The Influence of Running on Women's Self-Esteem and Attributional Style

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THE INFLUENCE OF RUNNING ON WOMEN'S
SELF-ESTEEM AND ATTRIBUTIONAL STYLE

by

Polly Walker Grant

A Dissertation in Social Work
Presented to the Faculty of the School of Social Work
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Let her swim, climb mountain peaks, pilot airplanes, battle against the elements, take risks, go out for adventure, and she will not feel before the world ... timidity.

Simone de Beauvoir

I am absolutely convinced ... that it is extremely important for girls and women to use their bodies to full capacity and to develop physical strength and power.

Jean Baker Miller, M.D.

We are out -- each in her own way -- to get back something that an over-repressive, over-protective society took away from us.

an anonymous runner quoted in "The Female Runner"
ABSTRACT


A quasi-experimental study was done to investigate the relative influence of running on the self-esteem and attributional styles of a group of 623 women in Boston. Volunteers from the participants in the 1983 Bonne Bell 10K race formed the runners group while the two control groups, athletic non-runners and non-athletic women, were composed of volunteers randomly self-selected from among patrons in various Boston service organizations.

Study participants were tested using Seligman’s Attribution Style Questionnaire (1981) and Hudson’s Index of Self-Esteem (1982). Results of the ASQ showed that the women who ran consistently tended to have a more internal than external locus of control and had an attributional style associated with an empowered sense of self. Results of the ISE showed that women who run consistently have a significantly higher level of self-esteem than do either the women who are athletic but who do not run or the non-athletic women, with the non-athletic women scoring with lower self-esteem than the athletic non-runners. On a subjective rating for degree of happiness, the consistent runners scored significantly higher than those women in the control groups. Both clinical and policy implications of these findings were discussed.
for M.G.R. and M.C.G.
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My special gratitude goes to the 623 women who participated in this study. I am aware of the time and effort it took each of them to participate, and I am grateful.
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CHAPTER 1

INTRODUCTION

In the late 1970's and early 1980's, when the thoughts for this research project were just beginning to form, the researcher had the opportunity to observe and get to know the members of the track team in a suburban high school near Boston. One young woman who twenty years ago would have been stereotyped as just a tall, very awkward, smart girl was there known as the champion hurdler. The girl who held the mile record was also a straight-A student and traditionally pretty. The look of fierce determination on her face when running the mile, and the general way the team members, male and female, got along as athletes, were in many ways the seeds which have grown into this dissertation. When it was said to these high school students that twenty years earlier there had been no girl's track team, they all responded with shock and disbelief.

When the observation was noted that women accomplished in sports in general and running in particular were seen to be powerful, attractive figures, questions about the implications arose. Is an athletic woman able to live her life with more confidence than a non-athletic woman? Does the competence gained from her involvement in sports permeate her other activities? Does physical competence influence women's lives, and, conversely, does lack of athletic competence lead to lower self-esteem and likelihood of depression?

These thoughts and a personal knowledge of and belief in benefits of running on the part of the researcher enabled the following thesis to be
posed: does running per se influence women's self-esteem and sense of power? Accordingly, a quasi-experimental design for research on this question was drawn up. Women who ran in the 1983 Bonne Bell 10K race in Boston were to be compared with women from an athletic club, YWCA's, a counseling center, and a women's center. Also, four hypotheses were written (see Chapter 3), stating in effect that women runners would be found to possess higher self-esteem and more positive attribution styles (correlated with freedom from depression; see below) than comparable non-runners.

The Nature of Running

Running was believed to be even more beneficial than many other sports for several reasons. In addition to all the benefits running shares with other aerobic exercises, it seems to have qualities unique to it as well. Perhaps it is that one has had to break more traditions to begin running, at least in the past. There is also the courage involved with the exposure connected with running on the roads or running paths. The danger of physical attack is generally greater than in a swimming pool, or on a tennis court. Perhaps it is biochemical changes that come from the consistent physical activity of a fairly long run. It is not known exactly why running is more beneficial than other sports, though several writers, discussed in Chapter 2, theorize about the topic. (Oglesby, 1981; Harris and Jennigs, 1977; Coles, 1980; Greist et al, 1979; Fixx, 1977, 1980; Marblestone, 1980; Cooper, 1970; Kostrubala, 1976; Wieman, 1980) What has been seen clinically by this researcher and others is that running appears to be particularly beneficial to those people who make it a regular part of their lives. And has been stated before it was a
belief on which this research was undertaken that running’s benefits
included alleviation of depression.

Depression And Its Effect On Women

Depression is a problem for many women in our society. Indeed, according
to the NIMH, the rank order for the most frequent psychiatric disorders for
women are phobia, major depressive episode without grief, dysthymia, and
obsessive-compulsive disorders, while for men the rank order for the most
frequent disorders are alcohol abuse/dependence, phobia, drug abuse/
dependence, and dysthymia (Taube and Barrett, 1985, p. V.) For women in
the age group 25-44 years, which many people would think of as primary
years for happiness and career and family productivity, the most frequent
psychiatric disorder for women is dysthymia, while for men it is alcohol
abuse/dependence (Taube and Barrett, 1985, p. 5). Twice as many women as
men experience depressive episodes, and one in ten women can expect to
have a serious depression in her lifetime (Kaplan, 1984, p. 1). This level of
depression in our society constitutes a problem. And for social workers that
depression presents a challenge. How should it be dealt with clinically? How
can it be prevented? What social concepts and policies permit it to continue?
Social workers have searched for ways to help women to empower
themselves and move out of positions of perceived helplessness. This study
and others provide evidence that one’s attitude is critical to this growth and
that mastery of a task or skill is equally important, since one
accomplishment can give a person confidence to try other tasks.
As this thesis will discuss, what women can do for themselves and what they are allowed to do or prevented from doing greatly influences the depression levels in our society. Furthermore, government policies, which the profession of social work can and should influence, can limit or support women's opportunities for activity in not only sports but also the work force. And clinically, if social workers encourage women to be active, they will be encouraging them to take action that will probably lessen their likelihood of being depressed.

Self-Esteem

How a woman feels and how she feels she is seen in the world constitute an overall concept or attitude about herself that amounts to a measure of her self-esteem. On instruments like the Index of Self-Esteem (Hudson, 1982), used in this research, depressed women are found to have a low self-esteem rating. There is a correlation between low self-esteem and depression. A further connection has been shown between attributional style and self-esteem. When good events are attributed to a cause outside oneself, or bad events, to a cause within oneself, self-esteem is correspondingly low.

Power And Powerlessness

Power here is defined as "the capacity to produce a change." (Miller, 1982, p. 2) It is internal power, the ability to direct and control one's own life, that was the chief aspect of power examined in this study. Some activities and attitudes that influence those concepts of power in women were also
examined. Another concept studied was that of the disempowered, a social class that is without means and/or ability to change aspects of life.

Learned Helplessness

Learned helplessness, which is a concept first described in 1967 by Martin Seligman (see Chapter 2 for a full discussion), shows that a person or animal who feels that his or her actions have no real bearing on the ability to avoid an unpleasant experience is unlikely to try to escape. In humans, learned helplessness is analogous to depression. Seligman referred to this as helplessness depression. The terms "learned helplessness" and "helplessness depression" are used interchangeably in all of Seligman’s work and in this study.

The concept of learned helplessness has as its components the terms attribution style and locus of control. The first refers to a woman’s perception of the causes for events in her life. Three aspects of attribution style, covered by the Attribution Style Questionnaire (Seligman, 1981), the test used in this study, are internality/externality, stability/unstability, and globality/specificity. Internality refers to whether a woman sees her locus of control as internal or external, that is, whether she feels she controls her own life or is more controlled and influenced by outside forces and people, and it can be an index of her well being or depression and relates to self-esteem. Stability refers to the chronicity of an attitude, that is, whether one always has a particular attitude or has it only at one particular time. Globality refers to the generality of an attitude, that is, whether one holds a
particular attitude in all similar situations or in only one. Attribution of bad or uncontrollable events as well as good events is tested.

**Helplessness And Women’s Sex Role**

In the United States, women traditionally have been socialized for helplessness. (For a full discussion, see Chapter 2). The differing gender role expectations of women and men place limitations on women and condition them to be subordinate to men who hold power and status in this society. Traditionally, when women have tried to break out of their prescribed roles, society has punished them by the loss of some benefits of their traditional roles. Many writers have addressed these issues of role expectations and what is gained and lost by going beyond them. (Frieze, 1978; Miller, 1983, 1976, 1982; Gilligan, 1982; Kohlberg, 1981; Waites, 1977; Parson, 1955; Friedan, 1963; Greer, 1970; Chesler, 1972; Millett, 1969). Clinical social workers who, like this researcher, work with women and couples, know well the fragile balance of roles in traditional relationships and how disruptive the growth of either partner, especially the woman, can be.

**Conditioned External Locus Of Control**

It is therefore assumed in this study that women in our society are generally conditioned for external locus of control rather than internal. (Surrey, 1984, 1985). The more that a woman is able to change her locus of control from external to internal, the more her helplessness depression will be alleviated. Further, such a shift in locus of control raises the woman’s sense of self-esteem.
Feminism And Women's Mental Health

The women's movement of the last two decades has led to questions about perceived attitudes. Women had been conditioned to be dependent on relationships to others (Chodorow, 1978; Gilligan, 1982; Miller, 1976, 1982; Erickson, 1968). Women had also been expected to remain in subordinate positions in order to maintain the status quo (Miller, 1975, 1980). The destructive effects of these attitudes on women's health and self concept were what brought about recognition of the need for change. It was seen that being in a subordinate role leads to vulnerability, and that vulnerability can lead to depression and other manifestations of ill health. Feminism argued that the more a woman is able to move from a subordinate role to equality, and to assume responsibility for her own well being rather than depending on someone else to provide it, the greater will be her self-esteem. Quite naturally, the strength of these beliefs has led to many changes in social policy as well as in women's lives individually.

Social Policy

Social policy issues as well as clinical ones are addressed by the results of this study. Most of those issues revolve around opportunity for women in sports, which Title IX greatly increased.
The Importance Of Title IX In Women's Sports

Title IX is that portion of the Education Amendments of 1972 which prohibited discrimination on the basis of sex in educational programs receiving federal funds. Failure to comply meant loss of funds. As it was initially interpreted and enforced, it meant that all divisions of an institution were prohibited from discriminating if any received federal funds. This legislation, which has been credited with revolutionizing women's sports, had dramatic effects. Opportunities for women increased enormously. In 1972, only 7% of high school athletes were girls; in 1982 girls were 35% of high school athletes. Prior to 1972 almost no athletic scholarships were available for women, the exception being traditionally Black schools where outstanding female runners like Wilma Rudolph and Wyomia Tyus got their starts. By 1984, more than 10,000 scholarships were available for female athletes nationwide. Colleges and universities now spend over 16% of their athletic budgets on women, compared to 2% in 1972. The number of women in intercollegiate athletic programs has jumped from 16,000 in 1972 to more than 150,000 today. ("Like She Owns The Earth," 1985).

Athletics often mirror, as well as generate, the social stereotypes which dictate a society's values and roles for women and men. "Because sports has been one of the major vehicles for carrying sex role limitations into every structure in our society - including work, government, politics, and the family - changes in women's participation in sports can reverse many of these limitations by expanding women's roles." ("Injustice Under The Law," 1985).
Unfortunately, in 1984, in GROVE CITY v. BELL, the Supreme Court ruled that Title IX’s protection against sex discrimination extends only to the particular program or activity directly receiving federal funds, rather than extending to the recipient institution as a whole. This ruling cut the power and the intent of Title IX and effectively stripped women athletes of a federal statutory right to equal treatment (with the possible exception of scholarships). Discrimination began to creep back into the institutions where so much progress had been made by women in sports. As discussed in Chapter 5, there is pending legislation (the Civil Rights Restoration Act) to remedy the situation, action which the social work profession endorses.

Summary

In the research reported here it was found that athletic involvement has significantly influenced self-esteem and positive self concept in the general population of women studied.

The specific hypotheses tested were the following:

Hypothesis # 1. Runners will score on Seligman’s Attribution Style Questionnaire (1981) (the ASQ) as high on internal, stable, and global attributions for good events and low on internal, stable, and global for bad events.
Hypothesis # 2. Women who are athletic but not runners will score a little less than the runners for good events (less high on internal, stable and global) and a bit higher (higher internal, stable, and global) for bad events.

Hypothesis # 3. Women who are not athletic will score lower than the runners and lower than the athletic non-runners on the internal, stable and global attributions for good events, and higher on the internal, stable and global for bad events.

Hypothesis # 4. On Hudson's Index of Self-Esteem (1982), runners will score as having the highest self-esteem, athletic non-runners will have the next highest level of self-esteem, and the non-athletic, non-runners will have the lowest score in self-esteem of the groups of women tested.

In order to put into context the research itself and the findings it is necessary to go back to the sources of the theories on loss of self-esteem and positive self concept and to understand origin of power in women in this society as well as the loss of it or disempowerment. Further, it is necessary to understand more about running itself, and about psychological evaluations of depression or learned helplessness especially as it affects women. There are several recent studies of particular relevance to this research. For this purpose Chapter 2 is devoted to a review of relevant literature. It will then be possible to present the methods and results of this research and discuss their implications.
CHAPTER 2
REVIEW OF THE LITERATURE

In this chapter the concepts and research central to this study; (1) women and power, (2) socialization of women, (3) running and mental health, and (4) learned helplessness will be reviewed. The literature on women and power and the socialization of women reflects the influence of the feminist movement, but has little research to support the concepts. In contrast, a considerable body of research exists which led to the development and refinement of the concept of learned helplessness. Similarly, research on running and mental health provides some support for the notion that running contributes to a sense of power and diminishes learned helplessness, although the findings are not consistent.

1. Women and Power

As has been stated, power is defined as "the capacity to produce a change." (Miller, 1982, p. 2). The term "power" is often used interchangeably with force, authority, strength, control and influence. (Frieze, 1978, p. 303). It is also "an aspect of interaction in a social relationship." (Frieze, 1978, p. 302). People perceive themselves to be more or less able to produce changes along a continuum from the extremes of powerless, disempowered, and helpless, to powerful and able. The aspect of power that is the focus of this thesis is the belief in one's own ability to control, direct and influence one's own life, that is, the development of mastery.
In our society, the woman's usual role in power dynamics is to foster the growth of the power and ability of others. Her work is that of a subordinate and her needs are secondary to the needs of others. Indeed, aggression and competitiveness, which are associated with a sense of power, are considered out of character for women. (Frieze, 1978, p. 301) The desire to direct one's own life and the drive for aggression with which we are all born, is neutralized, sublimated and controlled differently for women and men in our society. (Miller, 1983, p. 7).

How does this come about? Male and female children are socialized for different gender specific behaviors in our society. The males are directed toward dominance and the females toward subordinance, which leads to differing self concepts and values. (Miller, 1976) Psychologist Carol Gilligan, in her book IN A DIFFERENT VOICE (1982), writes of the reasons for differences in both moral development and the sense of personal power in women and men. According to Gilligan, much of women's behavior has been determined by the females' responsibility, over millennia, for the care of the children. What has developed is that women are thought to be more interested in relationships and defined by their relationships than men while men have been concerned with abstract concepts considered separately from the actual people who are involved. (Kohlberg, 1981) Hence, for women, any threat to the security of the relationship or one's place in it is most devastating. For a woman to take action that risks loss of place requires courage and, one hopes,
ability to deal with the ramifications. A sense of personal self worth and power would be vital. Yet as psychiatrist Jean Baker Miller says, "when women contemplate the use of power on their own behalf and for their own interests, many of them equate the prospect with destructiveness and selfishness - characteristics that they cannot reconcile with a sense of feminine identity. Moreover, they feel that the use of power may lead to abandonment, which threatens a central part of women's identity that affirms the need for relationship with other people." (Miller, 1982, p. 1)

Further she states that "to act out of one's own interest and motivation is experienced as the psychic equivalent of being a destructively aggressive person. This is a self image few women can bear. In other words, for many women it is still better not to feel powerful, if power makes you feel destructive." (Miller, 1982, p. 4)

In addition, Elizabeth Waites, writing on "Female Masochism and the Enforced Restriction of Choice," states that "... to the extent that authoritarian attitudes are an expectable concomitant of a traditionally "feminine" identity, we might expect any autonomously assertive act to threaten the submissive wife with identity loss." (Waites, 1977, p. 540)

In our society women have lived as subordinates (Miller, 1976) and taken on particular concepts of what actions are proper and improper for them. As subordinates, they "have been led by the culture to believe that their own self-determined action is wrong and
evil. Many women have incorporated deeply the inner notion that such action must be destructive." (Miller, 1982, p. 5) When women use power for their own needs, they risk the possibility that, as Miller states, "...change can occur only at the cost of destroying one's place in the world and one's chance for living within a context of relationships. I believe this reflects accurately the historic and cultural place, and the definition, of women." (Miller, 1982, p. 5) To move by methods of empowerment toward such ends as utilizing the full range of emotions and exercising control and influence, a woman must put at risk her traditionally defined and socially supported sex role, her relationships, and her traditionally defined femininity.

Elements of Power

Four factors which determine how much power a person can have and use are status, concrete resources, expertise, and confidence. The first two factors are external and the latter two, internal. (Frieze, 1978, p. 304) Women and men hold these elements in unequal proportions. For women status is usually gained by relationship to a successful man. Her efforts are subordinated to his needs in order to protect her channel to power, at best, and her survival, at worst. The vast majority of women have fewer concrete resources than men, whether they are wage earners or endowed with family wealth.

Expertise, or mastery, is usually gained through education and training. It has only recently been possible for women to have the
opportunity to gain expertise in many areas. Opportunities for careers in medicine, business, law, and other prestigious fields were closed to or strictly limited for women until relatively recently. Women had been channeled into what were considered to be appropriate fields for their gender such as nursing, social work, and teaching.

**Confidence And Empowerment**

Confidence is developed through the mastering of tasks. Yet because all but traditional tasks and skills were considered to be inappropriate for many women many of them lacked the opportunity to develop confidence in their own abilities, except for the narrow sphere of caregiving fields described above.

Confidence is one of the most important elements of a sense of being empowered; Frieze (1978, p. 308) defines it as "a generalized expectancy of success." This expectancy of success is the psychological variable which determines whether one sees oneself as potentially powerful. Lowered confidence for example, has the effect of lessening expectations for success, which leads to choosing modes of influence less likely to be evaluated negatively by others. Thus women, being without confidence and therefore with little expectation of success, would be less likely than men to attempt to exercise direct power.

High achievement-motivated men, on the other hand, tend to attribute their successes both to high ability and effort, while they
perceive their failures as due to a lack of effort (Frieze, 1975). The attribution of failure to lack of effort leads these men to put greater emphasis on effort. (p. 164) Women, who generally have not been encouraged to build confidence through mastery, have less expectation of success. "In general, more competent people, or people who have experienced successes, expect to do better than less competent or less successful people, and it is difficult to know how much of their superiority is due to their higher ability and how much is the result of the expectancies themselves."(Frieze, 1975, p. 159).

Thus women generally have believed that power on all levels was forbidden and forbidding to them. In addition, they have lacked the means to attain power, status, concrete resources, expertise and confidence, even if they had wanted them. Yet, as described in the next section on Women's Socialization, there have been shifts in our society since World War II. The disequilibrium in gender role expectations has led to unrest, turbulence, and growth. Many women and men as well struggle with ambivalence about their roles and many changes are in process. Ongoing struggles over power, both psychological and societal, characterize this decade.

2. Women's Socialization

How have women been expected to fit into society? In this section, some of the changes in women's socialization will be explored through an examination of relevant works by Talcott Parsons, Betty
Friedan, Germaine Greer, Phyllis Chesler, and Kate Millett. The earliest work, that of Parsons, goes back to the 1950's, while the four latter writers produced books critical to the development of the so-called "second wave" of the Feminist Movement, which began in approximately 1960.

One reads Talcott Parsons on the American family (1955) with an awareness of the extent to which opinions about women's behavior were based on society's need to keep them in supportive, subservient roles, regardless of what might promote their own growth and development. Parsons assumes that what is right for the status quo is right for the women and men in the family roles that maintain the equilibrium of society. He states that the increase in the birth rate after World War II indicates a "process of readjustment" rather than a continuation of what he terms "disorganization" within the family that the wartime situation, with many women working outside the home, had represented (1955, p. 5). Parsons viewed the role of the mother as "expressive" whereas the father was to be the "instrumental leader" of the family as a system. (1955, p. 13) Even in the work force the jobs of women should reflect their proper status as subordinates to men and male roles: ".... typical feminine occupations are those of teacher, social worker, nurse, private secretary, and entertainer. Such roles tend to have a prominent expressive component, and often to be 'supportive' to masculine roles. Within the occupational organization they are analogous to the wife-mother role in the family." (1955, p. 15) In his analysis of the status of the American family and the role
the work force in the 1950's, Parsons predicted that sex roles would remain roughly the same in the years to come. Even when he speaks of the "developing American feminine" role, the development he describes is within the role of nurturer, i.e., the development of a woman's rationality is seen to be only in the areas of human relations. (1955, p. 26)

Parsons' attitudes are representative of those which led to the discontent of many women and to the Feminist movement of the 1960's which continues today. In the years since the end of World War II much changed in the sex role functions within the family and in the work place, as many women began to want more than the activities prescribed for them within the traditional female role. Many felt that one could not be fully developed and mature within that role.

Betty Friedan and the Feminine Mystique

One of the most important books about woman's place in society, and the one which heralded many changes to come, was Betty Friedan's THE FEMININE MYSTIQUE (1963). Friedan chronicles the first fifteen years after the end of World War II, a time when the prevailing attitude as illustrated by Parsons (above), was that a woman should be entirely happy as a wife and mother, and blame herself, not the society, for any dissatisfaction with that role. Friedan identified the growing dissatisfaction many women felt with their limited, prescribed roles, calling it "the problem that has no name." She
interviewed 200 of her classmates from the Smith College class of 1942 for her initial research, shaping her questions from their input. Additionally, she spoke with many professionals, both psychologists, magazine editors, writers, and so on, who cater to women. She became the first to write of the very real ambivalence women face about the roles of mother/wife and career woman.

Limitations of Sex Roles

Another vital concept Friedan described was limitation to women's growth caused by the prescribed role of wife/mother. These limitations do real damage to the woman. Friedan states that "by permitting girls to evade tests of reality, and real commitments, in school and the world, by the promise of magical fulfillment through marriage, the feminine mystique arrests their development at an infantile level, short of personal identity, with an inevitably weak core of self." (1963, p. 278)

Friedan's assertion was that American women had outgrown the housewife role. "It is not possible to preserve one's identity by adjusting for any length of time to a frame of reference that is in itself destructive to it." (1963, p. 296) She describes the housewife role as one that denies women's adult human identity. One needs to be involved in all of life's complexities in order to be fully human. "Self-esteem in women, as well as in men, can only be based on real capacity, competence, and achievement; on deserved respect from others rather than unwarranted adulation." (1963, p. 304)
When Friedan's book appeared, what had been growing unrest within many women over prescribed roles began to find expression. The 1950's had been a time of healing and recovery from the upheavals of World War II, but women's role and status was one piece of the puzzle that did not settle back into its former place. With the birth-control pill an era of reproductive choice controlled by women became a reality. Women began to desire full adult status. Friedan's book, which was written for a general readership and distributed widely in paperback, led directly to what came to be called the second wave of the Feminist movement, with Betty Friedan as one of the original founders of the National Organization for Women in 1969.

Another of the early feminist writers is Germaine Greer, author of THE FEMALE EUNUCH (1970). By training a professor of English, Greer has been one of the most thoughtful, thorough, researchers of and one of the most articulate speakers for feminist concerns over nearly two decades. In THE FEMALE EUNUCH, she spoke of the stirring of female discontent as "the stirring of the demand for life." (1970, p. 13) She also describes how this culture has stripped womankind of its essential essence and potency, thereby creating a female eunuch. In chapters entitled "body," "soul," "love," "hatred," and "revolution," she describes how each aspect of femaleness has been neutered, diluted, and devalued. Calling the strategy "the psychological sell," she describes how women have been conditioned "to abandon autonomy and seek guidance." (1970, p. 90), thereby undermining
their ability to build self esteem through action taking to gain competence.

Greer takes the psychological concepts of Freud, Deutsch, Erikson, Krafft-Ebing, and others that have been used as reasons for inhibiting women and refutes each one with intelligence and passionate anger. She also describes how the masochistic role has been the one prescribed for women, thereby reinforcing infantilization. Finally she calls for women to fight for their autonomy and independence and encourages both individual effort in developing to one's full potential and also collective effort for the good of society.

An equally stirring author, Kate Millett, wrote in SEXUAL POLITICS (1969) about concepts of power and domination, and about patriarchy as a political institution, discussing how sexual domination has been portrayed throughout literature. She used the term "politics" here to refer "to power-structured relationships, arrangements whereby one group of persons is controlled by another."(1969, p. 31). She speaks of the domination of females by males in our society as "interior colonization" whereby women collude in their repression because they believe they are inferior and should be submissive to male authority. (When those who are repressed identify with the values of the oppressors, they are called colonized.)
Socially Constructed Power of Sex Roles

One reason patriarchy has had such a tenacious and powerful hold on society, according to Millett, is "through its successful habit of passing itself off as nature." (1970, p. 81) Millett's book is essential to one's understanding of power in our culture for the very reason that so many people take the inequality in power between women and men as a given. She analyzes how the inequality is socially constructed and maintained, far from being a given of nature. When one sees how clearly "strong and powerful" has been correlated with maleness, it is easier to see why "strong, powerful and female" has seemed like a contradiction in terms.

Phyllis Chesler's book, WOMEN AND MADNESS, (1972), details what sexism does to the lives of women. In the book she states that modern female psychology reflects a powerless and deprived condition: "... the psychological portrait of the individual and powerless woman consists of naivete, compulsive heterosexuality, procreative 'pride,' fearfulness, self-hatred, mistrust of other women -- and of compassion, passion, and idealism."(1972, p. 267). Discussing concepts of sanity and insanity in our society, through the use of Greek and Roman mythology, on which many of our psychological concepts are based, she traces and elaborates how women are conditioned to be powerless, frustrated in their attempts to be fully human and strong, and ultimately may go "crazy" owing to the conflicts they feel with their prescribed roles in our society. Through
detailed accounts of women's experiences in asylums, mental hospitals, and psychotherapy, she demonstrates the ways in which women have been damaged or destroyed by the sexist, patriarchal attitudes of the mental health establishment.

Society's Role in Disempowerment

Each of these four books elaborates an element of patriarchal society's methods of repressing women. Though several years have passed since the publication of these books, there has been little real change in the attitudes supporting the unequal status of women and men in our society. In fact, many of the attitudes have become more entrenched. One might well ask how the system perpetuates itself. A very important concept to keep in mind is that of identification with the aggressor. This is as a defensive maneuver "based on the child's need to protect himself from severe anxiety experienced in relation to the object. The child identifies with, and incorporates the characteristics of, the feared person, who is perceived as his attacker, and upon whom he is dependent, so that he may become allied with the aggressor rather than be his victim, in order that he may share in his power rather than be powerless before him. Such identifications may impoverish the ego by burdening it with negative introjects; their contribution to the formation of rewarding object relationships and the development of ego skills is questionable." (Mack and Semrad, 1967, p. 294). Applying this concept to the attitudes of many women helps one understand their failure to react against institutionalized sexism and its
repressive practices. Empowerment, as it is being defined in this paper, concerns ways to reverse this learned behavior.

In reviewing the literature on women and power and the socialization of women, it becomes apparent that many women today are struggling to create personal power for themselves in the face of institutionalized sexism. Obviously many paths exist and it is the focus of this research to examine sports in general and running in particular as it enables women to empower themselves.

3. Running and Mental Health in Women

Running is a simple sport that costs little money, it can be done anywhere (within reasonable limits of safety), and does not require other people. Moreover it offers women a way to achieve with a task dependent only on their own ability. This way there is no question about attributing success to "luck" or favor; one can only attribute the results of a race to effort and ability, whether high or low. Quoting an anonymous female runner in RUNNER'S WORLD magazine, "Our society has refused to recognize how badly women need the sanitizing, mind-bending experience of high stress sports, and it does its best to keep women fretting on minimal levels of tests." (1974) With running, the effort is great and the attributions must be realistic, that is, to effort and ability.
A number of researchers, among them Coles, Oglesby, Hennig and Jardim, Harris and Jennings, Corbett, Bunker, and Clark, have studied the effect of running on women's mental health.

**Running as Socialization for Women**

Carole Oglesby, Ph.D., professor of health and physical education at Temple University, states that female runners have experienced a sense of arbitrary limitation that is both self and other imposed. (1981) Sensing the activity to be outside the boundaries of their sex role and perceived feminity, women runners had to overcome social-psychological obstacles in order to incorporate running into their lives, according to Oglesby. Women who run derive benefits from running which provide opportunities for defining and extending personal limits. Oglesby states further that when participated in as an institutionalized activity (involving consistent training, entering races, working toward progressive performance goals, etc.), running may serve the individual woman as a form of socialization into dominant values of American society. (Oglesby, 1981, p. 162) Indeed, some researchers feel that competing, as in a footrace, teaches women they can be powerful people. As Margaret Hennig states, "Unless people not only are, but believe that they are, equally able or competent to compete, they will not willingly or successfully integrate themselves with more powerful individuals and groups." (Hennig and Jardim, 1977, p.XIV)
Oglesby's research supports the notion that "activity and physical competence enhancement is accompanied by positive psychological development." (1981, p. 162) Further she states that running provides an opportunity for authenticity, here defined as being the "finding of one's own present limits of distance, speed, strength, and endurance." (1981, p. 163) But others claim that gaining competence and authenticity can have risks for women. Participation in sports may cause conflict about the appropriateness of their behavior. Referring to work by Matina Horner (1970), Coles (1980), in her dissertation about female marathon runners, states, "... the motive to avoid success is a stable personality characteristic which develops as part of a sex-role identity. If a woman fears a threat to her acceptability as a woman as a result of success, anxiety is mobilized and performance is inhibited." (Coles, 1980, p. 35) One is reminded of Margaret Mead's work and the statement generally attributed to her that men are unsexed by failure and women are unsexed by success.

**Gender and the Runner's Self-Esteem**

Though the activities of the traditional, very feminine, woman were thought to be very different from the activities of the sports woman, much of this is changing. The more androgynous sportswoman, ideally, combines the best of being feminine and masculine. Research by Harris and Jennigs (1977), points out these changes. They tested female distance runners for self-esteem and sex role orientation.

Using a personal attributes questionnaire which differentiated gender
specific behavior according to normative roles for masculine, feminine, androgynous, and undifferentiated categories, the researchers determined that the runners who test in the androgynous category have the highest levels of self-esteem, followed closely by women who score in the masculine category. This study refutes beliefs that women who might perceive themselves as more closely aligned with typical masculine behavior would have lower self-esteem, or that women who perceive themselves as feminine have the highest self-esteem.

Harris and Jennigs (1977) used gender behavior categories to examine sex role behavior in a dualistic rather than bipolar fashion: i.e., a person can possess high feminine and high masculine abilities at the same time, rather than having one set of abilities exclude the other set. For example, a woman or man could have high score highly in both aggressiveness (typically masculine) and highly nurturing (typically feminine). Those individuals with high scores in both masculine and feminine traits are termed androgynous.

The authors conclude with the idea that the high scores of androgynous female runners on self esteem indicate more latitude in societal attitudes for sex-role behavior. "Females who have developed a sense of autonomy and a positive self-esteem may be better able to select their roles and enjoy a freedom of choice without experiencing conflict... ... the intensity of the conflict between the roles of being a female and being an athlete seems to be disappearing."(Harris and Jennings, 1977, p. 814)
Increasing Social Competence

Coles (1980) states that, "... women who achieve, both intellectually and physically, identify with those components of the masculine personality which allow them to develop a broader repertoire of attitudes and behavior than are available to the traditional female." (p. 31) This broader range of responses, she claims in her review of studies about androgyny and mental health is of great value: "...better mental health for children of either sex is associated with higher dominance, independence, and competence." (Coles, 1980, p. 30) Thus the sportswoman who risks losing some societal supports, primarily those based on remaining passive and submissive, and risks also acquiring a sense of mastery and autonomy that to some feel like loneliness and yet also like power, gains, based on her effort, a social competence much more valuable to her mental health than supports based on her passive and submissive status.

Running as Training for Competition

Coles (1980) also found, as did Oglesby (1981) and Hennig and Jardim (1977) in studies previously mentioned, that sports participation helps socialize children into awareness of the dominant role of competition in our society and teaches them how to work and compete. This knowledge, they state, is especially important for those going into business careers. "...there is strong evidence to suggest that physical excellence may not only have its own intrinsic desirability and
rewards but may also teach attitudes about competition, winning and losing, that are extremely valuable in seeking success in traditionally male professions, particularly business." (Coles, 1980, p. 41)

Even though women may learn about the "rules of the game" in regard to business and other traditional male domains, it is still critically important that they also build an internal sense of power and self-worth based not on being accepted by their new colleagues but on their own sense of value. They may not be accepted simply because they are female, no matter how well they play the game. Misogyny exists in many forms and in many places. One is well reminded of the quotation attributed to Amelia Earhart: "Men would rather give up war than share it with women." Coles' finding that women marathon runners reported their self-esteem "was less easily shaken since they had become runners" (p. 149) is useful to consider in regard to this acceptance/rejection issue.

Coles' (1980) purpose was to examine family characteristics and personality traits among female marathon runners. She tested twenty-five female marathoners and twenty-three non-athletes, that is, women who did not participate in any regular athletic endeavor. The runners were Boston area women who finished the 1978 Boston Marathon. The non-runners were acquaintances of the runners. Coles used the Thematic Apperception Test and a taped scheduled interview to compile the data. The women were tested on family background, social and educational experience, and present life
situation. The runners reported greater similarity to fathers' than mothers' personality, attitudes and values than non-athletes, \( p < 0.05 \). Runners were more satisfied with employment status \( p < 0.05 \). In regard to psychological differences, the runners reported lower anxiety levels \( p < 0.05 \), and were less bothered by minor annoyances, \( p < 0.005 \) and reported more positive body images than did the non-athletes \( p < 0.005 \). Family relationships in general were freer of rigid expectations in the runner's families.

The women marathoners whom Coles studied showed numerous psychological benefits from their running: They had enhanced self-esteem and a positive self-concept. They also reported that running aided them in being able to cope with problems and tensions, gave them a sense of power, limitlessness, and new body awareness, and helped with clarification of values and priorities. In addition they felt more self-awareness, self-confidence and physical and emotional well-being. In general, her subjects reported that running helped them to cope with all aspects of their lives. Coles' study is one part of a growing body of research which suggests that women athletes are achievement oriented and well adjusted individuals.

Furthermore, Coles wanted to determine whether benefits of running generalized to other areas of women's lives; she concluded that they did. Her subjects demonstrated achievement motivation and success in other areas, and they reported strong motivation and confidence in their ability to set and reach goals. "It is of interest to examine the relationship of achievement in running to achievement in other
areas and note that, at least for the runners in this study, running did not seem to be a compensation but part of a general life trend of accomplishment and effective problem resolution."(p. 164) They stated that "their achievement in running has had positive effects on virtually all other areas of their lives."(p. 169)

**Competence as a Trait of Black Women Athletes**

Doris Corbett, Ph.D., a professor at Howard University, discussed issues peculiar to the black female athlete in a paper she delivered at the Women's Sports Foundation Conference. (1983) While white women are inhibited by social mores that require that they be weak and submissive, the black woman has been required to be strong and assertive, according to Dr. Corbett. Her research shows the advantages for black women in sports because of this cultural advantage, since young black women have not been socialized to be helpless and can therefore be assertive and self-reliant. Being competent does not cause role conflict for black women as it frequently does for white women.

To Dr. Corbett, human traits are divided by gender rather than by individual tendencies. Women are expected to be expressive, understanding, compassionate, and tender, while men are to be instrumental, independent, assertive, aggressive, and risk taking. She suggested that the appropriate human response, rather than being predetermined by gender, should be an androgynous one that is most appropriate to the situation, and she concluded that the
black female athlete is free to be androgynous and that most are. Though white women athletes by and large are also androgynous, her research showed a higher percentage of black women to be so.

Also at the Women's Sports Foundation Conference in 1983, Linda Bunker, Ph. D., professor of physical education at the University of Virginia, discussed the socialization of children for an active life style and how that contributes to achievement motivation. (1983) Through sports one discovers that, (1) attitudes and values are learned, (2) games and sport are anticipatory models of society, (3) achievement motivation is important to future participation, (4) goal setting is an important adjunct to achievement motivation, and (5) risk taking is related to high achievement motivation. Sports give children the chance to become competitive, independent, and persistent, to have experience with success and failure, to explore and experiment. Children can also learn self control and experience the satisfaction of doing one's best.

**Athletics as Achievement Training**

Dr. Bunker referred to her ongoing research into achievement motivation and sports with children in comparing typical behavior for those who are low achievers and those who are high achievers. These comparison attributes are similar to those discussed later in this chapter comparing persons who are either helpless or empowered, according to Seligman's Attribution Style Questionnaire.
She describes low achievers as avoiding failure, experiencing shame with failure, feeling that they fail for lack of ability, choosing very hard or very easy tasks, and tending to set unrealistic goals. High achievers strive for success, experience pleasure and pride, attribute outcome to effort and ability, choose intermediate levels of difficulty in tasks, and set realistic goals. A very significant aspect of her finding is that through sports, children, if properly guided, can learn proper attributions for success and failure in their lives. As will be seen later in this thesis, this research provides many implications for the education of girls and their athletic training.

In one further paper presented at the 1983 Women's Sports Foundation Conference, Jane Clark, Ph.D., professor of physical education at the University of Maryland, described her concept of "cumulative ignorance" in regard to women in sports and physical activity generally. (1983) If one is not taught, or does not learn, basic skills in any subject, then one only accumulates failures because basic foundation pieces have not been learned. This is the case for many girls, who are blocked, or at least discouraged, at an early age from practicing the motor skills necessary to develop athletic ability. Dr. Clark emphasized the importance of elementary school physical education for all children. Though boys at that age are being encouraged to build and master skills, girls are not encouraged nearly as much. Future achievement motivation can be fostered or hindered from that early stage of development. As will be discussed later, the concept of "cumulative ignorance" parallels in many
regards the learning-to-be-helpless of Seligman's Learned Helplessness concept.

Benefits from Running

Prior to this the effects of running, or from athletics as a whole, on women and their mental health has been discussed. A significant body of literature also exists on running itself and the benefits that have been found to have come from this activity. Most of the writing done in the 60's and 70's about running was anecdotal. Generally, running was thought to be helpful in gaining mastery and in reducing depression, and it was also seen as an excellent way to improve one's overall physical condition. In this section some of those reports, as well as several clinical research projects that were done, will be discussed.

Greist et al (1979, p. 48), hypothesized nine possible reasons that running, specifically, appears to have a positive beneficial effect, both physically and mentally. These reasons were determined in a study conducted to see the effects of running on depression. Greist and his group studied patients seeking treatment for neurotic or reactive depression. Thirteen men and fifteen women between eighteen and thirty years of age who had been screened for severe depression or psychosis were randomly assigned to either running or one of two therapy types: ten session time-limited or time unlimited psychotherapy. Those assigned to running were also tested to be sure they were physically capable of running. Ten patients received
the running treatment, six received time-limited psychotherapy, and twelve received time unlimited psychotherapy in this pilot study.

The running leader would meet individually with his patients three or four times per week for one hour. Most runs were performed individually, though occasionally small groups would run together. The runners were taught by the leader about pacing and breathing, and generally were coached so that they could become independent runners later. Eventually the leader met them less frequently, tapering the number of sessions over the course of the weeks until he met them only once per week and encouraged them to run on their own at other times. The conversation during the runs focused on running and not on their depression per se.

**Depression Treated by Running**

Greist et al (1979) found in this pilot study that the running treatment was as effective for depression as either the time-limited or time unlimited psychotherapy. Although they cautioned, that this is a pilot study with a very small sample, they suggested that the results are nevertheless worth considering for treatment of depression.

They hypothesized nine possible explanations for the beneficial effects of running:

1. **Mastery:** A runner develops a skill and a sense of mastery of a difficult activity.
2. Patience: Runners learn that patience is required to build skill and develop ability.

3. Capacity for change: People learn they can change themselves for the better.

4. Generalization: People who can experience themselves as competent in one area "feel capable of becoming competent in other areas."(p. 48)

5. Distraction: People's attention can be distracted from negative topics.

6. Positive habit or "addiction": People can recognize running as a positive activity and can substitute it for more "negative and neurotic defenses and habits."(p. 49)

7. Symptom relief: Running appears to relieve symptoms of anger and anxiety and provides most runners with a "good feeling" while running.

8. Consciousness alteration: Those who run for more than 15-30 minutes duration often report a state of consciousness that is "very positive, creative, less conscious, and more insightful" while running. (p. 49)

9. Biochemical changes: Physical activity has been shown to affect levels of depression and to influence biochemical changes in the brain.

The well-known popularizer of running, James Fixx (1977, 1980), stated that running enhances mental energy, improves concentration, increases willpower, helps people learn to accept difficulty, and has a calming effect. Furthermore, involvement in
athletics leads to persistence and increased ability to concentrate and pay attention.

Wieman, who reviewed literature concerning athletics and mental health (1980), found studies indicating that those who are fit are more composed, secure, emotionally stable, and adventurous than are those who have low fitness levels. Athletes also have improved self-concepts through athletic participation. Runners show increased feelings of self-worth and of taking control of one's life and report an increase in ability to set and reach goals. Physical fitness also correlated positively in studies showing a decrease in levels of depression.

**Empowerment**

The research done by Wieman (1980) was based on the theoretical notion that being disempowered, that is, made helpless, leads to depression, and that depression and learned helplessness could be influenced for the better by running. The ability to run and the discipline involved were proposed as factors that can help people alter their perceptions about the amount of power they have to effect change in their lives. Wieman proposed that the benefits resulting from running could generalize to other areas of a person's life.

Wieman compared an experimental group of runners and a control group of racquetball players. He tested them before and after twelve weeks of participation in their activities using the Multiple Affect
Adjective Checklist, the Minnesota Multiphasic Personality Inventory, and the Rotter Internal-External Locus of Control Scale. His subjects were students from 17 to 36 years of age in a large California University who volunteered for the experiment. There were twenty-four males and thirty-eight females in the runner group and twenty-five males and twenty-two females in the control group. On measures of depression, runners changed significantly more than those in the control group. Runners reduced their depression scores five times more than those in the control group. (P. 50) His results also supported the notion that runners with an external locus of control were more inclined to experience a decrease in depression than others. This was especially true for women. Wieman postulated that this may be due to a change in their perceptions concerning the amount of potency they have for making changes in their lives, i.e., their perception of their locus of control may have moved from external to internal. He concluded his study by stating that the learned helplessness model of depression does appear to be supported by his results and may serve as a valid way to account for changes in depression that result from running.

This lowering of the levels of depression is important for many reasons. Beck (1975) has identified three areas of cognitions, cognition being defined as any mental activity with verbal content, that contributes to depression. These are (1.) a negative view of self, (2.) a negative view of experience, and (3.) a negative view of the future. (p. 15) According to Beck, depression is often a consequence of these cognitions, all of which are influenced, almost always
positively, by running. Having success in any endeavor can force a person to question these negative attributions or cognitions; running causes the person to reevaluate his or her attributions about his or her abilities. "Because changes in physical fitness due to running are frequently dramatic and are experienced throughout many aspects of daily life, and because continued participation in a running program is in fact a difficult task to be done by the individual, the attribution for change can only be personal: that is, one can only attribute this change to oneself. This change in personal efficacy may then act as a causal factor in reducing levels of depression in runners." (Wieman, 1980, p. 23)

In the literature on running there are many references by researchers and runners to the power of running as a tool for altering human consciousness. It is relaxing, meditative, and therapeutic as well as energizing. Fixx (1977, p. xix) stated that "running has a uniquely salutary effect on the human mind." Mike Spino, sports director for the Esalen Institute in California, stated that "running is not just a physical process. Your mind and spirit can't help but be partners over the miles you run." (1977, p. 95) He spoke of running as a way to self-understanding.

**Aerobics**

Most of the research surveyed, of course, spoke of running as a factor contributing to both physical and psychological health. Marblestone, (1980) referring to work done by the President's Council
on Physical Fitness and Sports, stated that running is "the single most effective exercise in promoting maximum efficiency of bodily performance, because of its dramatic benefits to heart and lung function and endurance."(1980, p. 2) In his research, Marblestone wanted to test the psychological effects of running on normal women. He tested four groups of thirty each, beginning joggers, exercisers, artists, and for a control, a group of women who were not beginning any new endeavor in their lives, in the Cambridge, Massachusetts area. The test period was ten weeks. The experimenter used a quasi-experimental pretest-post-test design.

Marblestone found joggers to show changes in mood, for the better, but he did not find changes in levels of self-esteem. He did find a highly significant decrease in anxiety (p .001). He did not find depression to decrease as much as he had expected (p .06). In this study, as in most of the others reviewed here, the length of time the subjects had been running was relatively short. Marblestone states in his own analysis of his research that it would be necessary for subjects to have been running for a longer time in order to assess properly the psychological effects of running.

Thaddeus Kostrubala, M. D., a psychiatrist who uses running as part of psychotherapy for many of his patients, states that running, "applied with consistency, seems to help people to alter self-destructive life style patterns."(1976, p. 78). Done in a particular way, running "is a form of natural psychotherapy. It stimulates the
unconscious and is a powerful catalyst to the individual psyche."(1976, p. 133).

Duration of Training

These benefits of running vary with the distances run. However, most sources stated that to get psychological benefits, one must run at least three times per week for at least twenty minutes (Spino, 1977). Fixx (1977) increased that minimum to four times per week for forty-five minutes to an hour. Speaking generally of aerobic exercise, The American College of Sports Medicine (1978) recommends for optimal cardiovascular fitness, "a frequency of three to five days per week, an intensity of 60-90% of maximum heart rate, and 50-80% of maximum oxygen uptake, a duration of 15-60 minutes of continuous aerobic activity (dependent on intensity), and an activity that uses large muscle groups continuously, rhythmically, and aerobically (e.g., jogging, hiking, bicycling)." (Marblestone, 1980, p. 30)

Cooper (1970) states that aerobic capacity is dependent upon an ability to (1) rapidly breathe large amounts of air, (2), forcefully deliver large volumes of blood, and (3), effectively deliver oxygen to all parts of the body."(p. 16) These are the fundamental processes of lungs, heart, and vascular system referred to as "endurance exercise" or "fitness training".

Endurance exercise produces major cardiovascular adaptations. Marblestone (1980) quotes from research by Goss (1978), who reports these adaptations to be "(l) reduced resting and exercise heart rate,
(2) increased stroke volume, (3) increased maximal oxygen uptake, (4) increased maximal cardiac output, (5) increased maximal arteriovenous oxygen difference, (6) reduced blood pressure, (7) increased myocardial contractility, (8) improved coronary perfusion, (9) cardiac hypertrophy, and (10), reduced myocardial oxygen consumption." (1980, p. 29)

In running, cardiovascular benefits have been found to exist for low mileage runners as well as high mileage runners. Marblestone reports that several studies found "low mileage, recreational runners (averaging 3 miles per run, 3 times per week) did not differ significantly in levels of cholesterol or triglycerides from high-mileage runners (averaging more than four times higher weekly mileage) after four years." (1980, p. 31) This regime amounts to running three times a week for half an hour at the rate of ten minutes per mile.

The health benefits of running and other aerobic exercises cover more than the cardiovascular system. James Fries, M.D. (1980) stated that increased exercise, low weight, advancement in personal autonomy, and independent responsibility for health are positive factors in the entire preventive approach to chronic illness. Carl Simonton, M.D., noted cancer researcher, is quoted by Marblestone as stating that "further information regarding malignancy and regular physical exercise concerns personality traits. Certain personality traits have been correlated with a favorable course in malignancy. Some of these traits are self-esteem, ego strength, the ability to
function under situational stress, nonconformity, flexibility in beliefs, self-sufficiency and perceived internal control. It is interesting that regular physical exercise has been reported to change psychological profiles favorable in almost all of these categories thus providing a therapy which is particularly helpful to cancer patients because these traits tend to be distorted in an unhealthy direction in these individuals." (Marblestone, 1980, p. 34) Simonton states further that exercise is "one of the most effective psychotherapeutic tools for breaking up depression." (Marblestone, 1980, p. 35)

In research reviewed by Marblestone, several studies attested to the efficacy of exercise in reducing anxiety; several show a correlation with low physical fitness to high levels of depression; and others show the relationship between physical fitness and increased happiness, self-esteem, satisfaction, and quality of life. One interesting study showed that it was not actual fitness that counted for increased sense of self, but one's cognitive perception of one's fitness.

Marblestone referred to a study on depression by Brown et al (1978, p. 42) in which 700 joggers were studied for one year. He stated "any rational, safe, and effective treatment regime for depression should include a prescription for rigorous exercise to bring about and maintain optimal affective functioning." (1980, p. 50) In the study done by Greist et al, "Running as a Treatment for Depression," it was found that "in our pilot study of running as a treatment for moderate depression, running was at least as effective in alleviating
depression symptoms and target complaints as either time-limited or
time-unlimited psychotherapy.”(1979, p. 47)

Much research from dissertations was reviewed for this thesis. All
(Crocitto, 1981; Rainey, 1982; Rudner, 1979; Lankford, 1980; Buffone,
1980; Chan, 1981; MacMannis, 1979; Rhodes, 1980; Riddle, 1979; as
well as the aforementioned Cole, 1980; Wieman, 1980; and
Marblestone, 1980) support the positive findings of the research
reviewed for this thesis. Generally, they showed that running does
decrease depression and increase self-esteem and self-concept, though
almost all the studies used too few subjects and tested them over too
short a period of time for conclusive results.

None of these dissertations specifically tested runners with the
learned helplessness attribution scale that was used in research for
this thesis, though one (Wieman, 1980), made reference to the concept
of learned helplessness and the use of running as a countering force
to depression.

4. Learned Helplessness

The concept of learned helplessness was derived from animal studies
which involved the control of escape contingencies. Martin Seligman,
of the Pennsylvania State University, who has been the major
researcher in the learned helplessness studies, describes an organism
as having control when there is something it can do, or not do, to
change the likelihood of reinforcement or punishment. (Seligman, 1967)

In the early animal studies, the phenomenon of learned helplessness was brought about by placing an animal in a situation in which it could not avoid electrical shock and then subjecting the animal to a series of jolts. After this, the animal was placed in a box where the shock could be escaped by performing a simple task such as crossing a small barrier. Animals that had been shocked in a situation in which there had been no way of escaping typically made no effort to escape; rather, they passively received the shocks. (Garber and Seligman, 1980) This concept was first demonstrated in many species of animals and then in man. Two important early human studies are described below.

Hiroto (1974) tested three groups of human subjects by subjecting them to a loud noise. Two groups heard the noise: one group could not control the noise, the other was given a switch with which they could terminate the noise if they wanted to. The control group heard no noise. His subjects were then given a box similar to a shuttle box which would allow them to stop the noise by moving their hands in front it. The subjects were then subjected to the noise again. The control group and the group that had had the switch quickly learned how to stop the noise, while the group that had previously been subjected to uncontrollable noise sat passively. Hiroto concluded that "learning of independence between responding
In the Hiroto and Seligman study (1975), four experiments with college students were conducted simultaneously. The researchers were looking for the generality of the debilitation produced by uncontrollable events across tasks and motivational systems. The four experiments were: (a.) pretreatment with inescapable, escapable, or control aversive tone followed by shuttlebox escape testing; (b.) pretreatments with insoluble, soluble, or control discrimination problems followed by anagram solution testing; (c.) pretreatment with inescapable, escapable, or control aversive tone followed by anagram solution testing; (d.) pretreatment with insoluble, soluble, or control discrimination problems followed by shuttlebox escape testing. Learned helplessness was found in all four experiments: both insolubility and inescapability produced failure to escape and failure to solve anagrams. The researchers suggested that inescapability and insolubility both engendered expectancies that responding is independent of reinforcement, and stated further that the generality of this process suggests that learned helplessness may be an "induced trait."

Learned Helplessness as Depression in Humans

In Seligman's studies, the animals, after the training situation, showed gross deficits in the acquisition of the escape response, and this was referred to as learned helplessness. In humans, this learned
helplessness came to be viewed as the experimental analogue of depression (Rimm and Masters, 1979). By this it is meant that reactive depression in humans may be caused by feelings of not being in control of one's life, generally and specifically. People who are blocked from directing their own lives and developing mastery in terms of the actual process of decision making and in actual areas of accomplishment may be more vulnerable to depression than those who are encouraged to develop skills and mastery. "A life without mastery may produce vulnerability to depression."(Seligman, 1973)

For the purposes of this paper, it is important to remember that women are treated for depression far more frequently than men. (Kaplan, 1984) Their greater vulnerability to depression proceeds as a consequence of membership in a disempowered group. The symptoms of depression tend to be similar to those of people who exhibit learned helplessness: They are passive, lack aggression, become isolated and withdrawn, feel unable to make decisions and tend to give up easily. In both learned helplessness and reactive depression, there is a lowered initiation of voluntary responses. Both groups generally describe themselves as being unable or unwilling, to do many things. They have lowered motivation and ambition, and they often report being fatigued. Taking action and making decisions is difficult. (Stuart, 1977, p. 58)
Low Self-Esteem as a Function of Learned Helplessness

Learned helplessness cuts across the subclasses of clinical depressions and is found in the nonclinical population as well. "Its central and defining feature is its causal mechanism: the expectation that highly desirable outcomes are of low probability or that highly aversive outcomes are of high probability and that their occurrence is independent of the individual's actions." (Seligman, 1978, p. 169)

Learned helplessness would most logically arise from situations in which one has little possibility for control or change and therefore loses self-esteem. Learned helplessness research, according to Seligman, has increased knowledge about mild depression in the following ways: We know that "(a) mildly depressed individuals are cognitively impaired; (b) mildly depressed individuals show impairments in response initiation; (c) the greater the depression, the more severe are the impairments; (d) these impairments can be reversed (at least temporarily) by experience with success; and (e) these impairments parallel those induced by learned helplessness." (Seligman, 1978, p. 177)

Elements of Learned Helplessness

A model of learned helplessness (helplessness depression) formulated by Abramson, Seligman and Teasdale (1978, p. 68) consists of four elements:
1. Depression consists of four classes of deficits: motivational, cognitive, self-esteem, and affective.

2. When highly desirable outcomes are believed improbable or highly aversive outcomes are believed probable, and the individual expects that no response in his repertoire will change their likelihood, (helplessness) depression results.

3. The generality of the depressive deficits will depend on the globality of the attribution for helplessness, the chronicity of the depression deficits will depend on the stability of the attribution for helplessness, and whether self esteem is lowered will depend on the internality of the attribution for helplessness.

4. The intensity of the deficits depends on the strength, or certainty, of the expectation of uncontrollability and, in the case of the affective and self esteem deficits, on the importance of the outcome.

Attributions and Locus of Control

This model incorporates the human cognitive processing of learned helplessness whereby people view tasks and their outcomes as either out of their control or within their control. The Reformulated Model of Learned Helplessness, as Abramson, Seligman and Teasdale's 1978 model is called, examines the causal attributions offered by depressives (those suffering with helplessness depression) for the good and bad events in their lives. This model, which has been adopted for use in this thesis, proposes that depressive symptoms (helplessness symptoms) are associated with an attributional style in
which uncontrollable, bad events are attributed to internal (versus external), stable (versus unstable), and global (versus specific) causes. The presence and extent of depressive (helpless) symptomatology is influenced by these attributions and it is possible to analyze most types of attributions or situations using this model. The authors of this Reformulated Model (Abramson, Seligman and Teasdale, 1978), have concluded that negative attributions which are internal, stable and global are those which have the greatest likelihood of leading to a depressed (helpless) state.

If bad events are perceived to be caused by something about the person (internal attribution), as opposed to something about the situation (external attribution), then the resulting depression is hypothesized to involve low self esteem. If the uncontrollable events are attributed to nontransient factors (stable attributions), in contrast to transient ones (unstable attributions), then the depressive symptoms are expected to be long-lasting, and vice-versa. If the uncontrollable events are attributed to causes present in a variety of situations (global attributions), as opposed to more circumscribed causes (specific attributions), then the ensuing depression is proposed to be pervasive. (Peterson, et al, 1982, p. 288)

One can generalize from these lab tests to society at large and speculate. One wonders who is most vulnerable to helplessness and depression? Whose socialization is analogous to the enforced limitations of learned helplessness training? Which non-clinical groups of people would, when tested, show that they have learned to
attribute negative events to internal, stable and global causes, thus making them more likely to exhibit depression and helplessness? Of which groups can it be assumed that access to tasks producing mastery was limited?

Society has kept women disempowered as it has racial and ethnic minority groups. Societal attitudes concerning women's "proper" role as subordinates have led women, as a group, to exhibit many of the attitudes of those who are helpless and depressed.

**Helplessness and Rage**

Psychiatrist Jean Baker Miller, writing about how anger as a result of the subordinate and disempowered role of women contributes to depression, states, "I think that you have to have lived a little to experience the worst kind of anger. You have to have experienced the kind of hurtful and simultaneously disavowed experience (where feelings and thoughts are ignored because one is a woman) in order to acquire the kind of anger that has the connotations we usually associate with the most terrible and terrifying rage. Usually we call this 'helpless rage'." (Miller, 1983, p. 7). Aggression, drive, strength of will, motivation, are all neutralized, encouraged, sublimated, and controlled differently for women and men in our society. That women's rage stems from being disempowered is consistent with the generally held idea that depression is often anger turned inward. Hence women may have helplessness depression as a result of being forced into a subordinate, disempowered, role.
Research on Learned Helplessness

The literature on learned helplessness includes a number of relevant studies. No studies were found similar to this thesis that tested large groups of women from varied backgrounds and ages to see how they score on an attribution style questionnaire. Most studies used either college students or in-patient populations. The studies discussed below did address some aspects of women and learned helplessness, or at least shed some light on the subject.

Importance of Flexible vs. Fixed Sex Roles

Baucom and Danker-Brown (1979) tested 160 college students, both male and female, to determine a degree of learned helplessness in each of four separate groups, those being: androgynous, masculine sex-typed, feminine sex-typed, and undifferentiated. They hoped to see the relationship among sex roles, sex, and learned helplessness. The sex stereotypes here refer to behaviors that have traditionally been seen as more appropriate for one sex than another; sex roles refer to the sex role identity of a particular person, that is, the level of femininity or masculinity adopted by the individual.

Previous research led these researchers to believe that more feminine sex typed women would be more likely to be depressed than those who were masculine sex typed or androgynous sex typed. In fact what these researchers found was that the more extreme
masculine and feminine sex typed persons were equally susceptible to depression. However, androgynous persons were less susceptible than either the masculine or feminine sex typed. The androgynous ones are more flexible and have a broader range of strategies for dealing with diverse situations. Their findings "implicate sex roles as an important factor in the etiology of depression." (1979, p. 934)

Mastery by "Innoculation" and Sex Roles

Stuart (1977), researching women, sex roles, and learned helplessness, tested four groups of subjects, both men and women, who were grouped as sex-typed females (stereotypically feminine), sex-typed males (stereotypically macho), androgynous females, and androgynous males according to the Bern Sex Role Inventory (Bern, 1974). He hypothesized that women who scored high in feminity would be most susceptible to learned helplessness because they would have been prevented by their socialization from having as many "innoculating" experiences with mastery as the other groups. Experiences with "naturalistic inoculation", that is providing the organism with the experience of mastery before placing it in the uncontrollable condition such as the experience of dominance and the solving of problems, help some organisms to be extremely resistant to learned helplessness. Further, he anticipated that a sex-role stereotyped woman in our society would exhibit nurturing behavior and emotional expressiveness and also be compliant, while mastery producing behavior such as aggressiveness and competitiveness would be discouraged. Males who are encouraged in such mastery
producing activities as decision making, self-reliance, forcefulness, and ambition, would display such traits.

Stuart concludes, "In humans, the person who is resistant to the debilitating effects of learned helplessness is one who will retain a problem-solving stance, even in the face of one or more failure experiences. This doughty ability to resist comes from the successful practice of self-reliance in overcoming obstacles in the environment." (Stuart, 1977, p. 56) For women, "to the extent a woman conforms to stereotyped 'feminine' attitudes and behavior, she develops a life history which provides less experience with self-reliant mastery of problems. In short, she has a weaker "innoculation"." (Stuart, 1977, p. 3)

Another scale, an insolvable Levine-type discrimination task, on which Stuart tested his subjects was for perceptions of locus of control. That is whether one perceives that one's behavior is internally or externally controlled. Those believing in external control see results as being caused by luck, fate, or powerful others, while those believing in internal control see results as dependent on their own actions, choices, or personal characteristics. Stuart's results showed that sex-typed women believed in external control more than sex-typed men; they were also more depressed than were male subjects. A significant finding of his study was that the androgynous men and women were significantly less depressed than the sex-typed group of both sexes. (Stuart, 1977, p. 24). However, he found androgynous women to be as vulnerable to learned
helplessness as sex-typed females, a surprising result which he cautioned might have been caused by problems with his methods. "Androgynous women are just as vulnerable to the disruptive effects of response-reinforcement independence as sex-typed women. For women in this study, androgyny is no shield against the learned helplessness effect." (P.24)

Battered Women's Socialization

Baum (1982), in his research on battered women, learned helplessness, and traditional family ideology, hypothesized that women's socialization makes them more susceptible to learned helplessness and, on a continuum, he saw battered women as most likely to be conditioned to be helpless. He also hypothesized that women with traditional family ideologies would be likely to be prone to learned helplessness. In his review of the literature, he found no research exploring the relationship between learned helplessness and the traditional family ideology and battered women.

Baum, using Rotter's Internal-External Locus of Control measure, tested for helplessness comparing two groups of women seeking help at a community mental health center: one group had been battered and one group had not. He found that "battered women are significantly more accepting of a traditional family ideology than are non-battered women. This finding suggests that a traditional family ideology is a factor in the battering woman syndrome. According to this finding, battered women are more likely to be conventional in
their thinking and behavior, submissive to authority, exaggerated in their femininity, strongly conforming to authority and more inhibited in their impulse life. Inherent in this ideology is the acceptance of a subservient female role and a totalitarian male role in the family." (Baum, 1982, p. 80)

**Battering and Learned Helplessness**

Baum did not, however, find a significant difference between the battered women and the non-battered women when he tested for helplessness, although he cautioned that not proving that connection was probably the result of his methods. He reasoned that: (1) though only one group had been battered, both had been subjected to the same social and cultural forces which indoctrinate women to be submissive and dependent on men; (2) both groups were experiencing helplessness; were seeking help at a clinic; (3) learned helplessness may be the result of background variables rather than the condition of battering: both groups had similar backgrounds; (4) those most helpless may not have been in the study because they would have been behaving in truly helpless fashion and not seeking help because they don't believe escape is possible; (5) they may have given a social desirability response rather than responding honestly, and (6), his sample was so limited that one cannot generalize to a larger population.

Walker (1977), who studied the relationship between battering and learned helplessness, suggested that wife abuse is related to the
concept of learned helplessness. Here, the expectation of helplessness is formed as a result of repeated exposure to an aversive condition (battering) that is perceived to be inescapable. Initially there would be either attempts to escape that were thwarted or no attempts because the victim believed she couldn't escape anyway. In any case, helplessness results.

Walker focuses on early sex-role socialization and suggests that the condition of learned helplessness is inherent in our traditional socialization patterns of women. She states that "from childhood, women are taught to be passive and complacent in their relationships with men. Women are also taught to rely on men for security. Helplessness is further reinforced by the imposition of limits upon the opportunities available to women. By the very nature of the social reinforcement contingencies to which they are exposed, women are more likely to experience helplessness than are men." (Walker, 1977, p. 528) She reminds us that, according to social learning theory, responses which are not reinforced will become extinct. (p. 526) The reinforcement of passivity and dependence and the suppression of assertive, self-directing behavior leads to learned helplessness in girls and women. "Sex role socialization in childrearing can be responsible for inducing a faulty belief system that supports women's feelings of learned helplessness." (Walker, 1977, p. 529)

Walker concluded that learned helplessness theory demonstrates that propensity to being a victim is socially learned behavior; it can be
unlearned through systematic procedures designed to allow women actual power and control over their lives. "...the only successful treatment to reverse the cognitive, emotional, and motivational deficits is to learn under which conditions responses will be effective in producing results." (Walker, 1977, p. 531)

**Expectation as an Intervention for Helplessness**

Dweck, (1975), a principal researcher on gender and learned helplessness, studied the role of expectation in the alleviation of learned helplessness, by testing male and female children, ages 8-13, who had extreme reactions to failure. The children were divided into groups that attributed their failure to lack of ability (the learned helplessness group), or to lack of effort (the persistent group). Some of the children were given instructions using behavioral techniques where they only succeeded in getting right answers. Another section of children were given a few more tasks to complete than they could finish, but were told that not finishing was due to lack of effort, (they could do them, just didn't have time) and not to lack of ability. They knew that they should try harder, which increased their persistence. After this cognitive restructuring, the learned helplessness group of children showed improvement. They were learning to take realistic responsibility for their efforts. The children who only had success improved, but became even more afraid of failure because they had no experience with how to evaluate it. They did not know how to judge their efforts realistically. This result fits in with social learning theory: people
learn best from efforts where success and failure occur. The comparison is necessary. "Errors should be capitalized upon as vehicles for teaching the child how to handle failure." (Dweck, 1975, p. 684).

According to Dweck, "if a child believes failure to be a result of his lack of ability or a result of external factors beyond his control, he is unlikely to persist in his effort. On the other hand, if a child believes failure to be a result of his lack of motivation, he is likely to escalate his efforts in an attempt to obtain the goal." (Dweck, 1975, p. 683). It is important to note that girls more often attribute helplessness to lack of ability (a global and stable attribute) and boys to lack of effort (a specific and unstable attribute), thus making girls more susceptible to learned helplessness. (Abramson, Seligman and Teasdale, 1978, p. 68).

Studies on independence and helplessness were done by Langer and Benevento (1978) in a nursing home, where they found that being given tasks of responsibility helped elderly patients regain a sense of independence. They define self-induced dependence as "a process whereby an individual erroneously infers incompetence from situational factors." (p. 887). In their study they found that people in roles of worker and assistant were unlikely to attempt tasks that were clearly within their range of competence because of an erroneous inference drawn from their relative status. Here the perception of role and what is proper and possible for one in that role limited the patients' perceptions of what they were capable of
doing. They state "being assigned an explicit label that connotes inferiority relative to another person, engaging in a consensually defined demeaning task, no longer engaging in a previously performed task that is now engaged in by another, or allowing someone else to do something for one, all may render an individual helpless." (Langer and Benevento, 1978, p. 886). In this study, the patients were put back in charge of tasks within their competence and were thereby rendered less helpless.

Two studies, Wortman and Dintzler (1978), and Harris and Tyron (1983), raise the important issue of noting the necessity of being able to evaluate just which situations are actually within one's range of ability and which are not. Harris and Tyron state that response deficits occur only when failure is experienced after success is expected. If one expects success when success is not possible, then one could be contributing to producing the very performance deficits one is trying to avoid. It is better for clients to learn to discriminate uncontrollable from controllable situations and respond accordingly. Realistic evaluation is essential.

Wortman and Dintzler (1978) question whether in some instances helplessness and depressed behaviors may not be highly functional for the individual. "We believe that many of the behaviors associated with helplessness (giving up, losing interest in the outcome and/or motivation to pursue it) are maladaptive only when the outcome in question is controllable or modifiable. If the outcome is truly uncontrollable, these behaviors may be highly functional." (p.87)
Control of Life to Counteract Helplessness

In regard to questioning about how to reverse learned helplessness deficits, Wortman and Dintzler respond: "We would maintain that adaptive responding to aversive life events can be facilitated not by designing treatments to minimize helplessness but by teaching people to make accurate assessments of their ability to influence their outcomes and make accurate attributions for their failure to do so." (1978, p. 87). They state that one problem facing researchers in this area is the defining of boundaries around what one can do. For example, the Olympic Committee until last year forbade women to compete at marathon distance. Women protested; now the women's marathon is an Olympic event. The perceived limitations should always be in question. Wortman and Dinzler suggest that those affected meet to discuss and decide for themselves their situations, feelings, and "adaptations". (p. 87).

Summary

The studies reviewed here all discuss to one degree or another just how being blocked from being responsible for and in control of one's life leads to depression and learned helplessness. In this thesis, women's socialization is seen as the aversive agent keeping women from developing as many skills of mastery, relatively speaking, as men. On a continuum, women would be more prone to depression and learned helplessness than men because of that. Seligman states
that "the life histories of those individuals who are particularly resistant to depression or who are resilient from depression may have been filled with mastery. People who have had extensive experience in controlling and manipulating the sources of reinforcement in their lives may see the future optimistically. A life without mastery may produce vulnerability to depression." (Seligman, 1973, p. 48). Likewise, "A life history that biases individuals to expect that they will be able to control the sources of suffering and nurturance in their life should immunize against depression." (Abramson, Seligman and Teasdale, 1978, p. 70).

An adult woman finds herself having been socialized, to a relative degree, to be prone to helplessness and depression. How can she change her situation? "Helplessness can be reversed and prevented by experience with success." (Abramson, Seligman and Teasdale, 1978, p. 61). Success in many areas would help to fill the learned helplessness deficits. The need is for genuine mastery, not for praise for attributes that are unearned or praise that is given from bias that has its roots in the institutionalized sexism of the present society.

The literature, in summary, that has been examined for the purposes of this dissertation is in the general areas of women and power, women's socialization, the effect on mental health, and especially women's mental health, of sports and especially running, and finally learned helplessness, especially those studies that address women's helplessness and/or depression as social factors have
influenced it and as it can be altered by women themselves. A number of experimental studies provided insight for this project. Instruments chosen and group populations, research problems or experimental design flaws served to guide the design of this research. For example, this research included a population of long-time runners to avoid problems other researchers had encountered when using only short-time runners (see Methodology). Several recent studies seem to suggest less helplessness than had been hypothesized in women who are victims of battering, and more helplessness potential in so-called androgynous women or women with both masculine and feminine traits. It seems clear that the composition of the group under study dramatically affects results. It is not known how many women of color were included in the battering study, for example. In the study of power, it was stated that black women often perceive themselves as being less helpless than white women and the causes for this are very obvious in their social milieu. Overall, the findings are too questionable for us to revise the premise held that depression (helplessness) is a sex-subordination and disempowerment affect for women in this society.

Areas researched for this thesis have been ones that led to understanding of ways of attacking women's learned helplessness and defeating the depression that seems to accompany it, suggesting that a self (internally) directed sports program, specifically, one of running or jogging, would create an atmosphere in which the woman would through her own efforts undertake the skills leading to mastery, confidence, and self-esteem - all components of personal power. It is
proposed by researchers like Seligman that taking control and effecting change will break the no-escape trap in which the learned helplessness victim finds herself; in fact, this is a theme that, frequently stated in the helplessness literature, is echoed in the books on power and on women's socialization reviewed first in this section.

Changes after a running program are dramatic and experienced in many areas of life. The literature reviewed bears out the contention that there is benefit in such a program for the depressed woman, requiring as it must elements of nonconformity and androgyny (though realizing that some misogyny is inevitable), the ability to be persistent, to evaluate success and failure realistically, to learn to compete, to channel or sublimate anger, and to put demands of the woman's own on the world, if you will, rather than allowing society to demand of her. She can attribute her changed personality only to her own efforts, and her gain in ability and mastery may well act as a causal factor in reducing her level of depression or helplessness.
CHAPTER 3

METHODOLOGY

This thesis was designed to study the relationships among the variables of learned helplessness, empowerment, running, and self-esteem in women. In order to test these relationships, a group of women who run consistently was compared with three other groups of women: those who run less consistently than those in the first group, those who are athletic but who do not run, and a group of women who are not runners and also are not involved in any other sport. The two instruments used to measure the dependent variables were the Attribution Style Questionnaire (Seligman, 1981), and the Inventory of Self-Esteem, (Hudson, 1982). Additionally there were demographic questions for comparisons of the influence of the variables of age, occupation, education, race, religion, and marital status on learned helplessness and self-esteem. Two subjective questions, one concerning level of happiness and the other asking whether one was a feminist, were also asked.

The specific hypotheses tested were the following:

Hypothesis # 1. Runners will score on Seligman's Attribution Style Questionnaire (1981) (the ASQ) as high on internal, stable, and global attributions for good events and low on internal, stable, and global for bad events.
Hypothesis # 2. Women who are athletic but not runners will score a little less than the runners for good events (less high on internal, stable and global) and a bit higher (higher internal, stable and global) for bad events.

Hypothesis # 3. Women who are not athletic will score lower than the runners and lower than the athletic non-runners on the internal, stable and global attributions for good events, and higher on the internal, stable and global for bad events.

Hypotheses # 4. On Hudson's Index of Self-Esteem (1982), runners will score as having the highest self-esteem, athletic non-runners will have the next highest level of self-esteem, and the non-athletic, non-runners will have the lowest score in self-esteem of the groups of women tested.

**Study Design**

The design for this study was quasi-experimental (Stanley and Campbell, 1963). This was a field study with control groups. By the use of that design it was acknowledged that the researcher could not have control over possibly confounding extraneous variables. What could be tested for is difference between groups. It was not possible to say that running is the sole reason for differences between the groups, though it was possible to test to see which differences did exist.
The quasi-experimental design was chosen for this study over more truly experimental pre and posttest designs for the primary reason that the independent variable, running, needs to have been a part of one's life for a significant amount of time to be of real use. All of the research reviewed stated that the use of pre and posttest designs of relatively short periods of time, usually 10 to 12 weeks, usually did not allow enough time for a truly valid test of the variable of running. Instead, researchers recommended that longer time intervals between pre and posttests be used, or, as was done here, that running be a part of the subjects' lives for a substantial amount of time before the testing.

In this research three control groups were used. They were women who run less consistently than the women runners who were the primary focus of this study, non-running athletic women, and non-athletic women. Most difference was anticipated between the consistent runners and the non-athletic women. The control group composed of non-running athletic women was included so that it could be seen what influence athletic involvement of any sort has on self-esteem and learned helplessness, and whether running has a greater influence than other types of exercise.

Sample

The sample used here is a sample of convenience. Polit and Hungler (1978) define a sample of convenience as "the most readily available persons or objects for use in a study." (p. 454). In the case of this
study, the sample of running women, represented by the participants in the Bonne Bell Race, is good for many reasons. First, the field of runners is large, 8547 of them in the sample pool that year (1983). Second, the distance run in the Bonne Bell is 6.2 miles, much shorter than a marathon yet long enough to require persistent training, effort and desire. For this study, the plan was to test runners who included running as a part of their lives, but probably not as a primary focus. When one trains for a marathon, or consistently runs distances daily that would be similar to marathon training, there is less time for other activities in one's life. In her clinical practice the researcher has observed that people can use excessive running as a defense and as a method of avoiding people and life issues. It was therefore decided that participants in a 10 kilometer race would probably be running enough on a weekly basis for running to influence their lives strongly, but not to define their lives.

The subjects used in this study included, for the runners, participants in the 1983 Bonne Bell 10K race held in Boston. On the day before the race, October 10th, the researcher stood with a large sign explaining her study in the exhibition area where the runners came to pick up their numbers. During the day 1300 runners and 74 observers gave their names and addresses and agreed to participate in the study. In October of 1985, packets of study information and the questionnaires were mailed out to those who had agreed to participate. Included were a letter of explanation, the Index of Self-Esteem (Hudson, 1982), The Attribution Style Questionnaire (Seligman,
1981), and the demographic information questions. Copies of the information contained in that packet are included in the appendix.

To find participants for the control groups, boxes containing study packets were placed in five locations in Boston and Cambridge. The intention was to get a random cross section of women. The boxes were marked with signs that explained the study and asked prospective participants to take a packet, complete the forms and return them in the envelope provided. The five locations where the boxes were placed were the YWCA Berkeley Residence, the Mt. Auburn Athletic Club, the Cambridge Women’s Center, the Cambridge YWCA, and the Boston Psychological Center for Women, Inc. Between 30 and 50 study packets were placed in each location. In addition packets were given to friends and associates to give to women with whom they work or whom they know socially. These included lawyers, medical doctors, secretaries, legal service workers, beauticians, social workers and psychologists. Approximately 25 were given out in this way.

By March, 1986, the study groups were complete. The two runner’s groups contained 482 women, the athletic but non-runner group contained 85, and the non-athletic women’s group contained 56.

The criteria used for placing the women in the four different groups were as follows: group 1 contained those women who ran in the 1983 Bonne Bell, the 1984 Bonne Bell, and by their self descriptions, were still running at the time they filled out the questionnaires. That
group became the "consistent runners group." Group 2 contained women who ran in the 1983 Bonne Bell but either did not run in the 1984 Bonne Bell or were not running at the time they filled out the questionnaires. That group became the "less consistent runners group." The women in group 3 were those who were involved in some sport or physical activity at least once a week, but not running. That group was termed the "athletic but non-running group." Group 4 contained those women who are not athletic, by their own description. That group was then termed the "non-athletic group."

**Measures**

**The Demographic Information Questions**

The Demographic questions were designed to gain biographical information, to assess the athletic involvement of the study participants, and to ask two subjective questions. The biographical questions were age, occupation, education, race, religion, marital status, and number of children.

The sports involvement questions were: 1. Do you engage in any sport or physical activity regularly?; 2. Which sport or physical activity?; 3. How many times per week do you engage in your sport or physical activity?; 4. Did you run in the 1983 Bonne Bell 10K race in Boston?; 5. If you ran in the 1983 Bonne Bell, how many miles did you run per week prior to the race?; 6. Did you run in
the 1984 Bonne Bell 10K race in Boston?; 7. If you ran in the Bonne Bell, how many miles did you run per week prior to the race?; 8. Whether you ran in either race or not, but run now, how many miles do you run on average per week now?; and 9. How many years have you been a runner?

The two subjective questions were 1. Do you consider yourself to be overall more happy than unhappy?; and 2. Are you a Feminist? A copy of the demographic information page is included in appendix E.

The Index of Self-Esteem

The Index of Self-Esteem (Hudson, 1982), a copy of which is in appendix C, was chosen to test subjects on their level of self-esteem. It was designed to measure the evaluative components of self-esteem. This measure is one of the nine short form scales that comprise The Clinical Measurement Package (Hudson, 1982), designed to help therapists evaluate their client’s levels of dysfunction in several areas of personal problems or interpersonal relationship problems. Those areas are depression, self-esteem, marital discord, sexual discord, parent-child relationship as seen by the parent, as seen by the child in relation to the mother, as seen by the child in relation to the father, intrafamilial stress, and peer relationships.

The developmental work for these scales began in the 1970’s. The current Clinical Measurement Package scales are each one both valid and reliable. Each has a reliability of .90 or greater and they have
good face, content, construct, and discriminant validity. (Hudson, p. 42)

The Index of Self-Esteem consists of 25 questions concerning clients' attitudes about how they feel and how they feel they are seen in the world. The CMP scales are structured as a 25 item summated category partition scale with each item being scored according to the following five categories: 1 = rarely or none of the time, 2 = a little of the time, 3 = some of the time, 4 = a good part of the time, 5 = most or all of the time. Some of the items are positively worded and others are negatively worded to partially control for response set biases. All of the items are randomly ordered within each scale.

To score the ISE, one must first reverse score the positively worded items so that a 5 becomes a 1, 4 becomes a 2, 2 becomes a 4, and 1 becomes a 5, and 3 remains the same. The total score is then computed as $S = \sum Y - 25$. This produces a range of values from 0 - 100.

Scores on the ISE are on an intensity, severity or magnitude continuum. Low number sums are considered to have higher self-esteem than are high scoring sums. Thirty (30) is the clinical cutting point with those over that considered to have a clinically significant problem with low self-esteem.
The Attribution Style Questionnaire

The Attribution Style Questionnaire (Seligman, 1981), a copy of which is in appendix D, is the result of years of refinement by Seligman and others in his group who have been studying the phenomenon of learned helplessness. The ASQ incorporates the important cognitive aspect of causal attributions so that one can now test for why a person feels he or she has or lacks control over good and bad events in his or her life. The ASQ also enables one to test for how much control a person feels she or he has over the events in his or her life.

The ASQ has been found to be a reliable and valid instrument by most researchers. Evidence of some of those tests will be presented below.

Peterson et al (1982) describe the test and discuss its psychometric properties. The ASQ measures individual differences in the use of the attributional dimensions on internality, stability, and globality. The researchers wanted questions that would measure the degree to which subjects used the dimensions of internality, stability, and globality as defined by the Reformulated Model of Learned Helplessness of Abramson, et al (1978). Rather than giving the subjects several causes for events from which to choose, the researchers asked the subjects to generate a cause themselves for each of a number of events and then to rate the cause along 7-point
scales corresponding to the dimensions of internality, stability, and globality.

The test consists of 12 different hypothetical events. Half of the events are good events and half, bad. First, the subject is asked to write down one major cause of the event. Then the subject is asked to rate the cause of the event along the 1-7 scale of the three attributional dimensions.

The ASQ is scored in the following manner. The three attributional dimension rating scales for each event description are scored in the direction of increasing internality, stability, and globality. Composite scores are created by summing the appropriate items and dividing the sum by the number of items in the composite. One can combine the internality, stability, and globality scales into two composite attributional style scores, one for good events, and one for bad events, based on 18 items each.

Peterson et al (1982) tested the ASQ on 130 undergraduate college students (50 males and 80 females) in an abnormal psychology course. The test was administered again five weeks later.

SEX DIFFERENCES: No differences were found between males and females.

MEANS AND STANDARD DEVIATIONS: For good events the means and standard deviations are internality, 5.26 (.79 s.d.), stability, 5.36 (.68 s.d.), globality, 5.11 (.80 s.d.). The composite for good events was 5.25 (.62 s.d.). For negative events the means and standard deviations
were internality, 4.29 (.84 s.d.), stability, 4.14 (.71 s.d.), globality, 3.87 (1.07 s.d.). The composite for negative events was 4.12 (.64 s.d.).

INTERNAL CONSISTENCY: Alpha coefficients of .75 and .72 were obtained for the composite attributional style scales for good and bad events, respectively.

CONSISTENCY ACROSS GOOD AND BAD OUTCOMES: Composite style scores based on all of the items for good events and for all of the bad events are more strongly related to depression than were the individual attributional dimensions.

STABILITY: When the subjects were retested after five weeks, the resulting correlations were high, thus showing the anticipated "attributional style."

Colin et al (1981) tested an early version of the 1981 ASQ on 180 college students, comparing results from an attributional style scale with results from Beck's Depression Inventory. They found that the attributional dimensions of internality, stability and globality for bad events were found to be correlated with depression. They also found that attribution scores could predict depressive symptoms that would occur later.

Seligman et al (1979) also tested a forerunner of the 1981 ASQ. They tested 143 college students to determine if the Reformulated Model of Learned Helplessness formulated by Abramson et al (1978) can be used as a tool for assessing a depressive style by testing attributions for good and bad events. They used an attribution style scale that is a forerunner of the 1981 ASQ used in this thesis. They found that the
depressed students attributed bad outcomes to internal, stable, and global causes. Relative to non-depressed students, depressed students attributed good outcomes to external, unstable causes. According to the researchers, their work does show that the Reformulated Model of Learned Helplessness (Abramson et al, 1978) is predictive of depression. The researchers also state that psychometric refinement of the attribution style scale they used was continuing. That refinement resulted in the ASQ (Seligman, 1981).

Raps et al (1982) tested hospitalized male patients using Seligman's (1981) ASQ. Those who were depressed attributed negative events in their lives to internal, stable, and global causes more often than did non-depressed schizophrenics and non-depressed medical patients. "These results supported the existence, in a clinical depression, of the depressive attributional style postulated by the Reformulated Model of Learned Helplessness (Abramson, et al, 1978) and indicated that it is not a general characteristic of psychopathology." (Raps et al, 1982, p. 102).

Manley et al (1982) tested Seligman's (1981) ASQ and was the only one of those reviewed to have some negative findings. She tested depressive attributional style and depression following childbirth. She hoped to see if a depressive attributional style has predictive value. In her study she found that Seligman's (1979) findings "could not be replicated in a prenatal sample of primiparous women, nor was attributional style predictive of depression following childbirth." (Manley et al, 1982, p. 253). The researchers could not generalize
depressive attributional styles in their tested population. She stated that her unexpected results might be due to any one of several reasons, those being, the use of comparison scales unlike Seligman's; the use of samples that were different; the choice of pregnant women vs. college students; the nature of post-partum depression which may be unique within itself; and, the lack of testing for the ASQ in more general populations other college students.

In summary, research supports the validity of the ASQ in identifying depression, with the exception of women with post-partum depression.

Reliability

Table 1 shows the reliability of the two test measures used in this study. The Index of Self-Esteem (Hudson, 1982) is the more reliable of the two tests with an alpha coefficient of .9270. The alpha coefficients for the composite good and bad events scores for the Attribution Style Questionnaire (Seligman, 1981) are .7473 and .6182 respectively. For comparison in using the ASQ, Peterson et al (1982) found composite scores for good events to be .75 and for bad events it was .72.
Table 1

Reliability: the Attribution Style Questionnaire (the ASQ), and the Index of Self-Esteem (the ISE)

<table>
<thead>
<tr>
<th>The ASQ:</th>
<th>Alpha Coefficient</th>
<th>Standard Item Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>good events:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>internality</td>
<td>.4848</td>
<td>.5528</td>
</tr>
<tr>
<td>stability</td>
<td>.5707</td>
<td>.6359</td>
</tr>
<tr>
<td>globality</td>
<td>.4869</td>
<td>.5424</td>
</tr>
<tr>
<td>composite</td>
<td>.7473</td>
<td>.7503</td>
</tr>
<tr>
<td>bad events:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>internality</td>
<td>.4054</td>
<td>.4144</td>
</tr>
<tr>
<td>stability</td>
<td>.5386</td>
<td>.5460</td>
</tr>
<tr>
<td>globality</td>
<td>.7050</td>
<td>.7126</td>
</tr>
<tr>
<td>composite</td>
<td>.6182</td>
<td>.6246</td>
</tr>
<tr>
<td>The ISE:</td>
<td>.9270</td>
<td>.9297</td>
</tr>
</tbody>
</table>

Contribution to Research

Most studies using the ASQ to date used college students, psychiatric and medical inpatients, and the elderly for subjects. This study used as its sample a large group of normal women from varied backgrounds and with a broad age range. Testing this population has given a standard for measurement across many different demographic variables. This is a contribution to existing research.
Data Analysis

Data were entered on the computer and analyzed through the use of SPSSX (1985). Frequency distributions were used to describe the characteristics of the sample. In addition, chi-square comparisons were done for the nominal level categories of the demographics. The primary method of analysis used to test the hypotheses was analysis of variance. This study was designed to test for differences between and among the groups. Analysis of variance is the best method for computing these differences. The Scheffe test was done to test for significant differences among all four groups and then t-tests were done to test further for differences between specific groups. Pearson correlations were done to test for the influence of demographic variables and results of the Index of Self-Esteem and the Attribution Style Questionnaire within the whole sample.
CHAPTER 4

RESULTS

In this chapter, the women who participated in the study are described, followed by the results of the two test measures, the Attributional Style Questionnaire and the Index of Self-Esteem, used to test the four hypotheses.

Description of the Sample

The self selected sample was composed of 623 women whose mean age was 34.8 years and who were predominately Caucasian (97.5%), in professional positions (67%), highly educated with 81% having college or graduate degrees. A high percentage (73.5%) rated themselves as feminists. Almost equal numbers are single (39.2%) and married (39.5%) while the remainder were separated, divorced, widowed, or other. The majority (85%) rated themselves as happy or more happy than unhappy.

A high percentage (91%) were involved in some athletic activity. Runners accounted for 77.4% (n=482) while athletic non-runners accounted for 13.6% (n=85) and the non-athletic women numbered 56 for 9% of the total sample. Table 2 gives the specific demographic information on the total sample.
Table 2. Background and subjective characteristics of the sample. (n=623*).  

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean</td>
<td>34.84</td>
<td></td>
</tr>
<tr>
<td>sd</td>
<td>8.18</td>
<td></td>
</tr>
<tr>
<td>range</td>
<td>15-70</td>
<td></td>
</tr>
<tr>
<td>OCCUPATION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>medical &amp; mental health</td>
<td>143</td>
<td>23.5</td>
</tr>
<tr>
<td>education &amp; administration</td>
<td>151</td>
<td>24.8</td>
</tr>
<tr>
<td>Business &amp; hi-tech</td>
<td>116</td>
<td>19.0</td>
</tr>
<tr>
<td>Clerical</td>
<td>121</td>
<td>19.9</td>
</tr>
<tr>
<td>Homemakers</td>
<td>33</td>
<td>5.4</td>
</tr>
<tr>
<td>Students</td>
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<td>7.4</td>
</tr>
<tr>
<td>EDUCATION</td>
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<td></td>
</tr>
<tr>
<td>eighth grade</td>
<td>6</td>
<td>1.0</td>
</tr>
<tr>
<td>high school grad.</td>
<td>20</td>
<td>3.2</td>
</tr>
<tr>
<td>some college</td>
<td>89</td>
<td>14.4</td>
</tr>
<tr>
<td>college grad.</td>
<td>261</td>
<td>42.2</td>
</tr>
<tr>
<td>grad. degree</td>
<td>243</td>
<td>39.5</td>
</tr>
<tr>
<td>RACE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>592</td>
<td>97.5</td>
</tr>
<tr>
<td>Black</td>
<td>4</td>
<td>.7</td>
</tr>
<tr>
<td>Asian</td>
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<td>1.5</td>
</tr>
<tr>
<td>other</td>
<td>2</td>
<td>.3</td>
</tr>
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<td>RELIGION</td>
<td></td>
<td></td>
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<tr>
<td>Protestant</td>
<td>172</td>
<td>28.2</td>
</tr>
<tr>
<td>Catholic</td>
<td>225</td>
<td>36.8</td>
</tr>
<tr>
<td>Jewish</td>
<td>65</td>
<td>10.6</td>
</tr>
<tr>
<td>other</td>
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<td>6.1</td>
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<tr>
<td>none</td>
<td>112</td>
<td>18.3</td>
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<tr>
<td>MARITAL STATUS</td>
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<td></td>
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<tr>
<td>single</td>
<td>243</td>
<td>39.2</td>
</tr>
<tr>
<td>married</td>
<td>245</td>
<td>39.5</td>
</tr>
<tr>
<td>other</td>
<td>132</td>
<td>21.3</td>
</tr>
<tr>
<td>NUMBER OF CHILDREN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mean</td>
<td>sd</td>
<td>range</td>
</tr>
<tr>
<td>0.744</td>
<td>1.23</td>
<td>0-7</td>
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<table>
<thead>
<tr>
<th>SUBJECTIVE CHARACTERISTICS:</th>
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<tr>
<td>HAPPINESS</td>
</tr>
<tr>
<td>n</td>
</tr>
<tr>
<td>happy</td>
</tr>
<tr>
<td>more happy than unhappy</td>
</tr>
<tr>
<td>equally happy and unhappy</td>
</tr>
<tr>
<td>more unhappy than happy</td>
</tr>
<tr>
<td>unhappy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FEMINIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
</tr>
<tr>
<td>yes</td>
</tr>
<tr>
<td>no</td>
</tr>
</tbody>
</table>

*totals vary from 607 to 620 because of missing data.
The Groups

As table 3 shows, the sample of 623 women was divided into four groups according to their athletic involvements. Group 1 (215, 34.5%) the "consistent runners;" Group 2 (267 for 42.9%) the "less consistent runners;" Group 3 (85 for 13.6%) the "athletic non-runners;" and Group 4 (56 for 9.0%) the non-athletic women. The participants in Group 1 met three criteria: they ran in the 1983 Bonne Bell Road Race, they ran in the 1984 Bonne Bell, and they stated that they are still running now. The women in Group 2 ran in the 1983 Bonne Bell, but either did not run in the 1984 race or are not running now. The women in Group 3 stated that they are not runners but that they are involved at least once a week in some athletic activity, which they named, that is an important part of their lives. The women in Group 4 stated on their questionnaires that they did not have a significant athletic activity in their lives.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>215</td>
<td>34.5</td>
</tr>
<tr>
<td>(consistent runners)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 2</td>
<td>267</td>
<td>42.9</td>
</tr>
<tr>
<td>(less consistent runners)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 3</td>
<td>85</td>
<td>13.6</td>
</tr>
<tr>
<td>(athletic non-runners)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 4</td>
<td>56</td>
<td>9.0</td>
</tr>
<tr>
<td>(non-athletic women)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4 shows the demographic information about the sample by groups. Analysis of variance and chi square were used to compare the groups. For the categories of age and education no two groups were significantly different. For the category of number of children, there was significant difference among the groups (F=3.09; p<.03), but no two groups were different enough to be significantly different at the .05 level according to the Scheffe test.

There was significant difference (chi square =32.05; p<.006) among the groups in relation to their occupations, though the differences were not great. Almost one-third (33.6%) of Group 1 were in education and administration with one quarter (24.3%) in medical and mental health. Group 2 had almost one quarter in each of the categories of medical and mental health, education and administration, and clerical. Group 3 had 25% in business and high tech followed by 22.6% in medical and mental health, and 21.4% in clerical. Group 4 had 25% in both business and high tech and clerical followed by 23.1% in medical and mental health.

In the category of race, 97.5% of the study participants were Caucasian. Since there were so few members of other races represented, no other calculations were done.

The groups differed to a highly significant degree (chi square=51.58; p<.000) in regard to religion. Of those in group 1, 47.2% were Catholic followed by 27.4% Protestant. Group 2 was still predominantly
Catholic with 38.0% followed by 28.7% Protestant. Groups 3 and 4 were primarily Protestant with their next highest category being Jewish.

There was also a highly significant difference (chi square=35.91; p<.000) among the groups in regard to marital status. Of the consistent runners, 43.7% were single (40.5% married). In group 2, more were married (47.2% with 34.5% being single). Group 3 was 48.2% single as opposed to 21.2% married. The greatest difference in marital status came in group 4 however, where 41.1% listed themselves as other, 30.4% single and 28.6% married.
<table>
<thead>
<tr>
<th>Age</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Total</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>35.34</td>
<td>34.56</td>
<td>35.12</td>
<td>33.80</td>
<td>34.84</td>
<td>1.89</td>
<td>ns</td>
</tr>
<tr>
<td>sd</td>
<td>7.68</td>
<td>8.0</td>
<td>9.44</td>
<td>8.56</td>
<td>8.18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Children</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Total</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>.819</td>
<td>.830</td>
<td>.412</td>
<td>.554</td>
<td>.744</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sd</td>
<td>1.33</td>
<td>1.28</td>
<td>.99</td>
<td>1.14</td>
<td>1.26</td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Occupation a</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>214</td>
<td>259</td>
<td>84</td>
<td>52</td>
<td>619</td>
</tr>
<tr>
<td>%</td>
<td>35.0</td>
<td>42.5</td>
<td>13.7</td>
<td>9.0</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>n %</td>
<td>214</td>
<td>264</td>
<td>85</td>
<td>619</td>
<td></td>
</tr>
<tr>
<td></td>
<td>34.6</td>
<td>42.6</td>
<td>13.7</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
### RACE b

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>Caucasian</td>
<td>200 97.1</td>
<td>254 97.3</td>
<td>83 98.6</td>
<td>55 98.2</td>
<td>592 97.5</td>
</tr>
<tr>
<td>Black</td>
<td>0 0</td>
<td>3 1.1</td>
<td>1 1.2</td>
<td>0 0</td>
<td>4 0.7</td>
</tr>
<tr>
<td>Asian</td>
<td>6 2.9</td>
<td>3 1.1</td>
<td>0 0</td>
<td>0 0</td>
<td>9 1.5</td>
</tr>
<tr>
<td>Other</td>
<td>0 0</td>
<td>1 0.4</td>
<td>0 0</td>
<td>1 1.8</td>
<td>2 0.3</td>
</tr>
<tr>
<td>Total</td>
<td>206 33.9</td>
<td>261 43.0</td>
<td>84 13.8</td>
<td>56 9.2</td>
<td>607 100</td>
</tr>
</tbody>
</table>

### RELIGION c

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>Protestant</td>
<td>58 27.4</td>
<td>74 28.7</td>
<td>23 27.1</td>
<td>17 30.4</td>
<td>172 28.2</td>
</tr>
<tr>
<td>Catholic</td>
<td>100 47.2</td>
<td>98 38.0</td>
<td>16 18.8</td>
<td>11 19.6</td>
<td>225 36.8</td>
</tr>
<tr>
<td>Jewish</td>
<td>14 6.6</td>
<td>21 8.1</td>
<td>18 21.2</td>
<td>12 21.4</td>
<td>65 10.6</td>
</tr>
<tr>
<td>Other</td>
<td>12 5.7</td>
<td>16 6.2</td>
<td>9 10.6</td>
<td>0 0</td>
<td>37 6.1</td>
</tr>
<tr>
<td>None</td>
<td>28 13.2</td>
<td>49 19.0</td>
<td>19 22.4</td>
<td>16 28.6</td>
<td>112 18.3</td>
</tr>
<tr>
<td>Total</td>
<td>212 34.7</td>
<td>258 42.2</td>
<td>85 13.9</td>
<td>56 9.2</td>
<td>611 100</td>
</tr>
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</table>

### MARITAL STATUS d

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>Single</td>
<td>94 43.7</td>
<td>91 34.5</td>
<td>41 48.2</td>
<td>17 30.4</td>
<td>243 39.2</td>
</tr>
<tr>
<td>Married</td>
<td>87 40.5</td>
<td>124 47.0</td>
<td>18 21.2</td>
<td>16 28.6</td>
<td>245 39.5</td>
</tr>
<tr>
<td>Other</td>
<td>34 15.8</td>
<td>49 18.6</td>
<td>26 30.6</td>
<td>23 41.1</td>
<td>132 21.3</td>
</tr>
<tr>
<td>Total</td>
<td>215 34.7</td>
<td>264 42.6</td>
<td>85 13.7</td>
<td>56 9.0</td>
<td>620 100</td>
</tr>
</tbody>
</table>

a. For occupation, chi-square = 32.053, df = 15, significance = 0.006.
b. For race, chi-square = 12.756, df = 9, significance = 0.174.
c. For religion, chi-square = 51.580, df = 12, significance = 0.000.
d. For marital status, chi-square = 35.905, df = 6, significance = 0.000.

Scheffe test results show that for the categories of Age, Number of Children, and Education, no two groups are significantly different at the .05 level.
Table 5 gives the subjective characteristics of the sample by groups. ANOVA indicated that one of the strongest findings in this study is that 47.9% of the consistent runners list themselves in the highest category of happiness as opposed to 25% of those who are not athletic and 25.9% of those who are athletic but who do not run (F=12.27, p<.000). (See Graph 1 in the appendix) Further analysis using the Scheffe test indicated that subjects in Group 1 rate themselves as significantly more happy than those in the other groups. This represents a very strong finding concerning the potential importance of running in a woman’s self-concept.

The findings regarding feminism reflect primarily on the locations where the study sample was drawn instead of any possible reflection on runners as a group. The contrast groups came from YWCA’s, a Women’s Center and a women’s counseling center, places where visitors would be expected to include a higher percentage of women in agreement with feminist philosophy than the general population. The important statistic here is that in the entire study sample, 74% of the women consider themselves feminists.
TABLE 5
Subjective characteristics by groups

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th></th>
<th>Group 2</th>
<th></th>
<th>Group 3</th>
<th></th>
<th>Group 4</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Happy</td>
<td>103</td>
<td>47.9</td>
<td>106</td>
<td>40.3</td>
<td>22</td>
<td>25.9</td>
<td>14</td>
<td>25.0</td>
<td>245</td>
<td>39.6</td>
</tr>
<tr>
<td>Mostly Happy</td>
<td>99</td>
<td>46.0</td>
<td>113</td>
<td>43.0</td>
<td>42</td>
<td>49.4</td>
<td>27</td>
<td>48.2</td>
<td>281</td>
<td>45.4</td>
</tr>
<tr>
<td>Equally happy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and unhappy</td>
<td>11</td>
<td>5.1</td>
<td>33</td>
<td>12.5</td>
<td>16</td>
<td>18.8</td>
<td>7</td>
<td>12.5</td>
<td>67</td>
<td>10.8</td>
</tr>
<tr>
<td>Mostly unhappy</td>
<td>2</td>
<td>.9</td>
<td>10</td>
<td>3.8</td>
<td>5</td>
<td>5.9</td>
<td>7</td>
<td>12.5</td>
<td>24</td>
<td>3.9</td>
</tr>
<tr>
<td>Unhappy</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.8</td>
<td>2</td>
<td>1.8</td>
<td>2</td>
<td>.3</td>
</tr>
<tr>
<td>Total</td>
<td>215</td>
<td>34.7</td>
<td>263</td>
<td>42.5</td>
<td>85</td>
<td>13.7</td>
<td>56</td>
<td>9.0</td>
<td>619</td>
<td>100</td>
</tr>
</tbody>
</table>

mean | sd | mean | sd | mean | sd | mean | sd | mean | sd | F | p
1.59 |.63 | 1.81 |.83 | 2.05 |.83 | 2.18 |1.01| 1.80 |.8 | 12.27 |.0000 |

For the category of happiness, Scheffe test results show that significant differences exist between Group 1 and Groups 2, 3, and 4, and between Groups 2 and 4 at the .05 level.

For the category of feminism, Scheffe test results show that significant differences exist between Groups 3 and 2 at the .05 level.
Since the major hypotheses dealt with differences between runners (Group 1), athletic women (Group 3), and non-athletic women (Group 4), t-tests were done to compare these groups.

Table 6 shows that when a t-test was used to compare Group 1 with Group 3, there was significant difference between them for the number of children (p<.004) and happiness (p<.000) but no difference in age and education. Table 7 shows that when the t-test compared Group 1 to Group 4, there was significant difference only in the category of happiness (p<.000). Thus it is evident that the consistent runners in this study did have more children than did the athletic non-runners, and they rated themselves higher in happiness than either of the other groups.

**Table 6. T-test comparing Group 1 to Group 3 on background and subjective variables.**

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 3</th>
<th>t*</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>sd</td>
<td>mean</td>
<td>sd</td>
</tr>
<tr>
<td>Age</td>
<td>35.34</td>
<td>7.68</td>
<td>35.12</td>
<td>9.44</td>
</tr>
<tr>
<td>Education</td>
<td>4.18</td>
<td>.81</td>
<td>4.29</td>
<td>.80</td>
</tr>
<tr>
<td>Number of children</td>
<td>.82</td>
<td>1.33</td>
<td>.41</td>
<td>.99</td>
</tr>
<tr>
<td>Happiness</td>
<td>1.59</td>
<td>.63</td>
<td>2.05</td>
<td>.83</td>
</tr>
</tbody>
</table>

*t-test for independent samples with unequal variances.

**Table 7. T-test comparing Group 1 to Group 4 on background and subjective variables.**

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 4</th>
<th>t*</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>sd</td>
<td>mean</td>
<td>sd</td>
</tr>
<tr>
<td>Age</td>
<td>35.34</td>
<td>7.68</td>
<td>33.80</td>
<td>8.56</td>
</tr>
<tr>
<td>Education</td>
<td>4.18</td>
<td>.81</td>
<td>4.11</td>
<td>.95</td>
</tr>
<tr>
<td>Number of children</td>
<td>.82</td>
<td>1.33</td>
<td>.55</td>
<td>1.14</td>
</tr>
<tr>
<td>Happiness</td>
<td>1.59</td>
<td>.63</td>
<td>2.18</td>
<td>1.01</td>
</tr>
</tbody>
</table>

*t-test for independent samples with unequal variances.
Hypotheses

The following four hypotheses were made at the beginning of this study:

Hypothesis # 1. Runners will score on Seligman's Attribution Style Questionnaire (1981) (the ASQ) as high on internal, stable, and global attributions for good events and low on internal, stable, and global for bad events.

Hypothesis # 2. Women who are athletic but not runners will score a little less than the runners for good events (less high on internal, stable and global) and a bit higher (higher internal, stable and global) for bad events.

Hypothesis # 3. Women who are not athletic will score lower than the runners and lower than the athletic non-runners on the internal, stable and global attributions for good events, and higher on the internal, stable and global for bad events.

Hypotheses # 4. On Hudson's Index of Self-Esteem (1982), consistent runners will score as having the highest self-esteem, less consistent runners will be next, athletic non-runners will have the next highest level of self-esteem, and the non-athletic, non-runners will have the lowest score in self-esteem of the groups of women tested.

In this section the results concerning each hypothesis are presented.
Tables 8-13 involve results of the ASQ and tables 14-16 involve results of the ISE. In the graphs included in appendix F, numbers 2-5 involve the ASQ and number 6 shows results of the ISE.

The first hypothesis was tested by paired t-tests of the scores on the Attribution Style Questionnaire (Seligman, 1981). Table 8 shows that when the good event scores are compared with the bad event scores within the group of consistent runners (Group 1), the results were highly significant, thus supporting Hypothesis # 1. Thus it is seen that consistent runners score significantly higher on good events than on bad events on all three scales and on the composite score.

Table 8. T-test results pairing good events to bad events on the ASQ within Group 1.

<table>
<thead>
<tr>
<th></th>
<th>good events</th>
<th></th>
<th>bad events</th>
<th></th>
<th>t-test</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>sd</td>
<td>mean</td>
<td>sd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>internality</td>
<td>5.23</td>
<td>.79</td>
<td>4.11</td>
<td>.93</td>
<td>12.77</td>
<td>.000</td>
</tr>
<tr>
<td>stability</td>
<td>5.52</td>
<td>.69</td>
<td>4.05</td>
<td>.75</td>
<td>21.19</td>
<td>.000</td>
</tr>
<tr>
<td>globality</td>
<td>5.30</td>
<td>.92</td>
<td>3.73</td>
<td>1.30</td>
<td>15.31</td>
<td>.000</td>
</tr>
<tr>
<td>composite</td>
<td>5.36</td>
<td>.65</td>
<td>3.98</td>
<td>.77</td>
<td>18.45</td>
<td>.000</td>
</tr>
</tbody>
</table>

Hypothesis # 2 proposed that athletic women would score lower than runners on the ASQ. Table 9 shows the comparison of the Attribution Style Questionnaire for all the groups. Analysis of variance was used to determine the results. Using that test, both internality (F= 3.068, p<.0275) and stability (F= 6.827, p<.0002) for good events were found to be significant, as was the composite score for good events (F= 2.814, p<.0386). None of the attributions for bad events were found to be significantly different among the groups.
Further analysis was needed to test the second and third hypotheses which called for comparisons of Group 1 and Group 3, and Group 1 and Group 4. Two other tests were applied to these results to determine if the differences between specific groups supported the hypotheses. When the Scheffe test (Thorndike, 1982) was applied, significant differences were found to exist in the attribution of stability between Group 1 and Group 4 and between Group 2 and Group 4 at the .05 level (see table 9). When a t-test (Thorndike, 1982) was done to test for differences between pairs of the specific groups 1 and 3 (see Table 10) and then 1 and 4 (see Table 11), significant difference was found on the attributions for internality, stability and for the composite good events scores on both sets of group comparisons, 1 with 3 and 1 with 4. These findings partially support hypotheses 2 and 3. That is, runners scored higher than athletic women on the composite score and on the stability and internality scales for good events. There were no significant differences regarding the bad events. Similarly, when comparing Group 1 to Group 4, significant difference was found on good events scores in internality, stability, and for the composite good score. There were no significant differences with the bad events scores. The paired t-test is a more powerful statistic than the Scheffe test and thus was better able to detect differences in the two groups.
Table 9. Results of the Attribution Style Questionnaire by Groups. (n=623)

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good events:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internality</td>
<td>5.22 .80</td>
<td>5.15 .79</td>
<td>4.96 .78</td>
<td>4.95 .90</td>
<td>5.13 .81</td>
</tr>
<tr>
<td>stability</td>
<td>5.50 .71</td>
<td>5.46 .74</td>
<td>5.22 .73</td>
<td>5.08 .76</td>
<td>5.41 .74</td>
</tr>
<tr>
<td>globality</td>
<td>5.30 .92</td>
<td>5.31 .88</td>
<td>5.24 .83</td>
<td>5.28 .85</td>
<td>5.30 .88</td>
</tr>
<tr>
<td>composite</td>
<td>5.35 .67</td>
<td>5.31 .65</td>
<td>5.14 .66</td>
<td>5.13 .64</td>
<td>5.28 .66</td>
</tr>
<tr>
<td>Bad events:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internality</td>
<td>4.09 .93</td>
<td>4.13 .88</td>
<td>4.11 .83</td>
<td>4.22 .87</td>
<td>4.12 .89</td>
</tr>
<tr>
<td>stability</td>
<td>4.04 .75</td>
<td>4.16 .74</td>
<td>4.09 .84</td>
<td>4.18 .84</td>
<td>4.11 .74</td>
</tr>
<tr>
<td>globality</td>
<td>3.77 .92</td>
<td>3.82 .91</td>
<td>3.75 1.26</td>
<td>3.78 1.23</td>
<td>3.82 1.23</td>
</tr>
<tr>
<td>composite</td>
<td>3.99 .76</td>
<td>4.04 .70</td>
<td>3.98 .66</td>
<td>4.16 .81</td>
<td>4.03 .73</td>
</tr>
</tbody>
</table>

a. Scheffe tests indicate that no two groups are different at the .05 level.
b. Scheffe tests show that significant differences exist between Group 1 and Group 4, and Group 2 and Group 4 at the .05 level.

Table 10. T-test comparing Group 1 to Group 3 on results of the Attribution Style Questionnaire.

<table>
<thead>
<tr>
<th></th>
<th>Group 1</th>
<th>Group 3</th>
<th>t*</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good events:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internality</td>
<td>5.22 .80</td>
<td>4.99 .83</td>
<td>2.54</td>
<td>.012</td>
</tr>
<tr>
<td>stability</td>
<td>5.50 .71</td>
<td>5.24 .83</td>
<td>2.94</td>
<td>.004</td>
</tr>
<tr>
<td>globality</td>
<td>5.30 .92</td>
<td>5.14 .66</td>
<td>.59</td>
<td>.553</td>
</tr>
<tr>
<td>Composite</td>
<td>5.35 .67</td>
<td>5.14 .66</td>
<td>2.29</td>
<td>.023</td>
</tr>
<tr>
<td>Bad events:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internality</td>
<td>4.09 .93</td>
<td>4.11 .83</td>
<td>-0.21</td>
<td>.836</td>
</tr>
<tr>
<td>stability</td>
<td>4.05 .75</td>
<td>4.09 .64</td>
<td>-0.42</td>
<td>.676</td>
</tr>
<tr>
<td>globality</td>
<td>3.77 .29</td>
<td>3.73 1.26</td>
<td>0.29</td>
<td>.778</td>
</tr>
<tr>
<td>composite</td>
<td>3.99 .76</td>
<td>3.98 .66</td>
<td>0.12</td>
<td>.903</td>
</tr>
</tbody>
</table>

*t-test for independent samples with unequal means.
Table 11. T-test comparing Group 1 to Group 4 on results of the Attribution Style Questionnaire.

<table>
<thead>
<tr>
<th>Good events</th>
<th>Group 1</th>
<th>Group 4</th>
<th>t*</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>sd</td>
<td>mean</td>
<td>sd</td>
<td></td>
</tr>
<tr>
<td>internality</td>
<td>5.22</td>
<td>4.95</td>
<td>2.02</td>
<td>0.047</td>
</tr>
<tr>
<td>stability</td>
<td>5.50</td>
<td>5.08</td>
<td>3.60</td>
<td>0.001</td>
</tr>
<tr>
<td>globality</td>
<td>5.30</td>
<td>5.28</td>
<td>0.18</td>
<td>0.859</td>
</tr>
<tr>
<td>composite</td>
<td>5.35</td>
<td>5.13</td>
<td>2.12</td>
<td>0.038</td>
</tr>
</tbody>
</table>

Table 12. T-test comparing Group 1 to Group 3 on the ratio of the composite good to composite bad scores on the ASQ.

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Group 3</th>
<th>t*</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>sd</td>
<td>mean</td>
<td>sd</td>
</tr>
<tr>
<td>ratio good to bad</td>
<td>1.40</td>
<td>.34</td>
<td>1.34</td>
</tr>
</tbody>
</table>

Table 13. T-test comparing Group 1 to Group 4 on the ratio of the composite good to composite bad scores on the ASQ.

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Group 4</th>
<th>t*</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>sd</td>
<td>mean</td>
<td>sd</td>
</tr>
<tr>
<td>ratio good to bad</td>
<td>1.40</td>
<td>.34</td>
<td>1.28</td>
</tr>
</tbody>
</table>

*Note: t-test for independent samples with unequal variances.*
Table 13 shows that when the ratio of the difference in means between the composite good and composite bad ASQ scores within Group 1 and Group 4 was compared using a t-test, it was found that the groups differed to a significant degree, that being $p < 0.04$. Thus it was shown that there was a significant difference between consistent runners and non-athletic women, but there was not a significant difference between the consistent runners and the women who are athletic but who do not run.

In summary, hypothesis #1 was supported by the test results, and hypothesis #2 and #3 were partially supported. That is, the consistent runners scored in a more positive direction than did the other groups on the ASQ, suggesting that the consistent runners had a more internal locus of control. The greatest difference between groups was found between those in Group 1, the consistent runners, and Group 4, the non-athletic women. Examination of the data shows that Groups 1 and 2, both runners, did not differ from each other on the Attribution Style Questionnaire scales.

Hypothesis #4 predicted that the consistent runners, those in Group 1, would have the highest self-esteem of all the groups. The less-consistent runners would have the next highest level of self-esteem, followed by the athletic non-runners. The non-athletic women were expected to have the lowest self-esteem of the four groups tested. The results of this study support this hypothesis.
The result of the Index of Self Esteem is shown in table 14. The score of 30 is considered to be the clinical cut off point, those scoring above 30 being considered to have a low enough self-esteem to be of clinical concern. Group 1 had a mean score of 21.01 followed by group 2 at 21.33, group 3 at 24.87, and group 4 at 27.02; thus, none of the groups were considered to have significant problems in self-esteem.

Analysis of variance was used to determine if the scores on self-esteem were significantly different between the groups. Using that measure, significant difference was found to exist among the groups. When the Scheffe test (Thorndike, 1982) was applied to the results, significant differences were found to exist between Group 1 and Group 4 and Group 2 and Group 4 at the .05 level. When a t-test (Thorndike, 1982) was applied to test for differences between the specific pairs of Groups 1 and 3, and then Groups 1 and 4, significant differences were found in each case, at .03 for the differences between Group 1 and Group 3, and at the .02 level when comparing Group 1 to Group 4 (see tables 15 and 16). This result supports hypothesis number 4, that is, consistent runners had higher self-esteem than non-athletes and athletic non-runners. However, it was found that the less consistent runners also scored significantly better on self-esteem than did non-athletes and athletic non-runners.
### TABLE 14.
Results of the Index of Self-Esteem by Groups. (n=623).

<table>
<thead>
<tr>
<th>Group</th>
<th>mean</th>
<th>sd</th>
<th>mean</th>
<th>sd</th>
<th>mean</th>
<th>sd</th>
<th>mean</th>
<th>sd</th>
<th>mean</th>
<th>sd</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>21.01</td>
<td>11.94</td>
<td>21.33</td>
<td>13.01</td>
<td>24.87</td>
<td>14.26</td>
<td>27.02</td>
<td>17.50</td>
<td>22.20</td>
<td>13.40</td>
<td>4.449</td>
<td>.0042a</td>
</tr>
</tbody>
</table>

a. Scheffe test results show that significant differences exist between Group 1 and Group 4, and Group 2 and Group 4 at the .05 level.

### Table 15. T-test comparing Group 1 to Group 3 on results of the Index of Self-Esteem.

<table>
<thead>
<tr>
<th>Group</th>
<th>mean</th>
<th>sd</th>
<th>mean</th>
<th>sd</th>
<th>t*</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esteem</td>
<td>21.00</td>
<td>11.94</td>
<td>24.87</td>
<td>14.26</td>
<td>-2.20</td>
<td>0.03</td>
</tr>
</tbody>
</table>

### Table 16. T-test comparing Group 1 to Group 4 on results of the Index of Self-Esteem.

<table>
<thead>
<tr>
<th>Group</th>
<th>mean</th>
<th>sd</th>
<th>mean</th>
<th>sd</th>
<th>t*</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esteem</td>
<td>21.00</td>
<td>11.94</td>
<td>27.02</td>
<td>17.50</td>
<td>-2.39</td>
<td>0.02</td>
</tr>
</tbody>
</table>

*t-test for independent samples with unequal variances.
Pearson Correlations were done to test for the relative influence of the demographic variables on the women in the sample. Table 17 shows the results of the Pearson Correlations. Age, education, and number of children significantly correlated with each other and with the dependent variable of self-esteem. As might be expected, age and number of children had the highest correlation among the demographic variable. The group of associations that is the most important for this study involves the correlations between happiness, self-esteem, and the composite good and bad events scores on the Attribution Style Questionnaire. What this shows is that those who, by their own reports are happiest, also test as having the highest self-esteem. They also score in the directions on the ASQ that reflects the most empowered and least helpless attributional styles. The relatively high correlations on these variables suggests that there is consistency across measures used in this study.

<table>
<thead>
<tr>
<th>Table 17. Pearson Correlation Results.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Number of children</td>
</tr>
<tr>
<td>Happiness</td>
</tr>
<tr>
<td>Esteem</td>
</tr>
<tr>
<td>Composite Good</td>
</tr>
<tr>
<td>Composite Bad</td>
</tr>
</tbody>
</table>

***p<.001
**p<.01
*p<.10
CHAPTER 5

DISCUSSION

The primary question investigated in this study is whether running can influence a woman's self esteem and attributional style. This study suggests that it can. For the women studied, self-esteem and positive self concept were correlated with running as a regular discipline. Though most of the differences among subjects are slight, they are statistically significant in some categories and all bear out the hypotheses of the research.

Sample

There were 623 female subjects in this research project divided into four groups according to degree of athletic participation. Group 1, termed the consistent runners, ran in the 1983 Bonne Bell 10K race in Boston, the 1984 Bonne Bell, and were still running at the time the data were collected. There were 215 in that group. Group 2, the less consistent runners, ran in the 1983 Bonne Bell but either did not run in the 1984 race or were not running when the data were collected. There were 267 women in Group 2. Group 3 was made up of 85 women who are athletic but who do not run. Group 4 consisted of 56 women who did not run and who also were not involved in other athletics.

As will be recalled, the profile of the entire sample was one of Caucasian women, college educated, primarily in professional or
managerial positions with a mean age of 34.8 years and in equal numbers of married and non-married women. The groups were comparable in relation to age, education and race, although they differed somewhat in the categories of occupation, religion and marital status. Group 4 differed from the other groups on marital status; it is conceivable that not only the lack of athletic activity but also the higher percentage of "other" marital status women in this group influenced scores on self-esteem and attributional style.

Instruments

The two test measures used were Hudson's Index of Self-Esteem (1982), and Seligman's Attribution Style Questionnaire (1981).

Hypotheses of the Study

It was hypothesized that the consistent runners, Group 1, would score as having the highest self-esteem of the tested groups, and that they would test as the least helpless, or most empowered, on the ASQ. (see Methodology, Chapter 3). In the self-esteem test it was found that, as Hypothesis 4 predicted, Group 1 (consistent runners) had higher self-esteem than Groups 3 and 4, the athletic and non-athletic women. The less consistent runners (Group 2) also had significantly higher self-esteem than the two non-runner groups. This suggests that running, whether consistently or in the past, contributed to positive self-esteem of these women. However, it is important to recognize that none of the groups of subjects were considered to have
poor self-esteem. This finding of high self-esteem may also be related to the characteristics of the sample, which contained subjects who were generally successful in terms of educational achievement and occupational status, and they may already have practice in avoiding depression and gaining power. Of course an assumption can be made that the women's training as a runner contributed to and was concurrent with career and/or education. A study could be made of women testing as low in self-esteem and depressed who were treated on a running regimen and in fact work similar to this has been done (see Literature Review), but without continuation over a period of sufficient length for the benefits of seasoned running to be felt.

Hypothesis # 1 that runners would score high on attributions for good events and low on attributions for bad events was supported by the data. Generally the runners don't attribute bad events to internal forces, but do attribute good events to internal ones; their locus of control is more internal than external. According to data cited earlier in this paper (Peterson et al, 1982; Abramson et al, 1978; Colin et al, 1981, Seligman et al, 1979; and Raps et al, 1982), the runners should therefore be less susceptible to depression than the women in the control groups, because people with a more internal locus of control are generally less susceptible to depression than those with a more external locus of control.

In hypotheses # 2 and 3 it was predicted, too, that runners would score higher than non-running athletic women and non-athletes on
the Attribution Style Questionnaire. To test this hypothesis, the consistent running group was compared to each of the two non-running groups. The less consistent runners (Group 2) were not included in this analysis, since they did not differ from the runners on the ASQ. The composite score findings supported these predicted differences, giving further support to the idea that running does contribute to a sense of internal control over good events. In comparing the runners with the athletic non-runners and non-athletes it was found that groups differed on the dimensions of stability, internality and the composite good events scores but not on globality. The idea that there is a special and unique aspect to running as contrasted with other athletic activity is supported by these differences between runners and non-running athletes and non-athletic women. These findings are consistent with those of Griest et al, 1979; Fixx, 1977 and 1980; Wieman, 1980; Marblestone, 1980; Kostrubala, 1976; and Cole, 1980. It was noted that none of the groups differed from each other on the attributions for bad events. However, it was noted that runners and non-athletes did differ in the ratio of good events to bad events.

In inspecting the data for the entire sample it was seen that scores for attributions for good events were higher than those for bad events, suggesting that the subjects showed a higher degree of internal locus of control over good events than bad events. In contrast to this finding, studies of depression show that persons who are depressed tend to attribute bad events to internal causes. On the basis of group means, the sample did not appear to contain
depressed women, although there may have been a few subjects who were depressed, as suggested by inspection of self ratings on happiness. (see below)

Furthermore, the subjective self ratings of happiness on a 5 point scale support the positive effects of consistent running. Runners rated themselves significantly more happy than any of the other groups. In fact, 94% of the runners rated themselves as "happy" or "mostly happy," while 73% of non-athletes chose these two ratings. This again supports the unique effect of running on overall sense of wellbeing. For comparison only two subjects chose "unhappy" (neither in the runners' group) and 24 "mostly unhappy." These subjects may have been depressed or dissatisfied with their lives; this was a subjective self rating and the stability of that feeling is unknown.

Limitations of Sample and Design

While the large size of the sample (623 women) was very good, and the basic similarities within the groups was another benefit, this sample was biased in terms of education and occupation. This may be a reflection on the greater Boston population, in which there are many colleges and higher education is relatively common, as well as required for most jobs. It may also be a result of the locations where the study participants were found. The women from the YWCA's, the counseling center, and the women's center were generally more educated than the researcher had predicted, as were
the runners. Although it had been thought that the sample would be fairly well educated, it had not been predicted that over 81% would have college or graduate degrees. Another limitation is that the sample was predominately Caucasian. The study results cannot, therefore, be generalized to all women, but only to those who are Caucasian, relatively well educated, and employed in professional and managerial positions.

Another limitation is related to the quasi-experimental design, one which, while excellent for research in a natural setting such as this study, lacks control over all influences. It is possible that factors other than the variable of running (such as the woman's history of success in planned activities, which could range from other sports to education, to work, to personal relationships; or the recent history of the woman including health events, financial events, accidents to her or a close family member, and other stressors; or psychological growth and/or changes ongoing at the time of the study) could account for differences between the groups or that the differences existed prior to the subjects' choice of running as an activity.

Implications of the Study Findings

Implications for Clinical Practice

This study has many implications for practice:
1.) A heightened awareness of the importance of sports and physical exercise in women's lives. Not only does this study suggest that their self-esteem will be higher if they are active, preferably if they are runners, but it suggests that women will be significantly happier, healthier, and less susceptible to depression if they are physically active.

2.) Of the women in this study who are consistent runners, 47.9% reported themselves to be in the highest category of happiness. This finding offers practical solutions to questions about women, their happiness, satisfaction, and depression. Clinicians and researchers would do well to remember this finding in dealing with their clients. Of course, one of the difficulties in incorporating a running program as part of therapy for depressed persons is the inactivity and lack of energy characteristic of depression. Thus it is more likely that running would be useful as a preventive intervention (see below) than as a treatment for depression, though this should not be completely ruled out. (see Implications for Research).

3.) As several researchers (Wieman, 1980; Greist et al, 1979) proposed, running may "innoculate" one against depression. This might be because of experience with mastery (Seligman, 1976), because of biochemical changes (Greist et al, 1979), or because of a changed locus of control from an external to a more internally controlled view of self (Wieman, 1980). For whatever the combination of reason, running does appear to offer a valid aid for preventing depression, unhappiness and low self-esteem in women. Running provides a self-
contained activity for building confidence and improving one's sense of self, information that can be helpful to female social workers themselves as well as their clients.

4.) Intervention with adolescents, who as a group are particularly susceptible to depression. Running programs might be particularly appropriate for an adolescent population, especially since the physical condition of most young people is far below the ideal.

5.) The possibility for the disempowered or oppressed women to develop a sense of power from exercise and especially running, where appropriate and advisable physically. Since social workers often deal with clients who are disempowered, the possibility for enabling them to develop a sense of power through the mastery associated with running seems warranted. The social worker may want to encourage such clients, individually or in groups, to undertake an exercise or running program.

6.) Clinicians should ask more questions at intake about the physical activities and sports involvements of their clients. If clients have not been active, there can be far reaching effects into other problem areas in client's lives when they begin to take charge of their physical wellbeing. They can begin to see that they can have power over something within their lives. These results are congruent with some of the benefits attributed to running by Greist et al, 1979; Kostrubala, 1976; and Fixx, 1977 and 1980.
Implications for Social Policy

1.) Support for legislation to fund athletics, especially for women and minorities. Title IX of the Education Amendments of 1972, which revolutionized women's athletics by providing equal funds, was stripped of most of its impact in 1984 by the Supreme Court's Grove City v. Bell decision. The social work profession supports pending legislation (the proposed Civil Rights Restoration Act, S. 557, H.R. 1214) that would keep the doors open for women in athletics by prohibiting sex discrimination; the profession should of course, continue to press for passage of this legislation.

2.) Support for physical education in public school systems. Parents, administrators, teachers and school boards need to be educated to the importance of exercise. This is especially vital in view of the poor physical condition of American youth.

3.) Budget support for school athletics on a state, county and/or community level must become a priority. Social workers can help to educate voters to the direct connection between "a sound mind in a sound body" rather than allowing athletics, and women's sports especially, to be viewed as a luxury budget item.

4.) Broadcast media and press should promote coverage of women's athletic events. Licensing reviews of local stations, letters and calls to editors, and the like, provide opportunities to show demand for this necessary coverage.
5.) Imaginative ways to depict role models for women in sports, and other non-traditional figures such as people of color, should be found. Perhaps pressure can be applied to produce television programs, even for preschoolers, showing females as star athletes. There are never enough role models.

**Implications for Practice - Theory**

This research has added to the available information on the concept of learned helplessness, the Attribution Style Questionnaire (1981) and the Index of Self-Esteem (1982). As explained below, the use of a normal group (as opposed to a hospitalized population, for example) in the researcher's study created a unique standard for measurement that has made a contribution to research.

Whether involvement in athletics, running in particular, can improve self-esteem or whether people who are happier and have high self-esteem are also runners is not yet known. What this study has shown is that there is a high correlation between good results on the ASQ, a high happiness, high self-esteem score, and running, thereby increasing the validity of the test measures and the idea that running can be an influence.

A constant form of physical discipline in one's life, such as a running program, also builds a healthy attribution style that lets one
determine causes for events in an appropriate manner -- i.e., grounded, self-assured, and objective or subjective, in turn.

An implication for theory that is perhaps more subtle involves expectations. Two types of expectations are involved here. One is what an individual expects of herself, and the other involves what can be expected of women as a group. If a female child is raised with the expectation that she can do anything that a male child can do, limited only by her physical talents and interests (a Mary Lou Retton, the petite gymnast, is not a Robert Parrish, the very tall basketball player, but then a Robert Parrish is not a Mary Lou Retton, either), she is less likely to be constrained by the ideas that others might have of her abilities. She would be encouraged to develop within her own capabilities and so build confidence. If that were the case, the socialization for learned helplessness discussed throughout this paper would not be in evidence. If that were the case, the depression level of women might be significantly affected.

And if our society were able to change the concepts it holds of what is appropriate and possible for women as a group to do, then there might be great changes for the whole society. Many parallels should be drawn here between expectations for the races as well as for the sexes. The stereotypes abound: a Black cannot be a quarterback, a woman cannot run a marathon, a Black cannot be a manager, a woman cannot be an executive. All these misconceptions have been refuted, as have so many others that were based on biased ideas. What is critical to remember is the significance of expectation. If an individual believes that she cannot do something, or that there is a
penalty for doing it, then she is less likely even to try or to do anything. (learned helplessness). If a society holds beliefs that groups within it cannot accomplish certain tasks, then that society contributes to the perceived limitations (helplessness) of those within it.

It is easy to extend from these thoughts to see how important it is to change expectations of what different races and sexes can do. A story was told to the researcher a few years ago by a young mother carpooling her young son and his young male friends home one afternoon. The boys were in the back seat continuing their play when the mother realized they were pretending to be Charlie's Angels, a T.V. show whose stars were all brave female detectives. Young female children have played Tarzan for years, but the cross-over for boys has been more forbidden. In the case of these young boys, it is interesting to think of their developing perceptions of the concepts of "brave and bold" and to know that "female brave and bold" is part of their perception.

What effect will the involvement in sports of girls and women today have on their expectations of equality of opportunity in other areas of their lives? Equality of opportunity has already resulted in more women's involvement in areas traditionally dominated by men.

"Between 1972 and 1980, the number of women in medical school rose from 11% to 26%; in law school, from 10% to 34%; in veterinary school, from 12% to 30%. The number of women awarded doctorates increased 16% to 30%." ("Injustice Under the Law," 1985). The
exclusive male world of professional athletics has yet to be effectively opened to women (it was shamefully slow to admit men of color). Men still dominate the high paying union labor force. Women drive trucks and buses, now, however.

Implications for Research

This study has made a contribution to research. Testing a large, normal group from varied backgrounds, as opposed to a group comprised of psychiatric or medical inpatients, or college students, the elderly, has given a standard for measurement across many demographic variables.

As has been discussed, this study design was quasi-experimental. It might now be valuable to do some experimental studies. Having non-running women be randomly assigned to a running program and some other activities or non-activities for control groups in a horizontal study of at least one year's time or longer would help to further knowledge about the value of running and exercise in women's lives.

Of greater value might be experiments to test for the preventive, innoculating benefits of running. It would be useful to conduct an experiment with a group at high risk for depression such as adolescents or women on welfare. Random assignment of participants in such a study would further knowledge about the usefulness of running and the nature of depression.
It is hoped that material from this study will also become part of the background research used in furthering biochemical investigations. This growing area of interest in the mental health field, known generally as psycho-biology, includes work on the genetic markers for alcoholism, depression and manic-depressive disorders. The biochemical influence of exercise on depression is another of these areas.

There is one other specific research project that could be an outgrowth of this study, namely, testing for gender role perceptions, using Bern’s Sex-Role inventory (1974), for correlations between attribution style, athletic involvement, self-esteem, and sex role perception. This would be a useful addition to the literature.

**Implications for Social Work Education**

The primary implication of this study for social work education is that the curriculum should lay greater emphasis on the importance of athletic involvement for clients.

The social work profession as a whole should support the athletic education of all children, from young childhood on up, so that no one begins the "cumulative ignorance" discussed in the literature review section of this thesis that Dr. Jane Clark spoke of at the Women’s Sports Foundation conference in 1983. (Clark, 1983) Educating people about the importance of physical fitness, and also working to insure
equal access to that involvement, is certainly an appropriate role for social workers.

Conclusion

This thesis began with questioning whether an athletic woman would be able to live her life with more confidence than a non-athletic woman. Would the competence gained from her involvement in sports permeate her other activities? Would running in particular have a positive effect on a woman's self-confidence and attributional style? This study has shown that running can be associated in a positive way with a woman's self-concept. A statistically significant difference appeared in the results between runners and non-athletes for several parameters measured.

The necessity of opportunity for women's involvement in sports was also discussed. Support for equal access is seen as crucial for individual women, and for women as a group.

A quote from Carol Mann, a member of the Ladies Professional Golf Association Hall of Fame and President of the Women's Sports Foundation, sums up well some final thoughts on the subject matter of this thesis. She stated that "the value of the sports experience is too important to be ignored. Competition, success, failure, and risk-taking instill a sense of self-assurance and self-reliance, equipping people to be better leaders. Congress must be pressed to ensure that males and females are afforded equal opportunity in the classroom."
and on the playing field. We can ill afford to waste the potential of 52% of our population." (Mann, USA TODAY, 1986).
October, 1983

Dear Bonne Bell Race Participant,

The day before the 1983 race, when we all picked up our numbers, you put your name and address on a list agreeing to help with some research on women and running. That research is part of my doctoral program in social work at Boston College. Well, here it is at last. I do hope that you are still interested in helping me. Even if your status as a runner has changed, I would still like for you to participate. Your contribution to this effort is greatly appreciated and needed.

All that is required is about twenty minutes of your time to fill out the enclosed questionnaires. A stamped envelop is enclosed for your convenience in returning the information to me.

Enclosed you will find two questionnaires and a demographic information sheet. Please complete all parts of each form and return them to me as soon as you can. All information is of course confidential. The numbers on the forms and envelopes are only to enable me to check you off the mailing list when I receive your reply. No name is required on the form. However, if you would like to receive information about the results, please include your name and address and I will send you my findings at the end of my research.

Thank you for your help.

Sincerely,

Polly Grant, LICSW
3 Haven Street
Boston, Mass. 02118
617-262-7546
617-267-4068
February 1986,

Dear Study Participant,

Thank you for agreeing to participate in my study. This research is part of my doctoral program in social work at Boston College. Your help is greatly appreciated.

All that will be required of you is to complete the two questionnaires and the demographic sheet enclosed. A stamped envelop is enclosed for your convenience in returning the forms to me. Please do so as soon as possible. All responses are of course confidential.

If you'd like to receive results of this study, please include your name and address on a separate piece of paper and I'll send you my findings at the end of my work.

Thank you for your help.

Sincerely,

Polly Grant
3 Haven Street
Boston, Mass. 02118
617-262-7546
617-267-4068
Appendix C

Questionnaire number 1.

This questionnaire is designed to measure how you see yourself. It is not a test, so there are no right or wrong answers. Please answer each item as carefully and accurately as you can by placing a number by each one as follows:

1. Rarely or none of the time
2. A little of the time
3. Some of the time
4. A good part of the time
5. Most or all of the time

Please begin.

1. I feel that people would not like me if they really knew me well.
2. I feel that others get along much better than I do.
3. I feel that I am a beautiful person.
4. When I am with other people I feel they are glad I am with them.
5. I feel that people really like to talk with me.
6. I feel that I am a very competent person.
7. I think I make a good impression on others.
8. I feel that I need more self-confidence.
9. When I am with strangers I am very nervous.
10. I think that I am a dull person.
11. I feel ugly.
12. I feel that others have more fun than I do.
13. I feel that I bore people.
15. I think I have a good sense of humor.
16. I feel very self-conscious when I am with strangers.
17. I feel that if I could be more like other people I would have it made.
18. I feel that people have a good time when they are with me.
19. I feel like a wallflower when I go out.
20. I feel I get pushed around more than others.
21. I think I am a rather nice person.
22. I feel that people really like me very much.
23. I feel that I am a likeable person.
24. I am afraid I will appear foolish to others.
25. My friends think very highly of me.


Continued on back of form.
Appendix D

Questionnaire number II

Please vividly imagine yourself in each of the situations that follow. If such a situation happened to you, what would you feel would have caused it? These events may have many causes. We want you to pick one -- the major cause if this event happened to you. Please write this cause in the blank provided after each event. Next we want you to answer three questions about the cause. To summarize, we want you to:

1. Read each situation and vividly imagine it happening to you.
2. Decide what you believe would be the major cause of the situation if it happened to you.
3. Write this cause in the blank provided.
4. Answer three questions about the cause.
5. Go on to the next situation.

1. **YOU MEET A FRIEND WHO COMPLIMENTS YOU ON YOUR APPEARANCE.**

   1. Write down the one major cause ____________________________

   2. Is the cause of your friend’s compliment due to something about you or something about the other person or circumstances? (Circle one number)

      |        |        |        |        |        |        |        |
      |        | 1      | 2      | 3      | 4      | 5      | 6      | 7      |
   All situations | Totally due to me |

   3. In the future when you are with friends, will this cause again be present? (Circle one number)

      |        |        |        |        |        |        |        |
      |        | 1      | 2      | 3      | 4      | 5      | 6      | 7      |
   All situations | Will always be present |

   4. Is the cause something that just affects interacting with friends or does it also influence other areas of your life? (Circle one number)

      |        |        |        |        |        |        |        |
      |        | 1      | 2      | 3      | 4      | 5      | 6      | 7      |
   All situations | Influences all situations |

11. **YOU HAVE BEEN LOOKING FOR A JOB UNSUCCESSFULLY FOR SOME TIME.**

   6. Write down the one major cause ____________________________

   7. Is the cause of your unsuccessful job search due to something about you or something about other people or circumstances? (Circle one number)

      |        |        |        |        |        |        |        |
      |        | 1      | 2      | 3      | 4      | 5      | 6      | 7      |
   All situations | Totally due to me |

   8. In the future when looking for a job, will this cause again be present? (Circle one number)

      |        |        |        |        |        |        |        |
      |        | 1      | 2      | 3      | 4      | 5      | 6      | 7      |
   All situations | Will always be present |

   9. Is the cause something that just influences looking for a job or does it also influence other areas of your life? (Circle one number)

      |        |        |        |        |        |        |        |
      |        | 1      | 2      | 3      | 4      | 5      | 6      | 7      |
   All situations | Influences all situations |

III. **YOU BECOME VERY RICH.**

10. Write down the one major cause ____________________________

11. Is the cause of your becoming rich due to something about you or something about other people or circumstances? (Circle one number)

      |        |        |        |        |        |        |        |
      |        | 1      | 2      | 3      | 4      | 5      | 6      | 7      |
   All situations | Totally due to me |

12. In your financial future, will this cause again be present? (Circle one number)

      |        |        |        |        |        |        |        |
      |        | 1      | 2      | 3      | 4      | 5      | 6      | 7      |
   All situations | Will always be present |
It takes time to organize your thoughts and determine the key points you need to cover in your statement. Here’s a step-by-step guide to help you write your statement:

1. **Understand the Prompt:** Carefully read the statement prompt provided by the organization. Make sure you understand what is being asked.

2. **Brainstorming:** Make a list of your ideas and thoughts about the prompt. Write down any relevant experiences or examples that come to mind.

3. **Outlining:** Organize your ideas into a logical structure. Start with an introduction that clearly states your main point and the context of your experience. Include at least three major points in the main body of your statement, ensuring each point is supported by specific evidence or examples.

4. **Writing:** Begin drafting your statement. Start with a strong introduction, followed by well-structured body paragraphs. Each paragraph should focus on a single idea and provide evidence to support it.

5. **Revising:** Review your statement for clarity, coherence, and accuracy. Check for grammatical errors and ensure your tone is appropriate for the occasion.

6. **Finalizing:** Make any necessary adjustments to ensure your statement is polished and ready for submission.

Remember, your statement should be personalized and tailored to the specific requirements of the event. Good luck!
IV. A FRIEND COMES TO YOU WITH A PROBLEM AND YOU DON'T TRY TO HELP THEM.

14. Write down the one major cause ________________________________________

15. Is the cause of your not helping your friend due to something about you or something about other people or circumstances? (Circle one number):

<table>
<thead>
<tr>
<th>Totally due to other people or circumstances</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

16. In the future when a friend comes to you with a problem, will this cause again be present? (Circle one number):

<table>
<thead>
<tr>
<th>Will never again be present</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

17. Is the cause of something that just affects what happens when a friend comes to you with a problem or does it also influence other areas of your life? (Circle one number):

<table>
<thead>
<tr>
<th>Influences just this particular situation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

V. YOU GIVE AN IMPORTANT TALE IN FRONT OF A GROUP AND THE AUDIENCE REACTS NEGATIVELY.

18. Write down the one major cause _______________________________________

19. Is the cause of the audience reacting negatively due to something about you or something about other people or circumstances? (Circle one number):

<table>
<thead>
<tr>
<th>Totally due to other people or circumstances</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

20. In the future when giving talks, will this cause again be present? (Circle one number):

<table>
<thead>
<tr>
<th>Will never again be present</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

21. Is the cause of something that just affects giving talks or does it also influence other areas of your life? (Circle one number):

<table>
<thead>
<tr>
<th>Influences just this particular situation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

VI. YOU DO A PROJECT WHICH IS HIGHLY PRaised.

22. Write down the one major cause _______________________________________

23. Is the cause of being praised due to something about you or something about other people or circumstances? (Circle one number):

<table>
<thead>
<tr>
<th>Totally due to other people or circumstances</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

24. In the future when doing projects, will this cause again be present? (Circle one number):

<table>
<thead>
<tr>
<th>Will never again be present</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

25. Is the cause of something that just affects doing projects or does it also influence other areas of your life? (Circle one number):

<table>
<thead>
<tr>
<th>Influences just this particular situation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
</table>

Continued on back
39. Is the cause of your getting the position due to something about you or something about other people or circumstances? Circle one number.

Totally due
to other people or circumstances

1 2 3 4 5 6 7

40. In the future when applying for a position, will this cause again be present? (Circle one number)

Will never again be present

1 2 3 4 5 6 7

41. Is the cause something that just influences applying for a position or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation

1 2 3 4 5 6 7

Influences all situations in my life

XII. YOU GET A RAISE

42. Write down the one major cause.

43. Is the cause of the raise going badly due to something about you or something about other people or circumstances? Circle one number.

Totally due

to other people or circumstances

1 2 3 4 5 6 7

44. In the future when dating, will this cause again be present? (Circle one number)

Will never again be present

1 2 3 4 5 6 7

45. Is the cause something that just influences dating or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation

1 2 3 4 5 6 7

Influences all situations in my life

46. Write down the one major cause.

47. Is the cause of your getting a raise due to something about you or something about other people or circumstances? (Circle one number)

Totally due
to other people or circumstances

1 2 3 4 5 6 7

48. In the future on your job, will this cause again be present? (Circle one number)

Will never again be present

1 2 3 4 5 6 7

49. Is this cause something that just affects getting a raise or does it also influence other areas of your life? (Circle one number)

Influences just this particular situation

1 2 3 4 5 6 7

Influences all situations in my life

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CONTINUED ON BACK OF PAGE.
Appendix E

1. Age ____________________

2. Occupation ____________________

3. Highest education level completed:
   - 8th grade ____________________
   - High school graduate ____________________
   - Some college attended ____________________
   - College graduate ____________________
   - Graduate degree ____________________
   - Other ____________________

4. Race, ethnic group ____________________

5. Religious group:
   - Protestant ____________________
   - Catholic ____________________
   - Jewish ____________________
   - Other ____________________

6. Marital status:
   - Married ____________________
   - Divorced ____________________
   - Widowed ____________________
   - Other (please specify) ____________________

7. Number of children (total):
   - Number of children under five years old ____________________

8. Do you engage in any sport or physical activity regularly?
   - Yes ____________________
   - No ____________________

9. Which sport or physical activity? (If more than one, pick the one most significant to you) ____________________

10. How many times per week do you engage in your sport or physical activity?
    - Never ____________________
    - Twice ________________
    - Three times ________________
    - Four or more times ________________

11. Did you run in the 1983 Boston 10K in Boston?
    - Yes ____________________
    - No ____________________

12. If you ran in the 1983 Boston 10K in Boston, how many miles did you run on average per week in the two months prior to the race?
    - 0-5 ________________
    - 6-9 ________________
    - 10-15 ________________
    - 16-25 ________________
    - 26-40 ________________
    - 41 plus ________________

13. Did you run in the 1984 Boston 10K in Boston?
    - Yes ____________________
    - No ____________________

14. If you ran in the 1984 Boston 10K in Boston, how many miles did you run on average in the two months prior to the race?
    - 0-5 ________________
    - 6-9 ________________
    - 10-15 ________________
    - 16-25 ________________
    - 26-40 ________________
    - 41 plus ________________

15. Whether you run in either race or not, but run now, how many miles do you run on average per week now? ________________

16. How many years have you been a runner? ________________

17. Do you consider yourself to be overall more happy than unhappy?
   - Happy ____________________
   - More happy than unhappy ____________________
   - About equally happy and unhappy ____________________
   - More unhappy than happy ____________________
   - Unhappy ____________________

18. Are you a Feminist?
    - Yes ____________________
    - No ____________________
Appendix F

Graph # 1 - Happiness by Groups

Categories
1. happy 2. more happy than unhappy 3. equal 4. more unhappy than happy
5. unhappy
Graph 2 - internality
Graph 3 - stability

- Group 1
- Group 2
- Group 3
- Group 4
- Total

good events  bad events

1 2
Graph 4 - globality

- Group 1
- Group 2
- Group 3
- Group 4
- Total
Graph #5 - Composite Scores by Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Good Events</th>
<th>Bad Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Group 2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Group 3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Group 4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>10</td>
</tr>
</tbody>
</table>
Graph 6 - Self-Esteem by Groups

The lower the score, the higher the self-esteem

Groups
BIBLIOGRAPHY


"Background Paper on Title IX, GROVE CITY, and Restorative Legislation," Women's Sports Foundation, N.Y., N.Y.


Baruch, Grace; Barnett, Rosalind; Rivers, Caryl. LIFEPRINTS; NEW PATTERNS OF LOVE AND WORK FOR TODAY'S WOMEN. McGraw- Hill, N.Y., 1983.


Sachs, Michael and Buffone, Gary, editors, RUNNING AS THERAPY; AN INTEGRATED APPROACH. University of Nebraska Press, Lincoln and London. 1984.


Taube, Carl A. and Barrett, Sally A (editors), MENTAL HEALTH, UNITED STATES, 1985. United States Department of Health and Human Services, NIMH, Rockville, Maryland.


