

<table>
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<tr>
<th>Source</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
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<td>2875.283</td>
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</tr>
<tr>
<td>Main Effects</td>
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<td>104.119</td>
<td>34.706</td>
<td>3.869#</td>
</tr>
<tr>
<td>Explained</td>
<td>4</td>
<td>2979.402</td>
<td>744.350</td>
<td>18.655</td>
</tr>
<tr>
<td>Residual</td>
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<td>1756.829</td>
<td>39.928</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>4736.230</td>
<td>98.671</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05
Hypothesis 3.

There is no difference in self-concept among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

The Index of Adjustment and Values provided a measure of self-concept, with individual scores ranging from 121 to 189 and high scores indicating a positive self-concept. The differences in mean scores among groups are presented in Table 9. No significant differences in pretest and posttest scores were indicated for any group by a paired t-test (two-tailed) analysis. An analysis of covariance with the self-concept scale pretest scores on the IAV as the covariate (Table 10) yielded no significant differences among groups. Because the data yielded no significant differences in self-concept among groups, Hypothesis 3 was not rejected.

Hypothesis 4.

There is no difference in self-acceptance among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

The IAV also provided a measure of self-acceptance, with individual scores on this scale ranging from 121 to 195. High scores suggest a higher degree of self-acceptance. A paired t-test (two-tailed) analyzing mean differences in self-acceptance scores for each group is presented in Table 11. No significant differences were indicated, suggesting that no significant changes in self-acceptance occurred in any group as a result of treatment. An analysis of covariance with pretest scores on the self-acceptance scale of the IAV as the covariate (Table 12) also reported no significant differences in self-acceptance.
### TABLE 9

Mean Difference in Index of Adjustment and Values (Self-Concept Scale) Scores by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental Condition 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>155.42</td>
<td>162.00</td>
<td>6.58</td>
<td>11</td>
<td>1.70</td>
</tr>
<tr>
<td>SD</td>
<td>18.00</td>
<td>18.24</td>
<td>13.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>5.20</td>
<td>5.27</td>
<td>3.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Experimental Condition 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(AT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>158.31</td>
<td>164.77</td>
<td>6.46</td>
<td>12</td>
<td>1.69</td>
</tr>
<tr>
<td>SD</td>
<td>15.51</td>
<td>19.57</td>
<td>11.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>4.30</td>
<td>5.43</td>
<td>3.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Experimental Condition 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(AT/Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>152.92</td>
<td>157.92</td>
<td>5.00</td>
<td>11</td>
<td>1.56</td>
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<td>21.32</td>
<td>11.10</td>
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<td>SE</td>
<td>5.02</td>
<td>6.17</td>
<td>3.21</td>
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<tr>
<td><strong>Control Condition</strong></td>
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<td></td>
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</tr>
<tr>
<td>X</td>
<td>164.75</td>
<td>164.50</td>
<td>- .25</td>
<td>11</td>
<td>- .07</td>
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<td>SD</td>
<td>19.37</td>
<td>18.18</td>
<td>11.93</td>
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<tr>
<td>SE</td>
<td>5.59</td>
<td>5.25</td>
<td>3.45</td>
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</table>
### TABLE 10

Index of Adjustment and Values, Self-Concept Scale: Analysis of Covariance

<table>
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<tr>
<th>Source</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (IAV pretest)</td>
<td>1</td>
<td>10805.938</td>
<td>10805.938</td>
<td>76.244*</td>
</tr>
<tr>
<td>Main Effects</td>
<td>3</td>
<td>509.832</td>
<td>169.944</td>
<td>1.139</td>
</tr>
<tr>
<td>Explained</td>
<td>4</td>
<td>11315.820</td>
<td>2828.955</td>
<td>19.960</td>
</tr>
<tr>
<td>Residual</td>
<td>44</td>
<td>6236.105</td>
<td>141.730</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>17551.926</td>
<td>365.665</td>
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</tr>
</tbody>
</table>

*p < .05
TABLE 11

Mean Differences in Index of Adjustment and Values (Self-Acceptance Scale) Scores by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Condition 1 (Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\bar{x}$</td>
<td>155.42</td>
<td>162.00</td>
<td>2.83</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>18.00</td>
<td>18.24</td>
<td>10.76</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SE</td>
<td>4.53</td>
<td>4.26</td>
<td>3.11</td>
<td></td>
</tr>
<tr>
<td>Experimental Condition 2 (AT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\bar{x}$</td>
<td>165.69</td>
<td>172.26</td>
<td>6.57</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>20.55</td>
<td>24.64</td>
<td>11.36</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SE</td>
<td>5.67</td>
<td>6.84</td>
<td>3.15</td>
<td></td>
</tr>
<tr>
<td>Experimental Condition 3 (AT/Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\bar{x}$</td>
<td>154.08</td>
<td>160.66</td>
<td>6.58</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>11.69</td>
<td>14.03</td>
<td>10.06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SE</td>
<td>3.37</td>
<td>4.05</td>
<td>2.90</td>
<td></td>
</tr>
<tr>
<td>Control Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\bar{x}$</td>
<td>168.08</td>
<td>174.00</td>
<td>5.92</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>29.20</td>
<td>26.04</td>
<td>15.59</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SE</td>
<td>8.43</td>
<td>7.52</td>
<td>4.50</td>
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</tr>
</tbody>
</table>
### TABLE 12

Index of Adjustment and Values, Self-Acceptance Scale: Analysis of Covariance

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate (IAV pretest)</td>
<td>1</td>
<td>13425.617</td>
<td>13425.617</td>
<td>96.303*</td>
</tr>
<tr>
<td>Main Effects</td>
<td>3</td>
<td>880.125</td>
<td>293.375</td>
<td>2.104</td>
</tr>
<tr>
<td>Explained</td>
<td>4</td>
<td>14305.742</td>
<td>3576.436</td>
<td>25.654</td>
</tr>
<tr>
<td>Residual</td>
<td>44</td>
<td>6134.035</td>
<td>139.410</td>
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</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>20439.777</td>
<td>425.829</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05
among groups. Because the data suggests no significant differences among groups, Hypothesis 4 was not rejected.

Hypothesis 5.

There is no difference in ideal self among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

The IAV also provided a measure of the ideal self, with individual scores ranging from 157 to 209 on the ideal self scale. High scores reflect higher values toward which the subject is striving. No significant changes in ideal self were indicated by a two-tailed \( t \)-test of mean differences for all groups (Table 13). This suggests that subjects in the experimental and control conditions did not change their concepts of an ideal self significantly as a result of treatment. Table 14 presents an analysis of covariance for the ideal self scale with pretest scores as the covariate which yielded no significant differences among groups. Hypothesis 5 was therefore not rejected.

Hypothesis 6.

There is no difference in assertiveness among groups of women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

A measure of assertiveness was provided by the College Self-Expression Scale. Individual scores ranged from 71 to 152 with high scores indicating assertive responses. A paired \( t \)-test (two-tailed) revealed significant differences between pretest and posttest measures of assertiveness for the assertiveness training and assertiveness training/jogging groups. A change in the direction of increased
## TABLE 13

Mean Differences in Index of Adjustment and Values (Ideal Self Scale) Scores by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Condition 1 (Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>183.75</td>
<td>179.92</td>
<td>-3.83</td>
<td>11</td>
<td>-1.36</td>
</tr>
<tr>
<td>SD</td>
<td>14.47</td>
<td>13.83</td>
<td>9.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>4.18</td>
<td>3.99</td>
<td>2.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental Condition 2 (AT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>183.62</td>
<td>186.00</td>
<td>2.38</td>
<td>12</td>
<td>.74</td>
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<tr>
<td>SD</td>
<td>11.95</td>
<td>11.71</td>
<td>11.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>3.31</td>
<td>3.25</td>
<td>3.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental Condition 3 (AT/Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>184.42</td>
<td>179.83</td>
<td>-4.58</td>
<td>11</td>
<td>-1.57</td>
</tr>
<tr>
<td>SD</td>
<td>13.46</td>
<td>16.24</td>
<td>10.10</td>
<td></td>
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</tr>
<tr>
<td>SE</td>
<td>3.89</td>
<td>4.69</td>
<td>2.91</td>
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</tr>
<tr>
<td>Control Condition</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>X</td>
<td>191.83</td>
<td>193.85</td>
<td>3.02</td>
<td>11</td>
<td>.84</td>
</tr>
<tr>
<td>SD</td>
<td>13.23</td>
<td>10.24</td>
<td>10.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>3.82</td>
<td>2.96</td>
<td>3.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>df</td>
<td>Sum of Squares</td>
<td>Mean Square</td>
<td>F-ratio</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>----</td>
<td>----------------</td>
<td>-------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>Covariate (IAV pretest)</td>
<td>1</td>
<td>4030.027</td>
<td>4030.027</td>
<td>42.440*</td>
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</tr>
<tr>
<td>Main Effects</td>
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<td>382.083</td>
<td>127.361</td>
<td>1.341</td>
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</tr>
<tr>
<td>Explained</td>
<td>4</td>
<td>4412.109</td>
<td>1103.027</td>
<td>11.617</td>
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</tr>
<tr>
<td>Residual</td>
<td>44</td>
<td>4177.781</td>
<td>94.950</td>
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</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>8599.891</td>
<td>178.956</td>
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<td></td>
</tr>
</tbody>
</table>

*p < .05
assertiveness was noted in the jogging group, but this difference failed to achieve .05 significance (p < .09). Table 15 presents the results of the t-test analyses. An analysis of covariance with pretest scores on the CSES as the covariate revealed significant differences in assertiveness among groups following treatment (Table 16). Hypothesis 6 was therefore rejected.

Other Findings

Adjustment

The total of the discrepancies between the self-concept and the concept of the ideal self was considered to be a measure of adjustment. The smaller the discrepancy, the greater the individual's personal adjustment. Table 17 presents a t-test (two-tailed) analysis of self-concept/ideal self discrepancies on the Index of Adjustment and Values for all groups. Significant increases in adjustment (decreases in self-concept/ideal self discrepancy) were revealed for all three treatment groups. Controls demonstrated no significant change. These results suggest that subjects in the treatment conditions changed their perceptions as a result of treatment such that their self-concepts became more similar to their concepts of an ideal self, resulting in increased personal adjustment.

Physical Fitness

Physical fitness was measured by the Run/Walk One-Mile Test and was used to assess fitness levels of the jogging and assertiveness training/jogging groups. Table 18 presents a two-tailed t-test for differences in physical fitness scores for the two groups. Although subjects in
TABLE 15

Mean Differences in College Self-Expression Scale Scores by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Condition 1 (Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>113.83</td>
<td>118.53</td>
<td>4.75</td>
<td>11</td>
<td>1.85</td>
</tr>
<tr>
<td>SD</td>
<td>13.13</td>
<td>17.23</td>
<td>8.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>5.23</td>
<td>4.98</td>
<td>2.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental Condition 2 (AT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>109.31</td>
<td>130.00</td>
<td>20.69</td>
<td>12</td>
<td>4.41*</td>
</tr>
<tr>
<td>SD</td>
<td>22.52</td>
<td>18.41</td>
<td>16.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>6.25</td>
<td>5.11</td>
<td>4.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental Condition 3 (AT/Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>111.25</td>
<td>132.50</td>
<td>21.25</td>
<td>11</td>
<td>7.41*</td>
</tr>
<tr>
<td>SD</td>
<td>11.99</td>
<td>14.38</td>
<td>9.94</td>
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<td></td>
</tr>
<tr>
<td>SE</td>
<td>3.46</td>
<td>4.15</td>
<td>2.87</td>
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</tr>
<tr>
<td>Control Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>119.83</td>
<td>120.67</td>
<td>.83</td>
<td>11</td>
<td>.23</td>
</tr>
<tr>
<td>SD</td>
<td>24.20</td>
<td>21.88</td>
<td>12.58</td>
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<td></td>
</tr>
<tr>
<td>SE</td>
<td>6.99</td>
<td>6.32</td>
<td>3.63</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( *p < .05 \)
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<tr>
<th>Source</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F-ratio</th>
</tr>
</thead>
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<td>Covariate (CSES pretest)</td>
<td>1</td>
<td>7655.863</td>
<td>7655.863</td>
<td>58.757*</td>
</tr>
<tr>
<td>Main Effects</td>
<td>3</td>
<td>3191.223</td>
<td>1063.741</td>
<td>3.164*</td>
</tr>
<tr>
<td>Explained</td>
<td>4</td>
<td>10847.086</td>
<td>2711.771</td>
<td>20.312</td>
</tr>
<tr>
<td>Residual</td>
<td>44</td>
<td>5733.063</td>
<td>130.297</td>
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</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>16580.148</td>
<td>345.420</td>
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</tr>
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*p < .05
<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest Discrepancy (Adjustment)</th>
<th>Posttest Discrepancy (Adjustment)</th>
<th>Difference</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental Condition 1</strong> (Jog)</td>
<td>28.33 ± 16.24 ± 5.01</td>
<td>17.92 ± 15.53 ± 4.28</td>
<td>-10.41</td>
<td>11</td>
<td>-3.92*</td>
</tr>
<tr>
<td><strong>Experimental Condition 2</strong> (AT)</td>
<td>25.32 ± 12.36 ± 4.23</td>
<td>18.23 ± 10.43 ± 4.01</td>
<td>-7.09</td>
<td>12</td>
<td>-3.15*</td>
</tr>
<tr>
<td><strong>Experimental Condition 3</strong> (AT/Jog)</td>
<td>31.50 ± 14.33 ± 4.59</td>
<td>21.91 ± 14.56 ± 5.51</td>
<td>-9.59</td>
<td>11</td>
<td>-3.75*</td>
</tr>
<tr>
<td><strong>Control Condition</strong></td>
<td>27.08 ± 17.28 ± 4.43</td>
<td>24.74 ± 16.32 ± 3.96</td>
<td>-2.34</td>
<td>11</td>
<td>1.23</td>
</tr>
</tbody>
</table>

* p < .05
TABLE 18

Mean Differences in Run/Walk One-Mile Test Scores by Group

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest (minutes)</th>
<th>Posttest (minutes)</th>
<th>Difference</th>
<th>df</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Condition 1 (Jog)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\bar{X}$</td>
<td>10.40</td>
<td>9.20</td>
<td>-1.20</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.11</td>
<td>2.14</td>
<td>2.41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SE</td>
<td>.32</td>
<td>.62</td>
<td>.69</td>
<td></td>
</tr>
</tbody>
</table>

Experimental Condition 3 (AT/Jog) |                  |                    |            |    |         |
| $\bar{X}$        | 10.40              | 9.50               | -.90       | 11  | -1.68   |
| SD                | 1.71               | 1.98               | 2.25       |     |
| SE                | .49                | .57                | .63        |     |
decreased in the number of minutes required to run one mile, the
analysis indicated no significant changes in physical fitness as a
result of treatment.

Summary of the Results

Hypothesis 1: Not rejected.
There is no difference in self-complexity among
groups of women who complete either a jogging
program, an assertiveness training program, a
combined assertiveness training/jogging program
or women who receive no treatment.

Hypothesis 2: Rejected.
There is no difference in physical self-image among
groups of women who complete either a jogging pro-
gram, an assertiveness training program, a com-
bined assertiveness training/jogging program or
women who receive no treatment.

Hypothesis 3: Not rejected.
There is no difference in self-concept among groups
of women who complete either a jogging program, an
assertiveness training program, a combined assertive-
ness training/jogging program or women who receive
no treatment.

Hypothesis 4: Not rejected.
There is no difference in self-acceptance among
groups of women who complete either a jogging pro-
gram, an assertiveness training program, a combined assertive-
ness training/jogging program or women who receive
no treatment.

Hypothesis 5: Not rejected.
There is no difference in ideal self among groups
of women who complete either a jogging program, an
assertiveness training program, a combined assertive-
ness training/jogging program or women who receive
no treatment.

Hypothesis 6: Rejected.
There is no difference in assertiveness among groups
of women who complete either a jogging program, an
assertiveness training program, a combined assertive-
ness training/jogging program or women who receive
no treatment.
CHAPTER 5
DISCUSSION, CONCLUSIONS, IMPLICATIONS, SUMMARY AND RECOMMENDATIONS

Discussion

Drop-Out Rate

The fact that over one-half of the women selected as subjects dropped out of the study before the program was completed (Table 1) raises questions about the research. An obvious question is, "Why?" The large drop-out rate may be explained, in part, by motivational factors. Many subjects who were originally assigned to the no-treatment control group did not complete posttests and showed no interest in receiving jogging and assertiveness training during the following term. Most of these women, when contacted by telephone, reported that they had lost interest in these activities, were too involved with jobs or classes, or had schedule conflicts which prevented them from completing the posttests and participating in the program. Other subjects had moved and left no forwarding address. Still another group of subjects assigned to the treatment groups did participate in the jogging and assertiveness training but did not meet attendance criteria for inclusion in the study.

Such behavior leads to a question concerning differences in motivation between those women who completed the program and those who dropped out. If there was a difference in motivation, then it may be that those women who completed the training were different in some important way from the general population of women. Subject motivation may therefore be viewed as an uncontrolled variable and possible source of contamination.
Physical Self-Image and Physical Fitness

Women who participated in the jogging components of the treatment displayed significant positive changes in physical self-image (Table 7) despite the fact that no significant changes in their physical fitness levels were indicated (Table 18). This suggests that even small changes in the physical realm may have significant implications for an individual's emotional life.

This inconsistency between physical fitness and physical image raises questions about the dynamics of change. Why did physical image increase when physical fitness did not? The current popularity of jogging may offer some explanation for the change in self-perceptions. Jogging is socially approved and reinforced in a college town, and subjects may have been influenced by their friends' and mates' positive reactions to their new activities. The popular media further reinforces the value of jogging, creating a physical fitness cult to which individuals are drawn with Madison Avenue promises of youth, excitement and happiness.

In addition to external reinforcements for running, the subjects may have experienced internal reinforcement as they noticed their own improved muscle tone and endurance. Although no significant increase in fitness was reflected at the end of training, subjects were aware of their muscles becoming firmer and of their breathing becoming easier throughout the training period. These unmeasured body changes may have been more pertinent to physical self-image than changes in physical fitness and may therefore provide some explanation for the inconsistent results.

Adjustment and Self Variables

Because subjects in all three treatment groups demonstrated increased personal adjustment (Table 17), the study provides no definitive explanation for the change. One facet common to all three treatment programs which
may explain the change in personal adjustment has to do with activity. Each treatment program required some active commitment to self-improvement, and it may be that doing something, regardless of whether it was enrolling in assertiveness training or beginning a jogging program, was the critical variable responsible for enhancing adjustment.

Another factor to consider is the possible effect of peer involvement and group support in lowering ideal self expectations. It may be that group feedback and support led to more realistic expectations of individual performance, or ideal self, such that the ideal self became more aligned with the perceived self and appeared more attainable.

Although the self-concept/ideal self discrepancy decreased significantly following treatment, neither the increase in self-concept scores nor the decrease in ideal self scores was statistically significant. Likewise, no significant changes were reflected in self-complexity or self-acceptance. A tentative explanation for the lack of change noted in these self variables is the brief length of treatment. It may be that eight weeks is insufficient to produce this kind of personality change. Another consideration may be the public media which promotes a cultural expectation for fast change and immediate gratification. It may be that subjects unrealistically expected greatly-improved performance and that their disappointment in the small gains they did achieve was reflected by no change in self-concept, self-acceptance, self-complexity and ideal self.

Theoretical Overview of Treatments

The assertiveness training/jogging treatment was designed to promote personal growth as conceptualized by Rogers (1961) from two theoretical perspectives, one cognitive and one physical. On the cognitive level, assertiveness training was undertaken to teach subjects communication
skills. These skills have been related to self-worth (Alberti & Emmons, 1974) and to a willingness to try new things (Rathus, 1975), both of which are suggestive of Rogers' criteria for personal growth. These include increased openness to experience and increased existential living.

It may be that the mechanism of cognitive dissonance serves a critical function in working toward personal growth from the physical perspective. The following paradigm may be used for explanation:

1. Success in running creates dissonance ("I am physically unfit and overweight, yet I just ran a mile").
2. Assume that a nonassertive woman's usual means of handing dissonance is to externalize it ("I made an A because the teacher thinks I'm pretty").
3. There are few, if any, external factors to which success in running may be attributed ("I was able to run a mile because the coach likes my personality" just does not make sense).
4. The nonassertive woman resolves the dissonance by attributing her success to herself (I ran a mile because I am capable of pushing my limits to show my strength), thereby increasing her feelings of self-worth.

This kind of dissonance resolution may lead to increased openness to experience, increased existential living and increasing trust in one's organism, all indications of personal growth outlined by Rogers. The major findings of this study, including increased personal adjustment, enhanced physical self-image and increased assertiveness, are all changes in the direction of personal growth.

**Conclusions**

The following conclusions may be drawn from data presented in this study:

1. There is no difference in self-complexity, self-concept, self-acceptance and ideal self among women who complete either a jogging program, an assertiveness training program, a combined assertiveness training/jogging program or women who receive no treatment.

2. Women who complete a jogging program demonstrate enhanced physical self-image.
3. Women who complete an assertiveness training program demonstrate increased assertiveness.

4. Women who complete a jogging program, an assertiveness training program, or a combined assertiveness training/jogging program demonstrate increased personal adjustment.

5. Women who complete a brief jogging program do not demonstrate increases in physical fitness.
Implications

The following implications may be derived from data presented in this study:

1. Although a short-term (eight-week) jogging program may not provide sufficient time for individuals to undergo changes in physical fitness, it may provide sufficient time for individuals to experience changes in their physical self-images. The data presented in Table 13 indicates no significant changes in physical fitness due to treatment, yet the data in Table 7 indicates that significant increases in physical self-image did occur in groups of women who completed a jogging program or an assertiveness training/jogging program. The implication here for counselors is that this type of treatment program (jogging component) offers a relatively simple method of helping individuals to enhance their self-images and to be satisfied with themselves at whatever their level of physical development while they strive for growth at whatever pace they choose. It offers a positive framework for growth, encouraging a positive attitude about what one has accomplished rather than a negative attitude about what one has yet to accomplish.

2. This study has implications for counselors in terms of effecting positive changes in personal adjustment of clients. Because the data presented in Table 17 demonstrates increases in personal adjustment for all three treatment groups, it appears that counselors may be able to enhance clients' personal adjustment by a variety of treatment modalities ranging from the extremes of a didactic assertiveness training program to an experiential jogging program.
Summary and Recommendations

Summary

The purpose of this study was to examine the effects of jogging and assertiveness training on selected self variables and assertiveness in women. The self variables included self-complexity, physical self-image, self-concept, self-acceptance and ideal self. A jogging treatment, an assertiveness training treatment, a combined assertiveness training/jogging treatment and a no-treatment control condition were compared in terms of their effects on the self variables and assertiveness. The study also assessed effects of the various treatments on adjustment, which was defined as the difference between an individual's self-concept and his or her concept of the ideal self.

Significant differences in physical self-image among groups were reported (Table 8), with subjects in the jogging and assertiveness training/jogging treatments demonstrating significant increases (Table 7). Significant differences among groups in personal adjustment were also reported (Table 17) as an effect of treatment, with all three treatment groups demonstrating increased personal adjustment. Other significant findings were increased assertiveness following treatment for the assertiveness training and assertiveness training/jogging groups (Table 16).

No significant changes in self-complexity, self-concept, self-acceptance or ideal self were reported for any group. These findings are reported in Table 6, Table 10, Table 12 and Table 14. The data also indicated no significant changes in physical fitness after participation in a jogging or an assertiveness training/jogging treatment (Table 18).
Recommendations

The following recommendations for further research are prompted by issues arising from this investigation:

1. It is recommended that physical fitness measures by obtained for all groups as a control measure. In the present investigation, there is no way of knowing that control and assertiveness training subjects did not improve their physical fitness during the experimental period, thereby contaminating the results. It may be speculated that subjects in all groups were motivated to improve themselves physically since all subjects volunteered for an assertiveness training/jogging program. They may have participated in other physical fitness activities and increased their physical fitness regardless of assigned treatment condition.

2. It is recommended that future investigations vary the length of the physical fitness component of treatment to determine whether or not length of treatment affects changes in self-complexity, self-concept, self-acceptance and ideal self.

3. It is recommended that assertiveness be assessed after an extended period of physical fitness training.

4. It is recommended that the role of physical fitness training in changing personal adjustment receive further investigation.

5. Extended follow-up assessment is recommended to determine whether or not changes in physical self-image, personal adjustment and assertiveness resulting from treatment are maintained over time.
APPENDIX A
STATEMENT OF INFORMED CONSENT

Participants in the assertiveness training/jogging program will be taught assertiveness skills and will engage in individualized jogging programs. The purpose of these procedures is to increase the participants' use of assertive communication and to improve their physical fitness. Any inquiries concerning these procedures will be answered by the principal investigator.

Participants can expect to benefit from this program by achieving more effective interpersonal communication and improved physical fitness. Because undertaking any physical activity increases the risk of injury and/or illness, participants are required to supply a signed physician's statement before treatment begins indicating that they are physically capable of participating in a jogging program.

No monetary compensation will be awarded for participation in this study.

All participants are free to withdraw their consent and discontinue participation in this program at any time without prejudice.

I have read and I understand the procedure described above. I agree to participate in the procedure and I have received a copy of this description.

______________________________  ________________________________  ________________________________
Subject                        Witness                        Principal Investigator
I hereby release the University of Florida, the University Counseling Center and the program instructors of any liability for injury or accident that may occur during participation in this program.

________________________________________

Signature
APPENDIX C
PHYSICIAN'S STATEMENT

This is to certify that ____________________________
is physically capable of participation in a jogging program to develop
physical fitness.

____________________________
Physician's Signature

___________________________
Date .
APPENDIX D
DEMOGRAPHIC DATA

Name:
Age:
Social Security Number:
Address:
Phone:
Marital Status:
Educational Classification (if not enrolled, please indicate if you are a student spouse):
Average amount of time spent exercising each week:

<table>
<thead>
<tr>
<th>None</th>
<th>.5-1 hr</th>
<th>1.5-2hrs</th>
<th>2.5-3hrs</th>
<th>3.5-4hrs</th>
<th>4.5-5hrs</th>
<th>5+ hrs</th>
</tr>
</thead>
</table>

Type of exercise:

Rank your assertiveness skills:

<table>
<thead>
<tr>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
</table>

Are you currently undergoing counseling or psychotherapy?
If yes, where?
APPENDIX E
JOGGING PROGRAM OBJECTIVES

Beginning Objectives

1. Run/walk one mile (no timing)
2. Run/walk one mile (not longer than 10 minutes)
3. Run one mile (not longer than 10 minutes)
4. Run one mile (under 10 minutes)
5. Run one and one-half miles (not longer than 15 minutes)
6. Run one and one-half miles (under 15 minutes)
7. Run one and one-half miles (not longer than 14 minutes)
8. Run one and one-half miles (under 14 minutes)
9. Run one mile (not longer than 9 minutes)
10. Run two miles (no timing)
11. Run two miles (not longer than 20 minutes)
12. Run two miles (not longer than 20 minutes)
13. Run one and one-half miles (12 minutes)
14. Run one mile (8 minutes)
15. Run two miles (20 minutes)
16. Run two miles (under 20 minutes)
17. Run two miles (under 20 minutes)
18. Run one mile (under 9 minutes)
19. Run two miles (under 19 minutes)
20. Run two miles (under 18 minutes)
Intermediate Objectives

1. Jog one mile (8 minutes)
2. Jog two miles (16 minutes)
3. Jog two miles (16 minutes)
4. Jog one mile (under 8 minutes)
5. Jog three miles (25-26 minutes)
6. Jog three miles (25 minutes)
7. Jog three miles (under 25 minutes)
8. Jog two miles (under 16 minutes)
9. Jog one mile (7-1/2 minutes)
10. Jog three miles (24 minutes)
11. Jog four miles (36 minutes)
12. Jog four miles (35 minutes)
13. Jog four miles (35 minutes)
14. Jog three miles (24 minutes)
15. Jog two miles (15 minutes)
16. Jog one mile (7 minutes)
17. Jog five miles (45 minutes)
18. Jog five miles (45 minutes)
19. Jog five miles (45 minutes)
20. Jog five miles (45 minutes)
APPENDIX E (continued)

Advanced Objectives

1. Run two miles (not over 15 minutes)
2. Run three miles (record times)
3. Run three miles (not over 25 minutes)
4. Run three miles (record times)
5. Run four miles (not over 35 minutes)
6. Run four miles (under 35 minutes)
7. Run five miles (record times)
8. Run five miles (record times)
9. Run five miles (record times)
10. Run five miles (record times)
11. Run six miles (record times)
12. Run six miles (record times)
13. Run six miles (record times)
14. Run five miles (with exercise stations)
15. Run five miles (with exercise stations)
16. Run five miles (with exercise stations)
17. Run five miles (not over 40 minutes)
18. Run five miles (with exercise stations)
19. Run six miles (with exercise stations)
20. Run six miles (approximately 50-52 minutes)
APPENDIX F
RECORD OF JOGGING EXPERIENCE

Indicate the amount of time (approximately) you spend jogging each day.

<table>
<thead>
<tr>
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</tbody>
</table>

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## APPENDIX G
SUMMARY OF COMMUNICATION SKILLS

### General

<table>
<thead>
<tr>
<th>Verbal</th>
<th>Nonassertive</th>
<th>Assertive</th>
<th>Aggressive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Apologetic words, veiled meanings, hedging, failure to come to point, rambling, disconnected, failure to say what you really mean, saying &quot;I know&quot; and &quot;you know.&quot;</td>
<td>Statement of wants, honest statement of feelings, objective words, direct statements, &quot;I&quot; messages.</td>
<td>Accusations, subjective terms, superior words, &quot;you&quot; messages.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nonverbal</th>
<th>Nonassertive</th>
<th>Assertive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actions instead of words, hoping someone will guess what you want, looking as if you don't mean what you say.</td>
<td>Attentive listening behavior, general assured manner, communicating caring and strength.</td>
</tr>
</tbody>
</table>
APPENDIX G (continued)

Aggressive

Exaggerated show of strength, flippant, sarcastic.

Specific

Voice

Nonassertive

Weak, hesitant, soft, sometimes wavering.

Assertive

Firm, warm, well-modulated, relaxed.

Aggressive

Tense, shrill, loud, shaky, cold, "deadly" quiet, demanding, authoritative.

Eyes

Nonassertive

Averted, downcast, teary, pleading.

Assertive

Open, frank, direct, eye-to-eye contact but not staring.

Aggressive

Expressionless, narrowed, cold, staring, not really "seeing" other person.

Stance

Nonassertive

Lean for support, twisted, stooped.

Assertive

Well-balanced, straight-on, at ease.

Aggressive

Hands on hips, feet apart.
APPENDIX G (continued)

Posture

<table>
<thead>
<tr>
<th>Nonassertive</th>
<th>Assertive</th>
<th>Aggressive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stood, shrunken, sagging, excessive head nodding.</td>
<td>Facing other person directly, erect, relaxed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stiff and rigid, rude.</td>
</tr>
</tbody>
</table>

Hands

<table>
<thead>
<tr>
<th>Nonassertive</th>
<th>Assertive</th>
<th>Aggressive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fidgety, fluttery, clammy.</td>
<td>Relaxed, warm, smooth motions.</td>
<td>Clenched, abrupt gestures, finger-pointing, fist-pounding.</td>
</tr>
</tbody>
</table>

Feet

<table>
<thead>
<tr>
<th>Nonassertive</th>
<th>Assertive</th>
<th>Aggressive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shuffling, restless motions, tucked under chair, toed-in.</td>
<td>Relaxed, comfortable position.</td>
<td>Tapping, firmly planted.</td>
</tr>
</tbody>
</table>

Consequences

Characteristics of the Behavior

Nonassertive

Ignores, does not express own rights, desires and needs, permits others to infringe on her
APPENDIX G (continued)

Assertive

Expresses and asserts own rights, needs and desires, stands up for legitimate rights in a way that does not violate rights of others, emotionally honest and direct, self-enhancing, chooses for self.

Aggressive

Expresses own rights at expense of others, inappropriate outburst or hostile reaction, intent to humiliate or retaliate, put the other down, emotionally honest, direct and expressive at other's expense, self-enhancing, chooses for others.

Your Feelings when you Engage in this Behavior

Nonassertive

Hurt, anxious, disappointed in self at the time and possibly angry later.

Assertive

Confident, self-respecting, feels good about self at the time and later.

Aggressive

Angry, then righteous, superior, depreciatory at the time, possibly guilty later.

Outcome

Nonassertive

Does not achieve desired goal.
APPENDIX G (continued)

**Payoff**

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonassertive</td>
<td>Avoids unpleasant and risky situations, avoids conflict and confrontation, doesn't get needs met, accumulates anger, feels nonvalued.</td>
</tr>
<tr>
<td>Assertive</td>
<td>Feels good, valued by self and others, improves self-confidence, needs are met, relationships are freer and more honest.</td>
</tr>
<tr>
<td>Aggressive</td>
<td>Saves up anger and resentment to justify a blow-up, emotional outburst to get even or to get back.</td>
</tr>
</tbody>
</table>

**Other Person's Feelings about Herself**

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonassertive</td>
<td>Guilty, superior or angry.</td>
</tr>
<tr>
<td>Assertive</td>
<td>Valued, respected.</td>
</tr>
<tr>
<td>Aggressive</td>
<td>Hurt, humiliated.</td>
</tr>
</tbody>
</table>

**Other Person's Feelings about You**

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonassertive</td>
<td>Irritated, pity, disgusted.</td>
</tr>
<tr>
<td>Assertive</td>
<td>Generally respectful.</td>
</tr>
<tr>
<td>Aggressive</td>
<td>Angry, vengeful.</td>
</tr>
</tbody>
</table>
APPENDIX H
DEVELOPING A BELIEF SYSTEM

Assertiveness training involves building a belief system which will help you to support and justify acting assertively. This is important so that: (1) you can continue to believe in your rights even when unjustly criticized for behaving assertively; (2) you can counteract your own guilt that may occur as the result of acting assertively; and (3) you can be proud of your assertiveness.

An important part of this belief system concerns the person's acceptance of certain basic interpersonal rights. While most of these interpersonal rights are very simple and naturally assertive people act on these rights, many others do not really believe that they have a right to their feelings, beliefs and opinions.

In helping you build a belief system which will effectively support your assertive behavior, it is important that in addition to believing that you have certain rights that you are entitled to exercise, you hold two other convictions.

The first conviction is that you will be happier in the long run if you appropriately exercise your rights. When a person is learning to become assertive, you are changing how you interact with others and consequently how you feel about yourself. Most importantly, you will have to learn to accept your own thoughts and feelings even when they are different than one should supposedly feel. This acceptance
of yourself almost always results in a raised self-concept and increased personal happiness.

The second conviction is that non-assertion is hurtful in the long run. It hurts relationships since it prevents the person from sharing your genuine thoughts and feelings, and this limits the closeness that can grow out of risking authentic encounters with others.

Interpersonal Rights

1. Right to feel and express anger, hurt, fear (negatives)
2. Right to feel and express caring, praise, strength (positives)
3. Right to have your needs be as important as the needs of others
4. Right to express your needs even if someone thinks they are illogical or unwarranted, someone does not want to hear, someone will be hurt and upset, or if you feel you shouldn't have them
5. Right to make mistakes
6. Right to use your time as you see fit
7. Right to have your opinion attended to
8. Right to be treated as a capable, mature adult and not be patronized
9. Right to refuse a request without feeling guilty, even if the person wants it badly, is an authority figure or has emotional problems
10. Right to strive for self-actualization through whatever ethical talents one finds natural (you don't have to fit into a stereotyped role if you don't want to)
APPENDIX H (continued)

11. Right to be independent
12. Rights involving your body
13. Rights involving your possessions
14. Right to assert yourself when your rights are abused
APPENDIX I
ASSERTIVENESS QUESTIONNAIRE

1. When I am angry with other people I usually:
   a. am afraid to say anything directly because I don't want to hurt their feelings
   b. am afraid that if I do or say something I will sound aggressive and they won't like me
   c. feel O.K. about expressing what is on my mind
   d. don't need to say anything; people can tell when I'm angry

2. When I am angry with someone I usually:
   a. drop hints about my feelings, hoping he or she will get the message
   b. tell the other person in a direct way what I want and feel all right about it
   c. avoid the person for a while until the anger wears off and I calm down
   d. blow up and tell him or her off
   e. express my anger sarcastically, getting my point across with humor or some dig

3. When someone gets angry with me I usually:
   a. think he or she doesn't like me
   b. feel too scared to ask why and try to work things out
APPENDIX I (continued)

c. feel confused and want to cry
d. think I have the right to understand why he/she is angry and try to respond to it
e. immediately feel wronged
f. feel guilty

4. When someone gets angry with me I usually:
   a. end up crying
   b. back off
c. ask him/her to explain the anger further or else I respond to it in some other straightforward manner
d. get angry in return
e. apologize if I don't understand why he/she is angry
f. try to smooth it over
g. make a joke out of it and try to get him/her to forget the flareup

5. When I need time and information from a busy professional, I usually think he or she will:
   a. resent me taking up valuable time
   b. consider my request as legitimate and be pleased that I'm interested
c. act as though he/she doesn't mind but secretly resents me
d. make me feel inferior

6. When I need time and information from a busy professional I usually:
   a. put off calling until I absolutely have to
b. apologize for taking up his/her time when I call

c. state directly what I need and ask for what I want

d. let him/her know that I expect immediate attention; after all, I'm important too

7. If someone asks me to do a favor for him/her and I refuse, I think he/she will probably:

a. hate me

b. be angry with me

c. act as though he/she doesn't mind but secretly resents me

d. understand and will not mind

e. think I don't like him/her

f. hesitate to ask me again

8. If someone asks me to do him/her a favor and I don't want to do it, I usually:

a. do it anyway

b. let him/her know that I resent the request and do it grudgingly

c. tell him/her I'd rather not do it

d. tell him/her I'd rather not do it and apologize profusely

e. make up an excuse as to why I can't do it

f. ask him/her who they think they are to ask me that

9. When I need something from someone else, I usually feel:

a. as though I shouldn't bother him/her by asking

b. as though people don't really want to do things for me

c. as though I don't want to put him/her on the spot by asking

d. that it's O.K. to go ahead and ask
APPENDIX I (continued)

e. afraid to ask because he/she might say no
f. as though he/she should do what I want

10. When I need something from someone else, I usually:
   a. don't ask unless I'm desperate
   b. ask and apologetically explain why I need help
   c. do nice for him/her hoping the favor will be returned
   d. become demanding and insist on getting my way
   e. ask directly for what I want, knowing that he/she can refuse
      my request if he/she wants to

11. When I walk into a party where I don't know anyone, I usually
    think:
    a. that no one there will talk to me
    b. that everyone else is relaxed except me
    c. that I'm out of place and everyone knows it
    d. that I won't be able to say the right thing if someone talks
       to me
    e. that it will be fun to meet some new people
    f. of ways to get attention

12. When I walk into a party where I don't know anyone, I usually:
    a. wait for someone to come and talk to me
    b. introduce myself to someone who looks interesting
    c. stay on the sidelines and keep to myself
    d. behave in some way where people will notice me
    e. rush for food or drink or cigarette to make it look as if I'm
       busy and having a good time
APPENDIX J
CHECKLIST: STEPS TO ASSERTION

1. Clarify the situation and focus on the issue. What do I want to accomplish? What do I want from the person or situation?
2. How will assertive behavior on my part help me accomplish my goal?
3. What would I usually do to avoid asserting myself in this situation?
4. What might be stopping me from asserting myself?

Some Ways to Help

1. Many times, situations requiring assertion are difficult areas for us and likely to cause us anxiety. One way to help us get started is to admit to the difficulty of the situation and then follow with assertion. Examples: "This is really tough for me to say...;" "I'm feeling anxious but this is important to me..."

2. State your assertion with an "I" message. Take responsibility for the way you are feeling, what you believe and what you want. It is your right. Being responsible for your own feelings avoids putting the other person on the defensive and enables them to listen to you. Instead of stating "You are making me very angry," say "I am very angry about (the person's specific behavior)." This also comes across as objecting to a particular action instead of devaluing the other person.
APPENDIX J (continued)

3. Pinpoint your specific feelings, what is causing those feelings and what changes you would like to see made. Example: "I am feeling (feeling) about (specific behavior). I would prefer that (state what you want from person or situation)."

4. Don't feel like you have to respond assertively immediately. It's O.K. to give yourself a moment to think about how you want to respond and what you want to say. Taking a deep breath is often a big help. You may even want to sometimes say, "I'd like to think about that for a moment before I respond."

5. Let your body posture be as assertive as your words. Look at the person in the eye; keep your shoulders erect and stance firm. Keep your voice at a level necessary to get your message across effectively. A very soft voice often indicates a feeling of not feeling as if you have the right to say anything while a very loud tone is often a sign of aggression. Body image is important in that even before we are feeling that assertive, it can help us to begin to convey an assertive image and thus gain confidence.

6. Avoid using apologies when they are not appropriate. Many times it is much easier to say something if we preface it with "I'm sorry but..." Beginning with "I'm sorry" often takes away from the effectiveness of our message and gives the other person the impression we don't feel we have the right to say what we are saying. Also, it is not emotionally honest.
In teaching people to cope with manipulative criticism from others, I instruct them not to deny any criticism (that's simply responding in kind), not to get defensive, and not to counterattack with criticism of their own. In learning to cope with criticism in this different way, I suggest that as a rule of thumb you might learn faster by verbally replying to manipulative criticism as if you were a "fog bank." A fog bank is remarkable in some aspects. It is very persistent. We cannot clearly see through it. It offers no resistance to our penetration. It does not fight back. It has no hard striking surfaces from which a rock we throw at it can ricochet back at us, enabling us to pick it up and throw it at the fog once more. We can throw an object right through it and it is unaffected. Inevitably, we give up trying to alter the persistent, independent, nonmanipulable fog and leave it alone. Similarly, when criticized, you can assertively cope by offering no resistance or hard psychological striking surfaces to critical statements thrown at you.

Irrespective of the label used to describe this powerful assertive verbal skill, we can use it to cope in the following ways. First, we can agree with any truth in statements people use to criticize us (agreeing with the truth). For example, if an overprotective mother
keeps checking up on her daughter even after the daughter no longer lives at home, the daughter might respond to her mother's criticism of implied or suggested wrongdoing with assertive fogging.

Mother: You stayed out again late, Sally. I tried to call you until twelve-thirty last night.

Sally: That's true, Mom. I was out late again last night.

Second, we can agree with any possible truth in statements people use to criticize us (agreeing with the odds). In the case of Sally and her mom, if Mom criticized her with a statement of direct wrongdoing, Sally might still respond with assertive fogging.

Mother: Sally, if you stay out late so much, you might get sick again.

Sally: You could be right, Mom. (Or, That's probably true. Or, I agree with you, Mom, if I didn't go out so often I would probably get a lot more sleep.)

Third, we can agree with the general truth in logical statements that people use to manipulate us (agreeing in principle). In the case of Sally's mother, if she persisted in trying to impose her own rules of living upon her daughter's lifestyle, Sally could continue to assert herself with verbal fogging.

Mother: Sally, you know how important looking good is to a young girl who wants to meet a nice man and get married. If you keep staying out so late so often and don't get enough sleep, you won't look good. You don't want that to happen, do you?

Sally: You're right, Mom. What you say makes sense, so when I feel the need, I'll get in early enough.

In the examples of assertive fogging just given, this obviously popular daughter added statements of her intention to be independent
APPENDIX K (continued)

of her mother, such as "...but I wouldn't stay up so late worrying about me if I were you." Or "...but I'm not worried about it." Or "...but I expect I'll be out late quite a bit now with all these guys wanting to date me."
APPENDIX L
SELF-COMPLEXITY TASK

Instructions: Here is a list of words. You are to read the words quickly and check each one that you think describes YOU. You may check as many or as few words as you like—but be HONEST. Don't check words that tell what kind of a person you should be. Check words that tell what kind of a person you really are.

1. ___able 15. ___bright 29. ___delicate
2. ___active 16. ___busy 30. ___delightful
3. ___afraid 17. ___calm 31. ___different
4. ___alone 18. ___capable 32. ___difficult
5. ___angry 19. ___careful 33. ___dirty
6. ___anxious 20. ___careless 34. ___dull
7. ___ashamed 21. ___charming 35. ___dumb
8. ___attractive 22. ___cheerful 36. ___eager
9. ___bad 23. ___clean 37. ___fair
10. ___beautiful 24. ___clever 38. ___faithful
11. ___big 25. ___comfortable 39. ___false
12. ___bitter 26. ___content 40. ___fine
13. ___bold 27. ___cruel 41. ___fierce
14. ___brave 28. ___curious 42. ___foolish

123
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<td>old</td>
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<td>44</td>
<td>funny</td>
<td>69</td>
<td>patient</td>
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<td>generous</td>
<td>70</td>
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<td>74</td>
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<td>small</td>
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<td>65</td>
<td>miserable</td>
<td>90</td>
<td>smart</td>
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<td>66</td>
<td>modest</td>
<td>91</td>
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<tr>
<td>67</td>
<td>neat</td>
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<td>special</td>
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APPENDIX L (continued)
APPENDIX M  
PHYSICAL IMAGE SCALE

Answer each statement by circling the appropriate answer which you feel best describes yourself. Circle either "yes" or "no" and also circle "satisfied" or "dissatisfied."

<table>
<thead>
<tr>
<th>Statement</th>
<th>Circle One</th>
<th>Circle One</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I think my physical endurance is adequate.</td>
<td>Yes No</td>
<td>Satisfied Dissatisfied</td>
</tr>
<tr>
<td>2. I am incapable physically of withstanding exact and strenuous demands.</td>
<td>Yes No</td>
<td>Satisfied Dissatisfied</td>
</tr>
<tr>
<td>3. My physical appearance is too round.</td>
<td>Yes No</td>
<td>Satisfied Dissatisfied</td>
</tr>
<tr>
<td>4. My physical appearance is too linear (narrow, lacking typical curves).</td>
<td>Yes No</td>
<td>Satisfied Dissatisfied</td>
</tr>
<tr>
<td>5. My physical appearance is too delicate.</td>
<td>Yes No</td>
<td>Satisfied Dissatisfied</td>
</tr>
<tr>
<td>6. My physical appearance is too soft.</td>
<td>Yes No</td>
<td>Satisfied Dissatisfied</td>
</tr>
</tbody>
</table>

125
APPENDIX M (continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Circle One</th>
<th>Circle One</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. My chest is adequately developed.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>8. My chest is overdeveloped.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>9. My muscles are adequately developed.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>10. My muscles are underdeveloped.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>11. I am physically weak.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>12. I am physically strong.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>13. My bones are too inconspicuous in my physical appearance.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>14. My bones are too conspicuous in my physical appearance.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>15. My physique appears too strong and muscular.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>16. My legs and arms are too long and thin.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>17. My legs and arms are too short and fat.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>18. My body is too fat.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
<tr>
<td>19. My body is too thin.</td>
<td>Yes No Satisfied Dissatisfied</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX M (continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Circle One</th>
<th>Circle One</th>
</tr>
</thead>
<tbody>
<tr>
<td>20. My physical appearance is satisfying to me.</td>
<td>Yes</td>
<td>Satisfied</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Dissatisfied</td>
</tr>
<tr>
<td>21. My physical appearance is dissatisfying to me.</td>
<td>Yes</td>
<td>Satisfied</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Dissatisfied</td>
</tr>
<tr>
<td>22. My body is poorly equipped for competitive and persistent action.</td>
<td>Yes</td>
<td>Satisfied</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Dissatisfied</td>
</tr>
<tr>
<td>23. My body is adequately equipped for competitive and persistent action.</td>
<td>Yes</td>
<td>Satisfied</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Dissatisfied</td>
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<tr>
<td>24. My muscular strength is adequate.</td>
<td>Yes</td>
<td>Satisfied</td>
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<td>No</td>
<td>Dissatisfied</td>
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<tr>
<td>25. My muscular strength is insufficient.</td>
<td>Yes</td>
<td>Satisfied</td>
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<td></td>
<td>No</td>
<td>Dissatisfied</td>
</tr>
</tbody>
</table>
APPENDIX N
INDEX OF ADJUSTMENT AND VALUES

Directions: Use each of the following words listed vertically on the left (below) to complete the sentences that appear above the column numbers. Then indicate on a five-point scale how much of the time this statement is like you in column 1. In column 2, indicate how you feel about yourself as described in column 1. In column 3, indicate how much of the time you would like this trait to be characteristic of you.

<table>
<thead>
<tr>
<th>Response for Column 1</th>
<th>Response for Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. seldom</td>
<td>1. I very much dislike being as I am.</td>
</tr>
<tr>
<td>2. occasionally</td>
<td>2. I dislike being as I am.</td>
</tr>
<tr>
<td>3. about half of the time</td>
<td>3. I neither dislike nor like being as I am.</td>
</tr>
<tr>
<td>4. a good deal of the time</td>
<td>4. I like being as I am.</td>
</tr>
<tr>
<td>5. most of the time</td>
<td>5. I very much like being as I am.</td>
</tr>
</tbody>
</table>
APPENDIX N (continued)

Response for Column 3

1. seldom
2. occasionally
3. about half the time
4. a good deal of the time
4. most of the time

I am a (an) ____________ person. I would like to be a (an) ________ person.

<table>
<thead>
<tr>
<th></th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
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<td>annoying</td>
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<td></td>
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<tr>
<td>busy</td>
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APPENDIX G
COLLEGE SELF-EXPRESSION SCALE

The following inventory is designed to provide information about the way in which you express yourself. Please answer the questions by placing the number of the rating that best expresses yourself in the situation in the blank on the left. Use the following ratings for your answers:

0  almost always or always
1  usually
2  sometimes
3  seldom
4  never or rarely

____ 1. Do you ignore it when someone pushes in front of you in line?

____ 2. When you decide that you no longer wish to date someone, do you have marked difficulty telling the person of your decision?

____ 3. Would you exchange a purchase you discover to be faulty?

____ 4. If you decided to change your major to a field which your parents will not approve, would you have difficulty telling them?

____ 5. Are you inclined to be over-apologetic?

____ 6. If you were studying and if your roommate were making too much noise, would you ask him or her to stop?

____ 7. Is it difficult for you to compliment and praise others?
APPENDIX 0 (continued)

8. If you are angry at your parents, can you tell them?

9. Do you insist that your roommate does his or her fair share of the cleaning?

10. If you find yourself becoming fond of someone you are dating, would you have difficulty expressing these feelings to that person?

11. If a friend who has borrowed $5.00 from you seems to have forgotten about it, would you remind this person?

12. Are you overly careful to avoid hurting other people's feelings?

13. If you have a close friend whom your parents dislike and constantly criticize, would you inform your parents that you disagree with them and tell them of your friend's assets?

14. Do you find it difficult to ask a friend to do a favor for you?

15. If food which is not to your satisfaction is served in a restaurant, would you complain about it to the waiter?

16. If your roommate, without your permission, eats food that he or she knows you have been saving, can you express your displeasure to him or her?

17. If a salesman has gone to considerable trouble to show you some merchandise which is not quite suitable, do you have difficulty in saying no?

18. Do you keep your opinions to yourself?

19. If friends visit when you want to study, do you ask them to return at a more convenient time?
APPENDIX 0 (continued)

20. Can you express affection to people for whom you care?

21. If you were in a small seminar and the professor made a statement that you consider untrue, would you question it?

22. If a person of the opposite sex whom you have been wanting to meet smiles or directs attention to you at a party, would you take the initiative in beginning a conversation?

23. If someone you respect expresses opinions with which you strongly disagree would you venture to state your own point of view?

24. Do you go out of your way to avoid trouble with other people?

25. If a friend is wearing a new outfit which you like, do you tell that person so?

26. If after leaving a store you realize that you have been "short-changed," do you go back and request the correct amount?

27. If a friend makes what you consider to be an unreasonable request are you able to refuse?

28. If a close and respected relative were annoying you, would you hide your feelings rather than express your annoyance?

29. If your parents want you to come home for a weekend but you have made important plans, would you tell them of your preference?

30. Do you express anger or annoyance toward the opposite sex when it is justified?
31. If a friend does an errand for you, do you tell that person how much you appreciate it?

32. When a person is blatantly unfair, do you fail to say something about it to him or her?

33. Do you avoid social contacts for fear of doing or saying the wrong thing?

34. If a friend betrays your confidence, would you hesitate to express annoyance to him or her?

35. When a clerk in a store waits on someone who has come in after you, do you call his or her attention to the matter?

36. If you are particularly happy about someone's good fortune, can you express this to that person?

37. Would you be hesitant about asking a good friend to lend you a few dollars?

38. If a person teases you to the point that it is no longer fun, do you have difficulty expressing your displeasure?

39. If you arrive late for a meeting, would you rather stand than go to a front seat which could only be secured with a fair degree of conspicuousness?

40. If your date calls on Saturday night 15 minutes before you are supposed to meet and says that he has to study for an important exam and cannot make it, would you express your annoyance?

41. If someone keeps kicking the back of your chair in a movie, would you ask him or her to stop?
APPENDIX G (continued)

42. If someone interrupts you in the middle of an important conversation, do you request that the person wait until you have finished?

43. Do you freely volunteer information or opinions in class discussions?

44. Are you reluctant to speak to an attractive acquaintance of the opposite sex?

45. If you lived in an apartment and the landlord failed to make certain necessary repairs after promising to do so, would you insist on it?

46. If you parents want you home by a certain time which you feel is much too early and unreasonable, do you attempt to discuss or negotiate this with them?

47. Do you find it difficult to stand up for your rights?

48. If a friend unjustifiably criticizes you, do you express your resentment there and then?

49. Do you express your feelings to others?

50. Do you avoid asking questions in class for fear of feeling self-conscious?
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BIOGRAPHICAL SKETCH

Rebecca Ann Rudner was born on December 7, 1947, in Pine Bluff, Arkansas. She traveled extensively throughout the United States with her military family and graduated from high school in Tacoma, Washington, in 1965.

She attended Florida State University, where she received a Bachelor of Arts degree in psychology in 1972. She received the Master of Education and Specialist in Education degrees in counselor education from the University of Florida in 1976, where she continued graduate study toward the doctoral degree in counseling psychology.

She has a daughter, Deborah, and a son, Benton.
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Theodore Landsman, Chairman
Professor of Psychology and Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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David I. Suchman
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

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This dissertation was submitted to the Graduate Faculty of the Department of Counselor Education in the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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