THE EFFECTS OF NO-OPPONENT, SAME-SEX OPPONENT, AND OPPOSITE-SEX OPPONENT CONDITIONS ON THE PERFORMANCE OF LOW, MEDIUM, AND HIGH FEAR OF SUCCESS COLLEGE WOMEN

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CHAPTER I

INTRODUCTION

The tendency for competent people to strive for success and, in the final moments when success is imminently possible, to emit behaviors which bring about their own defeat, is currently known as "the motive to avoid success," or "fear of success." Those individuals who demonstrate the motive to avoid success are incapable of realizing their own potential, and an effort to understand this phenomenon is warranted.

Horner's work in 1968, primarily concerned with achievement motivation, played a major role in bringing the study of fear of success into the limelight. In hopes of explaining the inconsistencies of performance between males and females in achievement motivation research, she theorized that a motive to avoid success must be included in the expectancy-value theory of motivation for women and devised a projective test to measure this motive. Much research has been generated from her initial work, and ironically the very means that Horner developed to untangle the inconsistencies found in achievement motivation research, i.e. the theory and projective technique used to measure fear of success, also plague research conducted on the motive to avoid success. For example, Horner's theory has not been able to adequately account for the appearance and rise of fear of success in men.

This study, therefore, attempts to investigate further the motive to avoid success in women to gain a more comprehensive understanding

of the fear of success phenomenon. In contrast with Horner's research, this author will employ a theoretical framework (Pappo, 1972) which has been developed to incorporate fear of success behavior for both men and women. In addition, an objective instrument to measure fear of success will be employed rather than a projective technique (Pappo, 1972).

CHAPTER II

REVIEW OF THE LITERATURE

Achievement Motivation and Fear of Success

From 1953, which marked the beginning of achievement motivation studies (McClelland, Atkinson, Clark, and Lowell, 1953) to 1967, very little research was conducted using female subjects. Alper (1974) cites several striking examples of the paucity of this research. Out of nearly 400 pages of The Achievement Motive (McClelland et al., 1953), only 8 were devoted to female studies. Motives in Fantasy, Action, and Society (Atkinson, 1958), 873 pages long, covered studies of women in one footnote (p. 77). And in The Anatomy of Achievement Motivation (Heckhausen, 1967), only 9 pages of the 215 dealt with sex differences.

While research conducted on males usually produced predictable, significant and replicable results, research conducted on females was discrepant with male results, inconsistent, and difficult (if not impossible) to replicate (Alper, 1974). For example, women failed to show the predicted increase in need for achievement scores when presented with achievement-oriented instructions emphasizing leadership and intelligence and the predicted decrease in scores when presented with neutral, task-oriented instructions (Veroff, Wilcox, and Atkinson, 1953).

Working within the framework of an expectancy-value theory of

motivation, Horner (1968) hypothesized a motive to avoid success (or fear of success-FOS) in an attempt to account for these discrepancies. According to Horner, success for a woman can be equated with aggressiveness, a stereotypic masculine characteristic, which in turn results in a perceived loss of femininity or social rejection. Horner postulated that these "negative consequences" of success must be included when trying to predict women's performance on achievement-related tasks. For Horner, women high in fear of success, i.e. those women who perceive negative consequences as a result of success, would be predicted to do more poorly in interpersonal competitive conditions, especially when competing with men, than in non-competitive conditions.

To measure FOS, Horner developed a projective instrument consisting of a one-cue verbal lead, "After first term finals, John (Anne) finds himself (herself) at the top of his (her) medical school class." In order to score the stories written to the cue for thematic apperceptive fear of success imagery, Horner used the following criteria: negative consequences because of the success, anticipation of negative consequences because of the success, negative affect because of the success, instrumental activity away from present or future success (including leaving the field for more traditional female work such as nursing, school teaching, or social work), any direct expression of conflict about success, denial of the situation described by the cue, or bizarre, inappropriate, unrealistic or non-adaptive responses to the situation described by the cue. Stories were scored for FOS imagery on a present-absent basis.

In a study devoted primarily to achievement motivation, Horner (1968) administered the FOS Thematic Apperception Test (TAT) cue, in-

cluded in a battery of tests and various tasks, to 178 undergraduates at the University of Michigan. In support of her theorized motive to avoid success, Horner found that over 62% of her female subjects wrote FOS stories, while only 8% of the male subjects wrote such stories. From data available for 30 female and 30 male subjects who appeared in both a mixed-sex competitive and non-competitive situation, Horner found that women high in FOS performed better in non-competitive conditions against a standard of excellence rather than in a mixed-sex competitive conditions. She also found evidence to suggest that low FOS females (like male subjects) perform better in competitive rather than non-competitive conditions.

Horner's original work in 1968 proved to be of great heuristic value. Much research has been generated from her initial work, and ironically the very means that Horner developed to untangle the inconsistencies found in achievement motivation research, i.e., the theory and projective technique used to measure fear of success, also plague research conducted on the motive to avoid success. Several areas of research which have emerged in response to Horner's work will be examined: sex differences in FOS, the effects of cue content, types of FOS instruments, and percentage of FOS in younger subjects and the developmental aspects of FOS.

Sex Differences

Two findings of importance since Horner's original work are the increase of FOS imagery stories written by men and the contradictory results concerning sex differences. In 1972, Horner reviewed her recent works and other current literature on FOS. She cited a trend in the

literature for increased FOS in men with a newly appearing theme devaluing achievement and success. The percentage of FOS imagery, however, remained significantly different between the sexes (Prescott, cited in Horner, 1972).

In a partial replication of Horner's original work, Hoffman (1974) confirmed Horner's findings for women--65.3% of her female subjects wrote FOS stories. She did not, however, support Horner's findings for a significant sex difference. Seventy-seven percent of Hoffman's male subjects also wrote high FOS stories. The percentages of FOS stories written by males and females were not significantly different. In fact, males wrote a higher percentage than females. Like Horner (1972), Hoffman found a difference between the theme content for the two sexes: males tended to write FOS stories which questioned the value of success, while females wrote stories which reflected negative consequences such as affiliative loss. Pappo (1972) and Curtis, Zanna, and Campbell (1975) also reported no significant sex differences in male and female FOS scores.

The Effects of Cue Content

In an effort to clarify the meaning of FOS and its implications, researchers have given considerable attention to one variable--cue content. Contradictory results have been obtained in studies designed to test the effects of variations in cues and lead one to believe, as stated by Jackaway (1974), that "the nature of the cue is of paramount importance in evoking the desired imagery" (p. 77).

In order to determine what aspect of the anticipation of success by women was anxiety-producing, Hoffman (1974) introduced three varia-

tions to the original cue, "After first term finals, John (Anne) finds himself (herself) at the top of his (her) medical school class." These variations, occurring within the cue, were a less masculine academic area (child psychology), private rather than public communication of success, and minimization of the competitive aspect of the situation. Hoffman found that none of the three variations significantly diminished fear of success. Although she was unable to distinguish which aspect of the cue was anxiety-producing, Hoffman did add confirmation to Horner's theory of the existence of a motive to avoid success even in low arousal conditions.

Alper (1974) questioned whether researchers in the area dealing with fear of success were tapping a cultural stereotype rather than a motive to avoid success. According to Alper "Anne's achievement in medical school" is achievement in a female-inappropriate field. Alper reasoned that if "Anne's success" were in a more female-appropriate field, the percentage of success stories should increase, therefore decreasing FOS stories for women. If this hypothesis were confirmed, Alper concluded that support for a cultural-stereotype explanation would be in order. In trying to determine whether researchers were indeed tapping a cultural stereotype rather than a motive to avoid success, Alper presented the cue, "After first term finals, Anne finds herself at the top of her nursing school class," and the medical school cue to students of two different noncoeducational colleges. Thirty junior college women preparing to be nurses and 37 women in a small four-year college participated in the study. Half of each group were presented the nursing school cue; the other half of each group received the medical school cue. Alper found that the percentage of FOS diminished

for nursing students responding to the nursing cue but that it remained the same for liberal arts students responding to either cue. The results of this study indicate that the effects of cue content on percentage of FOS stories written cannot be sufficiently explained on the basis of whether the cue contains female-appropriate or inappropriate fields. These results also indicate that more than a cultural stereotype explanation for the occurrence of the motive to avoid success is needed.

Several authors have investigated the effects of having subjects respond not only to same-sex cues, but also to opposite-sex cues. Monahan, Kuhn, and Shaver (1974), offer the argument that if negative consequences are given to only the female cue, then a cultural explanation of FOS would be in order. However, if negative consequences are given to both male and female cues, then an intrapsychic explanation would be tenable (similar to Horner's [1972, p. 159] "latent, stable personality disposition acquired early in life").

Both male and female pre-adolescents ages 10-13 and early-adolescents ages 14-16 were given either the female version of Horner's original TAT cue or the male version. It was found that both sexes responded with considerable FOS imagery to the female version, but not to the male version. The results of this study supported the cultural explanation and indicated that the sex of the cue, rather than the sex of the subject was the more critical variable.

In partial support of this study, Brown, Jennings, and Vanik (1974), administered the same two versions of the cue, "After first-term finals John (Anne) find himself (herself) at the top of his (her) medical school class," to both male and female college and high school

students. They found that college males, high school females, and high school males responded with more FOS imagery to the female cues. However, this did not hold for college women. They responded with about equal FOS imagery to both versions. Jackaway (1974), on the other hand, found that 10th grade boys responded with more FOS to a male cue than to a female cue, a finding in the opposite direction to that which was predicted.

Types of FOS Instruments

The measurement of fear of success has also played a significant role in recent research. This research can be broken into two different areas: 1) projective instruments consisting of modified versions of Horner's original projective cue and/or scoring system, and 2) objective instruments.

Several researchers have taken issue with the single cue measure and/or present-absent scoring system used by Horner. Althof (1973), noting the unsatisfactory implications of a one cue projective technique and believing fear of success to be more of a generalized lifestyle, further expanded Horner's projective technique by developing a five cue instrument. He selected the five best cues from a larger pool of verbal cues covering not only academic success but also personal, political, social, and vocational success and success in sports. The five cues which comprised the new instrument had the highest cue-total score correlations of the ten administered to the test group. All of these correlations as well as most of the intercorrelations of each of the five cues with each other were significantly different from zero. Althof obtained an interscorer reliability co-efficient of .89 for a random sample of 20 subjects' responses to the cues.

Althof also believed that fear of success varied in intensity rather than being an all-or-none phenomenon. He therefore modified Horner's scoring procedure by scoring fear of success on a zero to seven continuum, thus treating it as a continuous variable rather than a discrete one.

The number of cues comprising the FOS instrument was also expanded by Karabenick and Marshall (1974), although these authors chose to retain Horner's original present-absent system of scoring. One drawback to this study is that no data on either the intercorrelation of scores for each cue or correlations of cue-scores with the total score were collected. Agreement on 90% of all stories as evidencing either presence or absence of FOS imagery was obtained. The score-rescore correlation of total scores was .90.

Spence (1974) developed an objective questionnaire and scoring system to measure fear of success elicited by three versions of Horner's TAT cue involving the sex and marital status of the cue figure (single male, single female, and married female). For example, one cue was "When Bob graduated from college, he went on to enter medical school to become a doctor. After his first-term finals, he found himself at the top of his class." Subjects first wrote stories to TAT cues before answering the questionnaire. The reasons for writing the stories first were two-fold: first to create an arousal of FOS, and second so that scores for the FOS imagery in the stories using Horner's scoring technique revised could be compared with questionnaire scores (Spence added several other thematic categories to Horner's system). The questionnaire consisted of multiple-choice questions designed to tap essentially the same type of information which would be elicited by

the TAT cues. Each alternative to a question was classified as either positive, neutral, or negative in content. Values of 0, 1, or 2, respectively, were assigned to each category, and thus provided an objective scoring system for the various TAT cues. A high value for a series of questions concerning a cue reflected a subject's choice of negative alternatives. Story protocols were scored on the basis of positive, mixed, or negative success-related content rather than using Horner's present/absent system and were found to significantly relate ($p < .0001$) to questionnaire scores (negative choices) for all three cue-sex groups. The data thus suggest to Spence that subjects' responses to projective cues, at least when they are first elicited, could be satisfactorily described in questionnaire form and objectively scored. In summary, Spence developed an objective scoring system for projective cues.

This author, however, questions Spence's conclusion. When analyzing the data for mean questionnaire scores, Spence found that the most negative (FOS) response was to the single male cue, then to the single female cue, and then to the married female cue by both men and women. When analyzing the scores for TAT protocols either combining the mixed and negative categories or using only negative categories, Spence found that males responded with the most negative (FOS) imagery in response to the single female cue, then to the married female cue, and then to the single male cue. Women responded with the most negative (FOS) imagery to the married female cue, then to the single female cue, and then to the single male cue. Although Spence mentions that this is a major discrepancy between the TAT stories and questionnaire, she downplays its importance (p. 435). However, this author believes that

these results call into question her interpretation that projective cues, at least when they are first elicited, could be satisfactorily described in questionnaire form and objectively scored.

Fontaine (1975) also created an objective scoring system for scoring responses to two versions of Horner's cue (med. school vs. nursing school) by developing an 11-point bipolar adjective rating scale. The instrument covered three major theoretical areas described by Horner: 1) anxiety and negative feelings because of success (eg., happy-sad), 2) concerns about femininity and social rejection (eg., self-confident-self-doubting) and 3) denial of success or personal responsibility (eg., hardworking-lazy). Subjects rated the stimulus cues for adjective descriptions. It is important to note that the authors intuitively grouped Horner's seven thematic categories into three and then chose adjective scales which generally reflected these three areas. No validity or reliability data were collected on this FOS instrument.

Objective instruments have also been developed without the use of a "cue." Self-report objective questionnaires are designed to tap characteristics of fear of success subjects.

In 1972, Pappo developed an 83-item objective questionnaire that tapped five characteristics of fear of success subjects. These characteristics were theorized by Pappo to be: 1) low self-esteem, 2) a preoccupation with the evaluative aspects of the situation, 3) a competitive orientation, and 4) a tendency to repudiate one's competence. The fifth characteristics was that an FOS person would also, when close to attaining success, demonstrate self-sabotaging behavior to reduce the anxiety accompanying the feared success. A reliability

measure (internal consistency), an item analysis, a factor analysis and a measure of concurrent validity were obtained for this measure. Predictive validity was also established for this instrument through a laboratory experiment to be discussed later in this review.

Good and Good (1973) developed a 29-item objective measure of FOS using the assumption that "an individual who fears success is one who is prone to worry about the possibility of antagonizing others were his performance in various types of activities to be of superior quality" (p. 109). The instrument is a self-report, true-false inventory. In contrast to Pappo's (1972) elaborate analysis of her newly developed instrument, Good and Good reported only an internal-consistency estimate of .81. No validation procedures were conducted.

Percentage of FOS in Younger Subjects and the Developmental Aspects of FOS

Jackaway (1974) studied the developmental differences in white, predominantly middle-class boys and girls from ages 9 to 17. Males and females in the 4th, 7th and 10th grades (pre- to post-puberty age range) were given four TAT cues similar to Horner's (1968) but modified for the particular age range. Equal numbers of girls were given male female stimulus cues, as was true for an equal number of boys. The prediction that FOS would increase for girls with age was not upheld; in fact, the reverse was true. FOS in response to a male cue increased with age for boys. Also FOS was not found to be significantly higher for girls than for boys and did not support the hypothesis that sex differences in FOS motivation exist in children between grades 4 and 10. Tenth-grade boys responded with more FOS to a male cue than to a female cue, a finding directly opposite to what was predicted.

Monahan, et al. (1974) investigated the hypothesis that FOS imagery would increase in age by measuring the FOS in pre-adolescent (ages 10-13) and early-adolescent (ages 14-16) boys and girls. Both males and females in each group were given both versions (Anne and John) of Horner's (1968) original medical school cue. In response to the John cue, the authors found no significant differences in age groups. Both boys and girls, in response to the Anne cue, showed a decline in FOS imagery. Only the results for the girls, however, were statistically significant. This finding was opposite to the author's prediction, and inconsistent with Horner's findings of high FOS responses in college women. The authors offer the possibility that these results reflect generational differences in that Horner's original study was conducted in 1968, while this one was conducted in 1974. They also offer the very hopeful speculation that perhaps attitudes toward female achievement is changing. This finding was also supported by Brown et al. (1974), who found that high school women expressed significantly more FOS imagery to the female cue than did college women. According to these authors, perhaps the high school women, with more diverse interests and attitudes, have not as yet been greatly influenced by the women's liberation movement.

Other Theoretical Approaches to Fear of Success and Directions in Research

As evidenced in the above studies, Horner's work in 1968 played a major role in bringing the study of fear of success into the limelight, and much research has been generated from her efforts. However, Horner's study was not the first to theorize about some people's ten-

dency to get very close to success or winning and then to do something which seems subtly to bring defeat. In agreement with Horner, this phenomenon has been hypothesized to occur in very capable people; however, it has not always been hypothesized as a characteristic ascribed chiefly to women.

Freud (1916) termed the phenomenon of capable people defeating themselves and thus prohibiting the acquisition of a desired goal as "moral masochism." Ovesey (1962) referred to it as success neurosis and then more specifically theorized about one form of it--fear of vocational success. For Ovesey, this phobia occurs in both sexes; however, it occurs more frequently in males (patients) because "they are more subject to the competitive pressures of the culture" (p. 30). This author will not attempt to cover the various psychoanalytic and other theorists views of the psychodynamics of this neurosis but refers the reader to Althof (1973) for a more extensive overview. It is important only to note here that various theoretical stances exist on fear of success other than Horner's. These theories also encompass an explanation of the phenomenon of FOS in both sexes. As much of the research conducted by other fear of success theorists is based only on case studies, this author has chosen to review in detail one theory. Marice Pappo (1972) not only developed a theory of fear of success, but also has conducted experimental research pertaining to her theory. Her work is also particularly relevant to the present study.

Pappo (1972, p. 1) defines fear of success as

> . . . a psycholgoical state which leads to paralysis, withdrawal, or retraction in the presence of a consciously understood, subjective or objective goal which is perceived by the individual at the moment of withdrawal.

The goal is equated with success and is perceived as being imminently possible. Success is defined in terms of behavior which connotes measureable achievement, i.e. behavior which is better than one's past performance or achievement which society values as successful. When the occurrence of success is far away, the person may desire the goal and may engage in behaviors which move him/her toward it. However, when confronted with the imminent possibility of success, the person acts to avoid the successful outcome. One way that this avoidance is achieved, according to Pappo, is for a person to function less well or perform at a lower level as success becomes attainable.

It is this self-sabotaging behavior, i.e. a person's movement away from the success or his/her functioning less well as success becomes attainable, which Pappo uses as one characteristic of a fear of success person. Pappo also characterizes the fear of success individual as one who exhibits self-doubt and negative self-evaluation, a competitive orientation, and a preoccupation with evaluation. He/she also exhibits a tendency to repudiate his/her competence when the possibility of success is imminent. According to Pappo, these behaviors and characteristics develop out of parent-child interactions.

It is important to note that Pappo makes no distinction between the acquisition of fear of success for males or females. This enables her to account for the presence of this phenomenon in both men and women, a finding in current research which is difficult for Horner's theory to explain. For a more detailed explanation of her theory, the reader is referred to Pappo's original work (1972).

Pappo devised an 83-item, self-report fear of success questionnaire which incorporates the above characteristics and which measures, primarily,

academic fear of success. High fear of success people were defined as scoring one standard deviation above the mean of the total number of subjects tested in her study (800); low FOS people were defined as scoring one standard deviation below the mean of the subjects tested. Average male and female scores were not significantly different.

In a laboratory experiment designed to test the predictive validity of the questionnaire, Pappo gave high and low FOS subjects two reading tests with success or nonsuccess feedback after the first test. Each subject was run separately. As predicted, high FOS subjects decreased their test scores after success feedback. Low FOS subjects given both success and nonsuccess feedback and high FOS subjects given nonsuccess feedback increased their scores. Pappo's hypothesis that high FOS subjects would demonstrate self-sabotaging behaviors when confronted with success was confirmed. She gained further support for her theoretical framework with a post-experimental questionnaire, whose items also related to the five characteristics of FOS individuals. She found that high FOS subjects as compared with low FOS subjects reported a lower self-evaluation, manifested a preoccupation with the evaluative aspects of the situation to a greater degree, were more oriented toward competition, and tended more often to repudiate their competence.

Other Studies Conducting Laboratory Experiments

One of the drawbacks to the majority of fear of success studies is that they lack laboratory experiments which demonstrate the ability of a researcher to predict behavior on the basis of the measured FOS variable. Most studies seem content to design new or modified instruments, measure fear of success, and/or then to report percentages of

high male/female subjects. One study reported the analyses of the relationship of high/low FOS to performance, but only to previous performance which had not been measured in a controlled laboratory experiment, such as law board examination scores (Curtis et al., 1975). In addition to Pappo, a few studies have included laboratory experiments to see what types of behavior could be predicted by tapping the fear of success phenomenon. These studies will be discussed below.

As has been reported, Horner (1968) found that women high in FOS performed better in non-competitive conditions against a standard of excellence rather than in mixed-sex competitive conditions. However, this finding was pulled from data available from only 30 of her almost 100 female subjects only to unravel some of the contradictory results obtained when studying female achievement motivation and may have contained extraneous variables. It also did not differentiate between competition with a male and competition with a female.

Althof (1973), in a continuation of Horner's study, administered half the Lowell Scrambled Word Test under non-competitive, mixed-(opposite) sex competitive, and same-sex competitive conditions. By separating Horner's mixed-sex competitive conditions into same-sex and opposite-sex conditions, Althof further defined the variables present in the competitive conditions and allowed for further hypotheses to be proposed.

Althof confirmed Horner's (1968) results that women high in fear of success imagery performed better than low fear of success imagery women in non-competitive situations. Althof also found a tendency for the grade point average of high fear of success women to be higher than those of low fear of success imagery women. This finding is

similar to Horner's finding that Honors students tended to have a higher frequency of FOS imagery than did Non-Honors students. He did not, however, find significant results pertaining to four of his hypotheses comparing the non-competitive condition with competitive conditions, or comparing competitive conditions. He did find, however, that the differences between the means were in the hypothesized directions. Failure to obtain significant results could have been due to 1) the projective instrument used, 2) the type of task chosen, 3) failure to arouse sufficient competition within the subjects, and/or a failure to provide success feedback.

Althof's projective instrument consisted of cues which involved areas other than academic achievement and which were only correlated moderately well with each other. The subjects were then given a task which was academically-oriented, an area not represented in the projective technique. For these reasons, the author's expectation that the academically-oriented task would reflect differential effects of various competitive conditions on high and low FOS women (differentiated by this particular projective technique) is called into question. A second consideration in examining Althof's failure to achieve significant results is that the task, the Lowell Scrambled Words Test (an anagram task), was not purely motivational. That is, the task could have reflected individual differences which might have influenced the results. For example, brighter subjects may have been able to unscramble more words than less bright subjects. Thirdly, the instructions were brief and did not emphasize sufficiently the competitiveness of the situation, therefore perhaps failing to arouse sufficient competitive strivings within the subjects. And finally, the experiment did

not contain success feedback which may be necessary to sufficiently arouse the motive to avoid success so that differences in performance can be detected.

Karabenick and Marshall (1974) also studied the effects of competitive conditions on females' performance using a motivational task in an achievement-oriented situation. Subjects performed opposite a male or female, or alone. They were also given success, failure, or equal performance feedback. In analyzing performance as a function of fear of success, type of feedback, and opponent (competitor) conditions, only one significant result was found: an increase in performance over trials. The authors also conducted analyses containing a fear of failure variable to try and clarify the above results. They found two significant effects, one being a triple interaction (Fear of Failure x Opponent Condition x Fear of Success). However, no post hoc unconfounded paired comparisons between means were found to be significant, and only an inspection of the data without statistical tests was used to speculate on the variables affecting behavior trends.

Failure in this study to obtain significant results may have been due to the use of the projective instrument to measure fear of success. Karabenick and Marshall, like Althof (1973), expanded Horner's projective cue "to obtain a more representative set of situations involving feminine conflict between achievement and traditional female roles and also to increase the measure's reliability" (p. 224). However, the authors lacked further testing of the instrument, i.e., intercorrelations of cues. They also retained Horner's present/absent scoring system. The laboratory experiment took place at least two weeks after the

initial testing for fear of success. Since no test-retest reliability coefficient was obtained, the stability of their measurement is open to question.

All reviewed studies using Horner's projective technique or a revised version of it fail to get significant results for many of their hypotheses. Pappo (1972), using her objective questionnaire, seems to have designed the best instrument to measure FOS in academic-oriented situations. Her questionnaire is designed to avoid tapping a variable measuring traditional sex-role activities and has a theoretical base which encompasses the development of fear of success in both men and women. It also has the benefit of an objective scoring system.

Personality and Biographical-Demographical Variables

Althof (1975) investigated 78 personality and biographical-demographical variables to determine which variables could successfully differentiate high and low fear of success women. To classify women into high and low fear of success imagery groups, Althof used the projective technique developed by him in a previous study (Althof, 1973). Only 7 of the 78 variable (slightly greater than chance) significantly differentiated the groups ($p < .05$). These results, according to Althof, point out the difficulty in measuring FOS accurately and suggest questioning the existence of a FOS phenomenon. It is this author's belief that absence of more positive results in Althof's study is more likely a result of the difficulty in measuring fear of success using a projective technique, rather than a nonexistence of a FOS phenomenon.

In examining the seven variables, Althof (1975, pp. 46-47) found that high FOS women were significantly different from low FOS women. Specifically, high FOS women were more femininely oriented in their attitudes and interests, more likely to be autonomous, more likely to be single, more likely to report that they do not particularly like children, and were like likely to belong to the Protestant faith. These same high FOS imagery women, more than low FOS women, categorized their mothers as being in lower occupational groups and were more likely to report that they were not their mother's favorite child.

Fear of Success vs. Fear of Failure

One issue that continually arises in examining the literature on fear of success is, "What is the difference between fear of success and fear of failure (FOF)?" Drawing upon and expanding Pappo's (1972) theoretical framework, one would define a high FOS subject as one who fears the "negative consequences of success," while a high FOF subject fears the "negative consequences of failure." One would expect high FOS subjects to actively seek out competitive or evaluative situations. The high FOF person, on the other hand, would actively avoid these situations. Once in an inescapable evaluative situation, the high FOF person would work to avoid failure, and success for this person would not be feared or avoided but would be sought out. The high FOS person may work hard until success is imminent but would then demonstrate self-defeating behaviors, so as to avoid the success. This differentiation between the two groups was given partial support by Pappo (1972). She found that high fear of success subjects decreased their test (II) scores after success feedback while high FOS subjects

given nonsuccess feedback increased their scores. If she were measuring FOF, one would expect high FOS subjects given success feedback to increase their scores, as it is the characteristic of high FOS subjects to avoid failure.

One difficulty in distinguishing the two groups is that it is predicted that both would display anxiety in evaluative situations. However, the origin of the anxiety is theorized to be different and one, as discussed before, would predict differences in the behaviors of the two groups in approaching evaluative situations and in approaching success feedback.

CHAPTER III

STATEMENT OF THE PROBLEM

In examining the current research on fear of success, the use of Horner's projective technique, or a modified version of it, was seriously called into question as a predictor of the behavior of FOS individuals in academically-oriented situations. The results of studies measuring percentages of FOS males and females were contradictory (e.g., Hoffman, 1974, vs. Horner, 1972). Studies designed to examine cues in which other variables which might also be tapped along with FOS (such as sex-role stereotypes) are also contradictory (e.g., Hoffman, 1974, vs. Monahan, et al., 1974). Very few studies use Horner's original cue and scoring system. Most studies modify the instrument, a factor which possibly contributes heavily to the large variability in results (e.g., Karabenick and Marshall, 1975 and Fontaine, 1975). Horner's hypothesis that FOS for women is a latent, stable personality disposition acquired early in life in conjunction with sex role standards and which increases with age has not been supported. In fact, results exactly opposite to the theory have been found (Jackaway, 1974).

Pappo's (1974) fear of success questionnaire, on the other hand, does not fall prey to the criticisms leveled at FOS projective techniques, such as the subjectivity involved in scoring the protocols and the tendency for researchers to modify the scoring criteria.

The present study was primarily an attempt to expand the work done by Althof in 1973. The study examined the effect of success feedback in no opponent, same-sex opponent, and opposite-sex opponent conditions for low, medium, and high fear of success women. This author deviated from Althof (1973) and Karabenick and Marshall (1974) in that she used Pappo's objective technique to measure fear of success, in order to avoid the previously mentioned pitfalls of Horner's projective techinque. The author obtained test-retest reliability information for Pappo's instrument. This procedure helped to insure that the measurement of fear of success would remain stable through the experimental phase of the study. Unlike Althof, success feedback was used to insure the arousal of FOS in opponent and no opponent conditions. A motivational, digit-letter substitution task like Karabenick and Marshall's (1974) was used rather than one like Althof's to avoid the effects of individual differences in intellectual ability. The performance of medium FOS individuals was assessed, an area which had consistently been left out of previous studies. And finally, a post-experimental questionnaire was administered so that a comparison with the results of Althof's (1975) biographical-demographical questionnaire could be conducted and several aspects of the experimental manipulations assessed.

Horner (1968) theorized that the motive to avoid success must be aroused before it affects performance. Both she (1968) and Althof (1973) employed a competitive situation in order to sufficiently arouse the motive. However, many of their hypotheses were not found to be significant, although their task means were in the predicted directions. Therefore, in addition to the competitive conditions used by Horner

(1968) and Althof (1973) to arouse the motive to avoid success, this author proposed that success feedback was a necessary condition to sufficiently arouse the motive and without it, no changes in the performance of FOS subjects would be detected. For these reasons it was hypothesized that there would be no difference between low, medium, and high FOS groups or between the opponent conditions on trial 1 (prior to any success feedback).

As was stated, it was proposed by this author that success feedback was a necessary factor in the arousal of FOS. This proposition was supported by Pappo (1972). In order to assess the differences in FOS groups and/or opponent conditions when fear of success was sufficiently aroused, success feedback was added to the experiment after trial 1. Following this consideration and the work of Horner (1968) and Althof (1973) who investigated and found trends in the performance of high FOS women in competitive conditions, it was hypothesized that the differential increase from trial 1 to trial 2 would be significantly greater for high FOS subjects in the no opponent condition than for high FOS subjects in the opponent conditions (after success feedback).

Although Horner predicted that high FOS women would do more poorly in interpersonal competitive conditions when competing against men, she did not test the difference in performance between high FOS women competing against men versus high FOS women competing against other women. Althof (1973) tested this difference. Following the trends found by Althof, it is hypothesized in this study that (after success feedback), the differential increase from trial 1 to trial 2 would be significantly greater for high FOS subjects in the same-sex opponent condition than for high FOS subjects in the opposite-sex opponent condition.

On the other hand, it was proposed by both Horner (1968) and Althof (1973) that low FOS women would not exhibit this decrease in performance when involved in interpersonal competition as opposed to noncompetitive situations. In addition, Pappo (1972) did not find a decrease in the performance of low FOS subjects (males and females) after success feedback. Following the work of these authors, it was hypothesized that the differential increase from trial 1 to trial 2 for low FOS subjects in the no opponent condition would not be significantly different from the differential increase from trial 1 to trial 2 for the low FOS subjects in the opponent conditions. It was also hypothesized that the differential increase from trial 1 to trial 2 for the low FOS subjects in the same-sex opponent condition would not be significantly different from the differential increase from trial 1 to trial 2 for the low FOS subjects in the opposite-sex opponent condition.

Investigation of the performance of medium fear of success subjects had consistently been left out of the FOS research. In order to explore this area, similar comparisons were conducted on the performance of medium FOS subjects as were conducted on the other two FOS groups.

CHAPTER IV

METHOD

Subjects

One hundred eighty-seven female undergraduate students enrolled in introductory psychology courses at Oklahoma State University were employed in this study. These students were volunteers who agreed to participate for extra credit in their courses. The subjects were administered the Fear of Success (FOS) Questionnaire entitled "Self Awareness Questionnaire." From that group, the 90 female students whose scores fell in the lower, middle, and upper twenty-five percent of scores and who agreed to participate in a second experiment were employed in the second phase of the study. Three male and four female students from another class served as confederates in the opposite-sex and same-sex opponent conditions, respectively.

Materials

The FOS Questionnaire (Pappo, 1972) consisted of 83-items designed in a yes/no format and was accompanied by a computer card on which the subject recorded her answers (See Appendix A for FOS Questionnaire). All but 10 of the answers were scored in the "Yes" direction for an FOS answer.

In analyzing her questionnaire, Pappo (1972) determined several of its characteristics. The instrument has an internal consistency

reliability of .89. A factor analysis revealed 14 factors of which six had a significant number of positive loadings. These factors were interpreted to be affective reaction to success cues, repudiation of competence, sabotage of success, preoccupation with evaluation and competition, negative self-evaluation/self-doubt, and anxiety related to academic success. Concurrent validity was established through the correlation of the instrument with other scales. According to Pappo, the questionnaire is correlated with the Debilitating Anxiety Scale (Alpert & Haber, 1960), $r = .57$ ($p < .01$), with the external dimension of the I-E Scale (Rotter, 1966), $r = .24$ ($p < .05$), with the Rosenbury's Self-Esteem Scale (1965), $r = .47$ ($p < .01$), and with the Need to Fail Scale (Sarnoff, 1967), $r = .77$ ($p < .01$). The FOS Questionnaire was used by Pappo (1972) and by Curtis, Zanna, and Campbell (1975) and provides a larger sample of behavior than do alternative measures. Evidence is also provided by Pappo (1972) for the predictive validity of the questionnaire. A test-retest reliability study with a two week-interval was conducted by this author for Pappo's questionnaire. The test-retest reliability for 34 undergraduate women was .89.

In an effort to minimize the effects of intellectual differences, a digit-letter substitution task was chosen. This task consisted of a ten-letter-number combinations key, followed by a possible 250 substitutions to be completed. A subsection of 10 possible substitutions served as a sample section on which subjects were taught how to make the substitutions correctly. A second form of the task was used for trial 2, consisting of the same key and another 250 possible substitutions (see Appendix B for the Digit-Letter-Substitution Task).

A post-experimental questionnaire was constructed by using Althof's

(1975) Biographical-Demographical Questionnaire, four items from Pappo's (1972) Interim Reaction Form, and one item from Pappo's Biographical-Demographical Questionnaire and was employed in this study. The questionnaire (see Appendix H) consisted of four items designed to measure the subject's reactions to the experimental situation and 20 items which asked for information such as marital status, educational status and interests, family background, etc. Althof (1975) demonstrated a relationship between some of these 20 items and FOS imagery. For example, high FOS women were more likely to be Protestant. His questionnaire was included in this author's post-experimental questionnaire so that a comparison with his results could be conducted.

A classroom on the Oklahoma State University campus was employed for the initial testing session. For the second phase of the experiment a waiting room and an experimental room were used. In the experimental room a table measuring 2.4 x .65 meters was used with a 30.5 centimeter partition in the middle of the table. The partition was used so that subject and her opponent could not see each other's work but could be close enough so that a competitive situation was fostered.

Procedure

Phase I

The initial testing session to determine fear of success scores was conducted on four consecutive nights in a large classroom on the Oklahoma State University campus. Subjects signed-up in their introductory psychology classes for one of the four sessions, which lasted approximately 30 minutes each. The class instructors acted as experimenters in signing up the subjects (see Appendix C for instructions).

When the subjects arrived for the initial testing, a male and a female experimenter introduced themselves and proceeded with the administration of the Fear of Success Questionnaire (see Appendix D for instructions). In two of the sessions, the female experimenter read the instructions, and the male experimenter assisted with the administration of the questionnaire. In the other two sessions, this procedure was reversed. Subjects were given the "Self Awareness Questionnaire," a computer card, and a pencil. Four of the subjects were asked to pass out the materials. The experimenter asked the subjects not to turn over their questonnaire until told to do so. The experimenter then told the subjects that he/she was collecting information to improve the understanding of the factors which affect students in academic situations. He/she added that computer cards with names and ID numbers were being used so that credit could be assigned more efficiently and accurately. The experimenter then stated that he/she would present the obtained results of the study in future psychology class sessions and that if the subjects wanted to discuss the questionnaire further, individual conferences would be made available. The experimenter then read the instructions, and subejcts were asked to fill out the computer cards and answer the questionnaire. All materials were then handed back to the experimenters, and the subjects were dismissed.

Phase II

During the week that Phase I of the experiment was being run, this experimenter visited each introductory psychology class to begin the recruitment of subjects for the second phase of the experiment (see Appendix E for instructions for recruitment of subjects). The experi-

menter explained that simply using volunteer subjects in psychological experiments has several disadvantages. Because of these disadvantages, she would be randomly selecting subjects from the class to be contacted by phone and asked to participate in an experiment for extra credit. She added that they would be able at that time to decline to participate.

After scoring the questionnaire, this experimenter selected female subjects whose scores fell in the lower, middle, and upper twenty-five percent of the distribution. Scores on the questionnaire for the total sample ranged from 14 to 70 with a mean of 49.63 and a standard deviation of 12.53. The scores for the low FOS group ranged from 14 to 35 with a mean of 28.11 and a standard deviation of 5.97. The scores for the medium FOS group ranged from 38 to 44 with a mean of 41.43 and a standard deviation of 1.97. And, the scores for the high FOS group ranged from 48 to 70 with a mean of 54.34 and a standard deviation of 5.59. From these subjects, 30 were selected from each group and assigned to one of three conditions: no opponent, same-sex opponent, and opposite-sex opponent conditions. The subjects were then contacted and asked to participate in the second experiment. Thirty-eight females declined to participate or were unable to be reached. A subject was replaced by selecting another woman from the same group from which the replaced subject was drawn.

In the opposite-sex and same-sex opponent conditions, the female subject entered a waiting room designated for the experiment. A male or female confederate, respectively, met the subject in the room and acted as much like another subject as possible. The confederate was appropriately dressed and engaged the subject in casual conversation. The experimenter then arrived and ushered the subject and confederate

into the experimental room, instructing each to sit on the same side of a table measuring 2.4 x .65 meters. The table had a 30.5 centimeter partition in the middle so that the subject could not see the confederate's work. The task was then administered with instructions designed to enhance the competitiveness of the situation (see Appendix F). The subjects were told that the task was similar to a section of several intelligence tests and that these tasks have been shown to correlate highly with success during and after college. The experimenter also stated that she was interested in how well the subjects (i.e. subject and confederate) could compete with each other. Two two-minute trials were conducted with success feedback for the subject and feedback for average performance for the confederate after the first trial (see Appendix G). The success feedback consisted of the subject's announced score accompanied by information that the subject's score was better than 90 percent of the O.S.U. students taking the test. The confederate's score was adjusted to be 15 substitutions below the subject's score and then announced. The confederate was told that his/her score was about average compared to other O.S.U. students taking the test. Success or average performance feedback for each person was given in front of the other person. The second trial was administered with the same key but with a different group of substitutions, and then the subject was asked to fill out the Post-Experimental Questionnaire (see Appendix H). The subject was asked to fill out the questionnaire while the experimenter scored trial 2; however, no feedback was given concerning her performance on that trial. Following the administration of the questionnaire, subjects were told that the results of the study would be presented in class after all the subjects had been run. The subjects were

informed that the task was not related to intelligence and that no norms for the experiment actually existed. Their reactions to this information was then discussed. The subjects were also informed that if they would like to discuss the experiment or their performance in more detail, individual conferences would be made available.

In the no opponent condition, female subjects arrived at the waiting room and were met by the epxerimenter. The experimenter then ushered the subject into the experimental room and stood on the opposite side of the table from the subject. The subject was then given the task and instructions that stated that the subject's score would be compared with norms of other O.S.U. students (see Appendix F for no opponent instructions). The subject was given two two-minute trials with success feedback at the end of trial one (see Appendix G for no opponent feedback). The success feedback in this condition consisted of the subject's score and a statement that her score was better than 90% of other O.S.U. students. The second trial was administered, and the subject was asked to fill out the Post-Experimental Questionnaire. While the subject completed the digit-letter substitution task, the experimenter stood on the opposite side of the partition in order to down play any opponent effect. In all conditions the experimenter carried an official looking notebook with a computerized sheet which was consulted when feedback about norms was given to the subjects.

Statistical Analysis

The number of correct digit-letter substitutions was obtained for each subject and a 3 x 3 (FOS category x opponent condition) factorial analysis of variance was used to analyze the data on trial 1. The three

levels of the FOS category were low, medium, and high FOS, and the three levels of the opponent condition were no opponent, same-sex opponent, and opposite-sex opponent. Another 3 x 3 (FOS category x opponent condition) factorial analysis of variance was used to analyze the difference between scores earned on trial 2 and the scores earned on trial 1. Seven planned comparisons were made to test the hypothesized differences previously stated. Six 3 x 3 (FOS category x opponent condition) factorial analyses of variance were used to analyze the ratings on questions one through four of the Post-Experimental Questionnaire. These questions yielded continuous numerical data and dealt with the subjects' experiences during the actual experiment.

To enable comparison with Althof's (1975) Biographical-Demographical Questionnaire, questions from five through twenty-four of the Post-Experimental Questionnaire were analyzed for low, medium, and high FOS subjects. One-way analyses of variance were used for questions which yielded continuous numerical data. Chi-square tests were used for questions yielding frequency data.

CHAPTER V

RESULTS

Means and standard deviations are presented in Table I for each fear of success group in each opponent condition for the digit-letter substitution task scores on trial 1 and trial 2 and for the differences between those trials. A 3 x 3 (FOS category vs. opponent condition) factorial analysis of variance on trial 1 scores revealed no significant effects at the .05 level (see Table II). This result seems to indicate that no differences existed among low, middle, and high FOS subjects as predicted. One, however, cannot conclude that no significant differences among FOS groups existed. The F-value of 2.62 with 2 and 81 degrees of freedom for those differences was significant at the .10 level, suggesting the possibility of actual differences. Inspection of the FOS group means suggests that low FOS women may have performed more digit-letter substitutions than medium FOS women. In regard to the differences among opponent conditions, the prediction that no differences would exist was upheld.

The 3 x 3 factorial analysis of variance of difference scores also revealed no significant findings (see Table III). Low, medium, and high fear of success women did not differ significantly in their differential increases from trial 1 to trial 2. Whether the female subject competed with another female, male, or with a fictitious norm also did not affect her performance on trial 2 after success feedback. The nonsignificant

TABLE I

MEANS AND STANDARD DEVIATIONS FOR SCORES ON THE DIGIT-LETTER SUBSTITUTION TASK FOR TRIAL 1, TRIAL 2, AND DIFFERENCE SCORES

OPP+ FOS x Condition	Means & S.D.'s	Trial 1	Trial 2	Difference Scores
Low FOS				
No OPP+	Mean	91.60	97.20	5.60
	S.D.	9.41	9.89	4.99
S-Sex OPP+	Mean	91.70	98.70	7.00
	S.D.	12.70	16.15	7.79
O-Sex OPP+	Mean	91.10	97.00	5.90
	S.D.	10.70	14.45	5.86
Medium FOS				
No OPP	Mean	84.00	87.40	3.40
	S.D.	9.25	12.34	6.42
S-Sex OPP	Mean	87.20	91.40	4.20
	S.D.	10.72	10.71	5.88
O-Sex OPP	Mean	85.10	91.00	5.90
	S.D.	10.70	11.23	4.68
High FOS				
No OPP	Mean	91.20	98.20	7.00
	S.D.	8.85	8.57	6.43
S-Sex OPP	Mean	89.20	93.50	4.30
	S.D.	9.37	9.94	3.97
O-Sex OPP	Mean	84.50	87.70	3.20
	S.D.	9.63	9.38	4.24

+OPP = Opponent
No OPP = No Opponent
S-Sex OPP = Same-Sex Opponent
O-Sex OPP = Opposite-Sex Oppnent

TABLE II

ANALYSIS OF VARIANCE OF TRIAL 1 SCORES FOR THE EFFECTS OF OPPONENT CONDITIONS ON LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

Source	SS	df	MS	F
Fear of Success (A)	546.47	2	273.23	2.62[a]
Opponent Conditions (B)	104.07	2	52.03	< 1
A x B	187.47	4	46.87	<1
W.cell	8443.36	81	104.24	
TOTAL	9281.37	89		

[a] $p < .10$

TABLE III

ANALYSIS OF VARIANCE AND PLANNED COMPARISONS OF DIFFERENCE SCORES FOR THE EFFECTS OF OPPONENT CONDITIONS ON LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

(A) SUMMARY TABLE

Source	SS	df	MS	F
Fear of Success (A)	46.67	2	23.33	< 1
Opponent Conditions (B)	1.67	2	.83	< 1
A x B	118.27	4	29.56	< 1
W.cell	2633.88	81	32.52	
TOTAL	2800.49	89		

TABLE III (Continued)

(B) PLANNED COMPARISONS

	No OPP[+] Condition Mean	S-Sex OPP Condition Mean	O-Sex OPP Condition Mean	F or t
Low Fear of Success				
Comparison 1	5.60	(½) 7.00	(½) 5.90	F = 1.48
Comparison 2		7.00	5.90	t = .43
Medium Fear of Success				
Comparison 3	3.40	(½) 4.20	(½) 5.90	F = .56
Comparison 4		4.20	5.90	t = .67
High Fear of Success				
Comparison 5	7.00	(½) 4.30	(½) 3.20	F = 2.17
Comparison 6		4.30	3.20	t = .43

[+] No OPP = No Opponent
S-Sex OPP = Same-Sex Opponent
O-Sex OPP = Opposite-Sex Opponent

FOS category by opponent conditions interaction and nonsignificant planned comparisons (see Table III-B) do not support the hypotheses that women high in FOS would show a greater differential increase from trial 1 to trial 2 in the no opponent condition than in the opponent conditions, and a greater differential increase in the same-sex opponent condition than in the opposite-sex opponent condition. Low FOS women, as predicted, did not differ in their performance in the no opponent and opponent conditions. They also did not show a greater differential increase from trial 1 to trial 2 in the same-sex opponent condition than in the opposite-sex condition after success feedback. The latter two results were also found for medium FOS women. As the predictions for high FOS women were not upheld, the meaning of the supported predictions for low FOS women and the findings for medium FOS women are obscured.

Mean ratings for reported subject reactions during the experiment are presented in Table IV. These mean ratings are reported for all FOS groups in each opponent condition and are computed from the subjects' ratings on the first 4 questions (question 1 had three parts) of the Post-Experimental Questionnaire (see Appendix H). All but two of the 3 x 3 (FOS category vs. opponent conditions) factorial analyses of variance were nonsignificant (see Appendix I, Tables XII, XIII, XIV, and XV). The fear of success groups did not differ significantly on their reported reactions to the success feedback when considering performance on trial 2. That is to say, they did not differ on their reported feelings of uneasiness, tension, or certainty of performance on trial 2, or on their reported ratings of the importance of doing well on trial 2. However, the 3 x 3 factorial analysis of variance shown on Table V revealed that low, medium, and high FOS women differed in their ability

TABLE IV

MEAN RATINGS FOR REPORTED SUBJECT REACTIONS
DURING THE EXPERIMENT

FOS x OPP[+] Condition	Uneasy/ Calm[1]	Stress[2]	Certainty[3]	Importance of Doing Well[4]	Ability to Concentrate on Trial 1[5]	Ability to Concentrate on Trial 2[6]
Low FOS						
No OPP[+]	4.80	3.99	6.19	5.97	4.71	5.38
S-Sex OPP[+]	5.79	4.11	6.37	6.39	4.46	5.57
O-Sex OPP[+]	4.76	3.70	5.44	5.71	6.62	6.09
Medium FOS						
No OPP	3.95	3.26	4.43	5.35	5.23	2.85
S-Sex OPP	5.81	4.45	6.32	5.61	5.82	3.43
O-Sex OPP	5.19	2.75	5.72	6.04	6.42	5.56
High FOS						
No OPP	4.00	3.93	4.49	5.34	4.40	3.64
S-Sex OPP	4.39	3.55	5.64	6.34	4.09	2.92
O-Sex OPP	4.35	4.95	5.04	5.95	4.64	4.38

[+]OPP = Opponent, No OPP = No Opponent, S-Sex OPP = Same-Sex Opponent, O-Sex OPP = Opposite-Sex Opponent

1 The higher the score the more calm the subject felt.
2 The higher the score the less stress the subject felt.
3 The higher the score the more certain the subject felt about her performance.
4 The higher the score the more important it was for the subject to do well on Trial 2.
5 The higher the score the easier it was for the subject to concentrate.
6 The higher the score the easier it was for the subject to concentrate.

TABLE V

ANALYSIS OF VARIANCE AND POST HOC COMPARISONS OF THE RATINGS+ OF ABILITY TO CONCENTRATE ON TRIAL 1 FOR THE EFFECTS OF OPPONENT CONDITIONS ON LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

(A) SUMMARY TABLE

Source	SS	df	MS	F
Fear of Success (A)	31.93	2	15.96	3.82*
Opponent Conditions (B)	24.57	2	12.28	2.94
A x B	11.95	4	2.99	< 1
W.cell	338.90	81	4.18	
TOTAL	407.35	89		

(B) POST HOC COMPARISONS FOR FACTOR A

	Low FOS Subjects' Mean	Medium FOS Subjects' Mean	High FOS Subjects' Mean	q
Comparison 1	5.26	5.82		1.51
Comparison 2	5.26		4.38	2.37
Comparison 3		5.82	4.38	3.84*

* $p < .05$

+ The higher the score the easier it was for the subject to concentrate.

to concentrate on trial 1. Further scrutiny of the data using the Tukey HSD procedure showed that medium FOS subjects differed significantly from high FOS subjects, i.e. medium FOS subjects reported that they felt that it was easier to concentrate on trial 1 than high FOS subjects. No other post hoc comparisons for differences between FOS groups were significant (see Table V-B).

In examining subjects' ability to concentrate on trial 2, the analysis of variance shown in Table VI revealed that both main effects for fear of success and opponent conditions were significant. Post hoc comparisons (see Table VI-B) showed that low FOS subjects found it easier to concentrate on trial 2 after success feedback than either medium or high FOS groups. An examination of mean ability to concentrate on both trial 1 and on trial 2 for FOS groups revealed that high FOS women reported more difficulty concentrating on both trials, although high FOS subjects differed significantly only with low FOS subjects on trial 2. Post hoc comparisons conducted to explore the differences among opponent conditions (see Table VI-C) revealed that regardless of degree of FOS, subjects competing against a male opponent reported that they found it easier to concentrate than those subjects competing against a female opponent or against a fictitious norm. It is important to note that this finding is opposite to the popular belief that women have more difficulty when competing against men.

Five one-way analyses of variance were used to analyze questions on the Post-Experimental Questionnaire which yielded continuous numerical data for low, medium, and high FOS subjects (questions 11, 19a, 19b, 21, and 23). The means for the FOS groups are given for each analyses in Table VII. Only two of these five analyses were significant

TABLE VI

ANALYSIS OF VARIANCE AND POST HOC COMPARISONS OF THE RATINGS+ OF ABILITY TO CONCENTRATE ON TRIAL 2 FOR THE EFFECTS OF OPPONENT CONDITIONS ON LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

(A) SUMMARY TABLE

Source	SS	df	MS	F
Fear of Success (A)	72.29	2	36.14	8.00**
Opponent Conditions (B)	38.00	2	19.00	4.21*
A x B	16.09	4	4.02	< 1
W.cell	366.00	81	4.52	
TOTAL	492.38	89		

(B) POST HOC COMPARISONS FOR FACTOR A

	Low FOS Subjects' Mean	Mediums FOS Subjects' Mean	High FOS Subjects' Mean	q
Comparison 1	5.68	3.95		4.42**
Comparison 2	5.68		3.65	5.19**
Comparison 3		3.95	3.65	< 1

** $p < .01$

* $p < .05$

+ The higher the score the easier it was for the subject to concentrate

TABLE VI (Continued)

(C) POST HOC COMPARISONS FOR FACTOR B

	No OPP+ Condition Mean	S-Sex OPP Condition Mean	O-Sex OPP Condition Mean	q
Comparison 1	3.96	3.97		< 1
Comparison 2	3.96		5.34	3.55*
Comparison 3		3.97	5.34	3.50*

*p < .05

+No OPP = No Opponent
S-Sex OPP = Same-Sex Opponent
O-Sex OPP = Opposite-Sex Opponent

TABLE VII

MEAN SCORES FOR LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS FOR FIVE ITEMS ON THE POST-EXPERIMENTAL QUESTIONNAIRE

FOS Condition	G.P.A.	Closeness to Father	Closeness to Mother	Highest grade Father Completed	Highest grade Mother Completed
Low	3.36	2.48	1.63	14.40	13.50
Medium FOS	2.99	1.62	1.78	14.43	13.57
High FOS	2.86	3.36	2.10	14.00	13.73

(see Tables VIII and IX). Fear of success subjects differed significantly on their obtained grade point averages at O.S.U. Post hoc comparisons (see Table VIII-B) revealed that low FOS subjects obtained a higher G.P.A. than either medium or high FOS subjects.

The second significant one-way analysis of variance was performed on ratings of closeness to father. Post hoc comparisons (see Table IX-B) revealed that only high FOS subjects differed from medium FOS subjects on these ratings. High FOS women rated themselves as less close to their fathers when they were children than medium FOS women.

The three other one-way analyses of variances were not significant (see Appendix J, Tables XVI, XVII, and XVIII). Fear of success groups did not differ significantly on their reported closeness to their mothers, on the highest grade their fathers completed in school, and on the highest grade their mothers completed in school.

The remaining sixteen questions of the questionnaire (see Appendix H) yielded frequency or ordinal data. Seven of the sixteen questions (questions 5, 6, 7, 10, 14, 15, and 16) did not warrant chi-square tests due to the restriction of range of their scoring and/or lack of variability of the means of the different FOS groups answering the questions. These data provide, however, a description of the sample of women who participated in the study. The women in this study ranged in age from 17 to 22 with the average age being 18.7. One subject was divorced while the remaining 89 subjects were single. The duration of current marriage for all subjects was therefore zero. Subjects were in their first, second, or third year at O.S.U. with the average year in school being 1.2. Subjects ranged from first to sixth born in their families with the average birth-rank for the total being 2.2. Subjects

TABLE VIII

ANALYSIS OF VARIANCE AND POST HOC COMPARISONS OF GRADE POINT AVERAGES FOR LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

(A) SUMMARY TABLE

Source	SS	df	MS	F
Fear of Success (BG)	4.18	2	2.09	10.39**
W.cell (WG)	17.50	87	.20	
TOTAL	21.68	89		

(B) POST HOC COMPARISONS

	Low FOS Subjects' Mean	Medium FOS Subjects' Mean	High FOS Subjects' Mean	q
Comparison 1	3.36	2.97		4.40**
Comparison 2	3.36		2.86	5.95**
Comparison 3		2.97	2.86	1.55

**$p < .01$

TALBE IX

ANALYSIS OF VARIANCE AND POST HOC COMPARISONS OF THE RATINGS+ OF CLOSENESS TO FATHER FOR LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

(A) SUMMARY TABLE

Source	SS	df	MS	F
Fear of Success (BG)	45.76	2	22.88	5.09**
W.cell (WG)	391.14	87	4.50	
TOTAL	436.90	89		

(B) POST HOC COMPARISONS

	Low FOS Subjects' Mean	Medium FOS Subjects' Mean	High FOS Subjects' Mean	q
Comparison 1	2.48	1.62		2.22
Comparison 2	2.48		3.36	2.27
Comparison 3		1.62	3.36	4.50**

**$p < .01$

+The higher the score the less close the subject felt toward her father.

had 0 to 4 brothers and 0 to 4 sisters with the average for the sample being 1.7 brothers and 1 sister.

The final nine questions (questions 8, 9, 12, 13, 17, 18, 20, 23, and 24) were analyzed using chi-square tests. Only two of the nine $\underline{X}^2$ analyses were significant. Table X shows that low, medium, and high fear of success subjects differed on the number of times that they have changed their major. Examination of the data suggests that high FOS subjects change their majors more times than either medium or low FOS subjects, and medium FOS subjects change their majors more times than low FOS subjects.

Two independent raters rated subjects' future occupational goals as either female-oriented, male-oriented, or not sex-related. Those goals which were not primarily female-oriented or male-oriented were classified as not sex-related. If there were any disagreements between raters, the author classified the goal as not sex-related. Agreement between raters for all three categories was 74%. It is important to note, however, that the method of placing the goals which the raters disagreed upon in the not sex-related category insured 100% agreement on the female-oriented and male-oriented categories. Table XI shows that low, medium, and high fear of success subjects differed on the masculinity-femininity orientation of their future occupational goals. An examination of the data suggests that low FOS women chose more masculine-oriented goals than medium FOS women and possibly more than high FOS women. The data also suggest that medium FOS subjects chose more goals that were not sex-related than low FOS subjects; however, as the not sex-related category does not have as high a rater-agreement percentage as other categories, this finding is only suggestive.

TABLE X

NUMBER OF TIMES LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS HAVE CHANGED THEIR MAJORS+

Times Majors Have Been Changed	Low FOS Subjects	Medium FOS Subjects	High FOS Subjects	X^2
0	27 (19.67)	18 (19.67)	14 (19.67)	17.06**
1	3 (7.33)	10 (7.33)	9 (7.33)	
2 or more	0 (3.00)	2 (3.00)	7 (3.00)	

** $p < .01$

+Expected frequencies in parentheses.

TABLE XI

LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS' FUTURE OCCUPATIONAL GOALS CLASSIFIED AS PRIMARILY FEMALE-ORIENTED, MALE-ORIENTED, OR NOT SEX-RELATED+

Future Occupational Goals	Low FOS Subjects	Medium FOS Subjects	High FOS Subjects	X^2
Female-Oriented	11 (10.34)	9 (10.34)	11 (10.34)	9.49*
Male-Oriented	9 (6.00)	4 (6.00)	5 (6.00)	
Not Sex-Related	10 (13.67)	17 (13.67)	14 (13.67)	

* $p < .05$

+Expected frequencies in parentheses.

The other $\underline{X}^2$ tests were not significant. Low, medium, and high FOS subjects do not differ significantly in their preference for children, religious preference, reported classifications (yes/no/no difference) of whether they were their mothers' favorite child, or classifications of whether they were their fathers' favorite child (see Appendix K, Tables XIX, XX, XXI, and XXII). When classifying fathers' occupations into three categories (professional persons; proprietors, managers, and officials; and clerks, skilled through unskilled workers, and foremen), the author found no significant differences among FOS groups (see Appendix K, Table XXIII). When classifying mothers' occupations into four categories (professional persons; proprietors, managers, and officials; clerks, skilled workers, and foremen; and semiskilled and unskilled workers), the author also found no significant differences among FOS groups (see Appendix K, Table XXIV). (The classifications of fathers' occupations were collapsed into three categories due to low expected frequencies in the category of "semiskilled and unskilled workers.") And finally, low, medium, and high FOS groups did not differ significantly in the size of city in which they were raised (see Appendix K, Table XXV).

CHAPTER VI

DISCUSSION

This study attempted primarily to expand the work done by Althof in 1973. In hopes of clarifying the reasons for the lack of significant findings in his work, this author attempted to refine Althof's original methodology. The study was also conducted to provide additional information in the area of fear of success research in regard to women possessing a medium degree of FOS and in regard to the applicability of Pappo's (1972) FOS Questionnaire. In addition, this study was designed to investigate the characteristics of low, medium, and high FOS women by employing Althof's (1975) Biographical-Demographical Questionnaire. Inclusion of the questionnaire also enabled the author to compare the results of the present study with Althof's (1975) findings.

One major argument of Horner's (1968) theorizing about the motive to avoid success is that it must be sufficiently aroused. She contends that the motive is aroused when high FOS women are in competition with other people, especially men. Analysis of the trial 1 data did not support this contention. High FOS women, as well as medium and low FOS women, did not differ significantly in their performance on the digit-letter substitution task when competing against another female, a male, or a fictitious norm. Since this author proposed that success feedback was a necessary condition for FOS to be aroused, she hypothe-

sized that FOS groups would not differ significantly on trial 1 scores (before success feedback was given). Although differences among FOS groups on trial 1 were not significant at the .05 level, the data suggest that low FOS subjects may perform better on the task than medium FOS subjects without requiring success feedback for the arousal of the motive and regardless of which opponent condition they are in.

After success feedback, it was predicted that high fear of success women would perform better in the no opponent condition than in either opponent conditions and better in the same-sex opponent condition than in the opposite-sex opponent condition. Low FOS women were predicted not to differ in their performance in the no opponent versus opponent conditions or in the two opponent conditions. The author planned to investigate the performance of medium FOS women with comparisons similar to those conducted on high and low FOS subjects' scores; however, no hypotheses with specified directions for differences between means were formulated for this group due to the lack of previous research regarding medium FOS women. As was stated, success feedback was given so that the motive to avoid success would be sufficiently aroused, therefore enabling the predicted differences in performance to occur. The predictions for low and high FOS groups were made in accordance with the work of Althof (1973) and Horner (1968). The lack of significant findings in the analyses of difference scores for high FOS women do not lend support to Horner's theory.

One possible interpretation of the lack of significant results for high FOS women is that the effects of fear of success were no longer in existence in 1976, eight years after Horner's original work and several years since a strong women's liberation movement had gotten

underway. Perhaps women, when competing with men, no longer fear the negative consequences of success, i.e. loss of femininity or social rejection. On the other hand, examination of several aspects of the study's methodology may provide clues as to the lack of statistical significance for the scores of high FOS women. This examination may then be able to suggest other interpretations of the results.

One would expect that the "possibility" for the fear of success groups to differ which was present in trial 1 scores should be heightened after success feedback. However, no significant differences were obtained. An examination of the credibility of the importance of the task being performed and therefore the importance and/or degree of impact of the success feedback may shed some light on the contradictory result and lack of significance. Subjects were told that the task they were performing was similar to a section of several intelligence tests and correlated with success during and after college. In the debriefing many subjects stated that they did not really believe that the task was related to intelligence. Many felt that it might be related to memory, but it was just too simple a task to be related to intelligence and success. Subjects were given this information to heighten competition; however, the reverse effect may have occurred, i.e. a lessening of competition due to the lack of importance of the task. If the subjects were not motivated to compete with the opponent or fictitious norm, the effect of the success feedback, which the author strove to create, may not have been achieved, i.e. the awareness and feelings of doing well on an important task in competition with another person (or norm). It is also important to note that all subjects were asked in the debriefing how they felt about the success feedback. Although responses varied,

no subject indicated that she did not believe the experimenter's report of her and her confederate's performance. Therefore, one may conclude that doing well on a simple task may not have carried with it the same negative consequences for high FOS women as doing well on a difficult one.

Pappo (1974) used as her task the Nelson-Denny Reading Comprehension Test for College Students. Subjects were given a passage to read (one of several) and then instructed to answer questions about that passage without being able to refer back to it. This task is very similar to sections of college entrance board examinations with which all college students are familiar. Pappo's positive results may have been due in part to a task which, by its relation to previous tests students have taken in important situations, may have motivated the subjects to do well. The success feedback was therefore viewed as extremely important or powerful, and an excellent manipulation of the experimental conditions was obtained (success versus nonsuccess feedback). The task may also have been more sensitive to the effects of the motive to avoid success because it was more complex or difficult. For example, if a person were anxious about doing too well on a task and there were having difficulty concentrating, his/her performance on a reading test might be affected more than his/her performance on a digit-letter substitution task. Further support of this interpretation is found in the present study through examination of the result that high and medium FOS women actually did find it more difficult to concentrate on trial 2 than low FOS women. This result is consistent with previous research (Pappo, 1972). Following from this result, one would expect that these subjects' performance on trial 2 would be hindered by their difficulty

concentrating. However, although they did find it more difficult to concentrate, their performance on trial 2 did not differ from low FOS subjects. Again, the difficulty concentrating may not have been reflected in the performance of high and medium FOS subjects due to the simplicity of the task used. This author's use of a simple motivational task to eliminate individual differences may not have outweighed the disadvantages of the task, i.e. lack of sensitivity to the effects on performance of success feedback or opponent conditions.

Another aspect of the methodology concerns the use of Pappo's FOS Questionnaire and offers two possible interpretations for the lack of significant findings. One interpretation is that Pappo's questionnaire contains several factors which may not be related to performance in the laboratory situation and which may obscure the emergence of significant findings for high FOS women. A factor analysis conducted on the FOS questionnaire by Pappo (1972) yielded 14 factors, six of which had a significant number of positive loadings. These six factors were affective reaction to success cues, repudiation of competence, sabotage of success, preoccupation with evaluation and competition, negative self-evaluation--self-doubt, and anxiety related to academic success. An area of further research, possibly using the same data collected for this study, would be to compare low, medium, and high FOS subjects in terms of these six factors to determine which factors differentiate among the groups.

Another consideration is that Pappo's FOS Questionnaire may represent a global measure and one which may not be sensitive enough to predict low, medium, and high FOS groups' performance on such a specific task as the one used in this study. For example, the questionnaire is

concerned with a person's behavior in competitive sports, while day-dreaming, and in school. Behavior in these circumstances may not have anything to do with behavior involved in tasks such as digit-letter substitution. Of more importance is the fact that almost all the questions in Pappo's questionnaire dealing with anxiety about success when in the presence of other people involve close relationships, i.e. close friends, parents, or teachers. In the present experiment, FOS subjects competed against strangers or a fictitious norm. Perhaps high levels of FOS are aroused only when one is in competition or experiences success with someone who "counts."

A final interpretation for the lack of significant results in the analyses of difference scores is that the low, medium, and high FOS groups were not sufficiently separated by scores on the FOS questionnaire, so that differences in their performance could be detected. In this study, low, medium, and high FOS subjects were selected from the bottom, middle, and upper 25% of scores, respectively, of the total sample adminstered the FOS Questionnaire. All subjects used in the second phase of the study were contacted by phone or personally if no phone number was available and had to agree to participate in this second phase. One hundred eighty-seven women were administered the FOS questionnaire. Their scores on the questionnaire ranged from 14 to 70. The mean for the sample was 49.63 and the standard deviation was 12.53. Low FOS subjects were selected from those subjects scoring from 14 to 35; medium FOS from those subjects scoring from 38 to 44; and high FOS from those subjects scoring from 48 to 70. Only two points separated medium and low FOS groups; only three points separated medium and high FOS groups. Ninety female subjects were used. Pappo (1972) on the

other hand, administered approximately 800 questionnaires to both male and female undergraduates (the approximate number administered to females was not known). Of all these subjects, only 45 females and 44 males were used in the study. The mean of Pappo's sample of 800 was 37 and the standard deviation as 12. All low FOS subjects selected fell one standard deviation below the test mean; all high FOS subjects fell one standard deviation above the test mean. Low FOS subjects' scores therefore fell below a score of 15, and all high FOS subjects fell above a score of 49. Subjects were separated by 34 points. Low and high FOS subjects were only separated by 13 points in the present study. This separation may not have been large enough to adequately separate the groups so that differences could be detected in their performance. However, it may be argued that if such separation is needed, the effects sought may not be that important.

In summary, with regard to subjects' behavior in the laboratory situation, suggestions for further research indicate an examination of the FOS questionnaire in terms of the different factors measured by the questionnaire and refining it to get a purer measure of fear of success, use of a task which is more conducive to the arousal of competition and one in which the importance of doing well exists, and examination of the effects of success with close friends or perhaps even engaged or married couples, and a wider separation of scores for subjects classified as low and high in FOS.

Four questions of the Post-Experimental Questionnaire were used to measure subjects' reported reactions to the experiment (question 1 had three parts). It was found that fear of success groups did not differ significantly on their reported feelings of uneasiness, tension,

or certainty of their performance. They also did not differ on their reported ratings of the importance of doing well on trial 2. These findings did not support Pappo's (1972) findings that after success feedback, high FOS persons felt more uneasy and under more stress than low FOS persons and that it was more important for high FOS persons to do well on trial 2. The present study also found that it was easier for medium FOS women to concentrate on trial 1 than high FOS women. The latter result is difficult to compare with Pappo's finding that high FOS persons found it more difficult to concentrate than lows, since the low FOS women in this study did not also report finding it less difficult to concentrate than high FOS women. The only finding in this study in support of Pappo's work is that low FOS women reported that it was easier to concentrate on trial 2 after success feedback than either medium or high FOS women. One possible interpretation of these two significant findings is that after all of the analyses conducted on this set of data, these few positive results could be due to chance. Interpretations of the lack of significant results concerning reactions to the experimental manipulations would follow those given above for the nonsignificant results found by analyzing the difference scores.

The result of the present study that women competing against a male opponent reported finding it easier to concentrate on trial 2 than those women competing against a female opponent or fictitious norm was completely unexpected. This finding is opposite to the belief present in today's society and proposed by Horner (1968) that women fear the negative consequences of success when competing with men. Popular beliefs would predict that women would have more difficulty concentrating when competing with men. Several interpretations of this result are

possible. First, the result may also be one of chance due to the many analyses performed in this study. Secondly, these women were competing with men who were total strangers. They had no reason to fear the negative consequences of success, i.e. loss of femininity or social rejection, from these men as they might fear if competing with a boyfriend, financé, or husband. This factor plus the rising influence of women's liberation, which stresses the right of women to compete with men and win, may have produced an extra incentive to succeed when competing against a male rather than against a female or fictitious norm.

The remaining nineteen questions of the Post-Experimental Questionnaire were included in the study to provide a comparison with Althof's (1975) Biographical-Demographical Questionnaire. One question pertaining to the subject's future occupational goal was included in this study but not in Althof's. None of the results of this study lent full support to those of Althof's. One result provides partial support for one of his findings. Althof found that high FOS women were more femininely-oriented in their attitudes and interests, while this study found that low FOS women chose more masculine-oriented goals than medium and possibly more than high FOS women. The fact that Althof's results were not replicated lends itself to several interpretations. First, these findings may add support to the argument that Althof's findings were indeed due to chance (only 7 of the 78 variables studied significantly differentiated the FOS groups). Secondly, the lack of significant findings may call into question the existence of fear of success all together.

Two other interpretations seem more likely. First, different instruments for measuring fear of success were used in the two studies.

Althof used a projective technique similar to Horner's (1968) original one. This author used Pappo's (1972) objective test. These two instruments may not be measuring the same phenomenon and therefore would not allow a legitimate comparison of the results of both studies. Secondly, as discussed before, FOS groups may not have been sufficiently separated in terms of their scores on the FOS questionnaire to provide true samples of low, medium, and high FOS women. If this were in fact true, one would not expect groups to differ significantly on many of the variables tapped by the Post-Experimental Questionnaire.

One finding of particular interest in this study was that low fear of success women had higher grade point averages than medium or high FOS women. This result is contradictory to previous trends in the research. Horner (1968) found that Honors women had a higher frequency of fear of success than Non-Honors women, although not significant at the .05 level. Althof (1973) found a tendency, although also not significant at the .05 level, for high FOS women to have a higher grade point average than low FOS women. One interpretation of the finding in the present study, contrary to Horner's (1968) theorizing, is that because low FOS women do not fear success, they have less anxiety over competing or exhibit less self-sabotaging behavior and therefore make better grades than either medium or high FOS women.

Several other results were found to be significant when analyzing the Post-Experimental Questionnaire. High fear of success women reported that they were less close to their fathers when they were children than medium FOS women. High FOS subjects changed their majors more times than either medium or low FOS subjects, and medium FOS subjects changed their majors more times than low FOS subjects. In addition, low

low FOS women chose more masculine-oriented goals than medium FOS women and possibly more than high FOS women. As has been discussed, this latter result provides partial support for Althof's (1975) finding that high FOS women were more femininely-oriented in their attitudes and interests than low FOS women. The former two results have not been found in previous research. These findings do not seem to lend themselves to a logical and consistent interpretation with previous research. One explanation of this phenomenon is that because of the many analyses performed in this study, some of them may be due to chance and therefore would be clouding a logical interpretation of the data.

One purpose of the study was to investigate the performance and characteristics of medium fear of success women as this group has been consistently left out of FOS research. There was no consistent pattern of the performance or characteristics of medium FOS subjects. Sometimes medium FOS subjects differed from high FOS subjects but low FOS subjects did not differ from high FOS subjects. Sometimes high and medium FOS subjects together differed from lows; and sometimes all three groups differed from a low to high order. One interpretation of this inconsistent pattern is that the medium FOS group, due possibly to an insufficient separation between groups on their scores on the FOS Questionnaire, may have contained subjects which in reality may have belonged to a low FOS group, to a high FOS group, or to both groups. This phenomenon may have resulted in an inconsistent performance pattern for the medium FOS group. Another interpretation may be that the relationship between low, medium, and high FOS groups and other variables is not a linear one. Since the medium group has never before been studied, comparisons with other data cannot be made. The performance of medium FOS persons in comparison with low and high FOS persons is an area which is in need of further study.

Several suggestions for further research have previously been discussed. In concluding this discussion, this author would like to emphasize the necessity for a study comparing the equivalency of either Horner's (1968) projective technique or Althof's (1973) modified version of it and Pappo's (1972) FOS Questionnaire. The difficulty of comparing results across studies is enormous and the methodological questions regarding the ability to measure this so-called FOS phenomenon are many. More credibility would be established for the existence of the motive to avoid success if two different techniques were shown to be able to accurately differentiate people into the same low, medium, and high FOS categories.

CHAPTER VII

SUMMARY

The motive to avoid success or "fear of success" has become a popular area in research today. The interest in this area developed out of achievement motivation research and the work of Matina Horner in 1968. Since then, a tremendous amount of valuable human effort has gone into trying to verify Horner's theory. Among the areas of FOS research studied are sex differences in FOS, effects of cue content, types of FOS instruments, and developmental aspects of FOS. Presently, there is much inconsistency in the research. Other theorizing about the phenomenon is developing, and the variables which seem to influence the behavior of high FOS persons are increasing. It was in the hopes of expanding and clarifying some of the work done in the area of FOS that this study was conducted.

The present study examined the effects of no opponent, same-sex opponent, and opposite-sex opponent conditions on the performance of low, medium, and high fear of success college women. One hundred eighty-seven introductory psychology women were administered Pappo's (1972) Fear of Success Questionnaire, in the first phase of this experiment. Low, medium, and high FOS subjects were then defined as falling in the lower, middle, and upper twenty-five percent of scores for the total sample, respectively. Ninety subjects, 30 from each group, were then selected and assigned to one of the three opponent conditions. Subjects

were then called and asked to participate in an experiment (actually the second phase of the experiment).

Low, medium, and high FOS subjects then performed two trials of a digit-letter substitution task, while competing against a fictitious norm, a female opponent, or a male opponent. The female and male opponents were confederates from a different psychology class. Success feedback was given after trial 1 for all subjects; average performance feedback was given to all confederates. After completing trial 2, all subjects filled out a Post-Experimental Questionnaire. This questionnaire consisted of questions asking for the subject's reactions during the actual experiment and for some biographical-demographical information. The questionnaire was included so that a comparison with Althof's (1975) study could be conducted.

Analysis of trial 1 scores revealed no significant differences at the .05 level of significance among FOS groups or among opponent conditions. The prediction of no differences among opponent conditions was upheld. However, a difference among the FOS groups, which was significant at the .10 level, did not allow the author to conclude with certainty that no differences existed among them.

Analysis of difference scores (performance on trial 2 minus performance on trial 1) and planned comparisons again revealed no significant findings. Low, medium, and high fear of success women did not differ on their performance from trial 1 to trial 2 after success feedback. Whether the female subject competed with another female, male, or fictitious norm also did not affect her performance on trial 2. This study did not support Horner's (1968) theory that high FOS women would perform better in noncompetitive than in competitive conditons, or

Althof's (1973) prediction that these women would perform better in same-sex opponent condition than in the opposite-sex opponent condition. Low FOS women, as predicted, did not differ in their performance in the no opponent condition and the opponent conditions. They also did not perform better in the same-sex opponent condition than they did in the opposite-sex opponent condition. The latter two results were also found for medium FOS women. As the predictions for high FOS women were not upheld, the meaning of the supported predictions for low FOS women and the findings for medium FOS women are obscured.

Consistent with previous studies, the Post-Experimental Questionnaire revealed that low FOS women reported that it was easier to concentrate on trial 2 after success feedback than either medium or high FOS women, and that low FOS women chose more masculine-oriented goals than medium FOS women and possibly more than high FOS women. Contrary to previous studies it was found tha low FOS women had higher grade point averages than medium or high FOS women and that women, regardless of the degree of FOS, reported that it was easier to concentrate when competing against a male opponent than a female opponent or fictitious norm (after success feedback). The present study revealed three other findings which previously have not been found in the FOS research. First, medium FOS women found it easier to concentrate on trial 1 than high FOS women. Second, high FOS subjects changed their majors more times than either medium or low FOS subjects, and medium FOS subjects changed their majors more times than low FOS subjects. And thirdly, high fear of success women reported that they were less close to their fathers when they were children than medium FOS women. No consistent pattern of performance or characteristics of medium FOS subjects was found.

Suggestions for further research indicate an examination of the FOS Questionnaire (Pappo, 1972) in terms of the different factors measured by the instrument and refining it to get a purer measure of fear of success, use of a task which is more conducive to the arousal of competition and one in which the importance of doing well exists, an examination of the effects of success with close friends or perhaps even engaged or married couples, and a wider separation of scores for subjects classified as low and high in FOS. The author would also like to emphasize the necessity for a study comparing the equivalency of either Horner's (1968) projective technique or Althof's (1973) modified version of it and Pappo's (1972) FOS Questionnaire.

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APPENDIXES

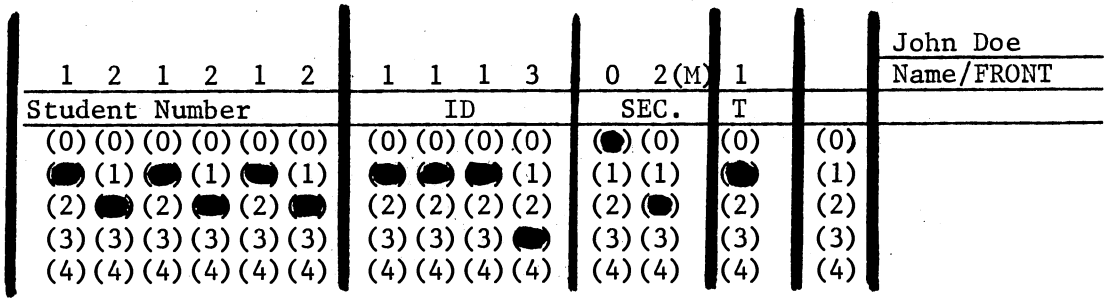
APPENDIX A

SELF AWARENESS QUESTIONNAIRE

SELF AWARENESS QUESTIONNAIRE

Instructions:

1. On the computer card, write in your student number, course ID (1113), and in the place marked sec., place 01 if you are a female, and 02 if you are a male. Now pencil in the numbers on the computer card which correspond to your student number, ID, and sex. Print your name in the space provided and then turn the card to the back and repeat the same procedure. An example is given below.



REPEAT THIS PROCEDURE ON THE BACK

2. Make sure to place each answer on the computer card (not on the questionnaire). Do not put your name on the questionnaire.

3. Please answer each item carefully; however, do not spend too much time on any one item. If necessary, guess the answer to an item rather than leave it blank.

4. On your computer card, mark A for Yes for those items that are more often than not true of your behavior or your opinions.

5. On your computer card, mark B for No for those items which infrequently or never describe your behavior or opinions.

6. A few items contain "double" statements, for example: "Although I often get excited by challenging work assignments, they also make me feel uneasy." For such cases, if both parts of the question are more often true than not true for you, mark A (Yes). If only one part of the item is more often true than not true for you, then mark B (No).

Questions:

1. It is easy for me to concentrate on my studies. (No)

2. I find it difficult to tell my friends that I do something especially well.

3. Frequently, at crucial points in an intellectual discussion my mind goes blank.

4. Often times, I become self-conscious when someone who 'counts' compliments me.

5. Generally, when I complete an important project I am satisfied with the results. (No)

6. As a game (card game, word game, chess, competitive sport etc.) reaches the winning point I start thinking about other things.

7. The things that I achieve frequently fall short of my fondest hope.

8. When playing competitive games I make more mistakes near the end than at the beginning.

9. When I write a paper for school I often feel unsure of my ideas until I check them out with teachers or friends.

10. I used to fantasize about doing something that no one else had ever done before.

11. I like it if a teacher I respect tells me my work is good although it makes me somewhat uncomfortable.

12. In areas in which I have talent my products are usually not excellent.

13. When I play competitive games I'm often so concerned with how well I am doing I don't enjoy the game as much as I could.

14. Instead of celebrating, I often feel let down after completing an important task or project.

15. I feel I need someone to push me to do the things I want to do.

16. When I am playing a game and people are watching I am extremely aware of their presence.

17. In my family (cousins included) I tended to be near the top academically. (No)

18. I tend to misplace things and then when I need them they are difficult to find.

19. It is important to seek the friendship of people with positions of higher status than yours.

20. When I feel confused about material I am learning I work at it myself until it is resolved. (No)

21. If something is easy for me to learn or to do, I have difficulty imagining someone else having trouble with it.

22. I frequently find it difficult to measure up to the standards I set for myself.

23. When a teacher praises my work I wonder if I can do as well the next time.

24. Oftentimes, I feel as if I do very little studying even though I generally get my work done.

25. I tend to get tired while studying.

26. It is more important to try to win a game than to merely play it.

27. I often get very excited when I start a project, but I get bored with it quickly.

28. At times, I believe I have gotten by in school because of the luck and the carelessness of the teachers.

29. Sometimes I find myself daydreaming about accomplishing fantastic feats.

30. While developing a new idea I find that my thinking 'freezes' at a certain point.

31. If I win a competitive game I feel a little bad for the other player.

32. When I study I am very aware of the passing of time.

33. There are school subjects in which I really excel. (No)

34. I sometimes have difficulty bringing important tasks to a successful conclusion.

35. I like working out tricky puzzles and problems even if I'm not sure I can figure them out. (No)

36. Frequently, I wish I was just a little bit smarter.

37. Persuasive people can influence my ideas.

38. When I get a low grade I know I could have done better if I had worked harder.

39. It makes me feel good to tell people about the things some of my friends have accomplished.

40. As a competitive game nears the end I tend to become tired and make more errors.

41. I have had difficulty deciding what work deeply interests me.

42. If someone calls attention to me when I'm doing well, I often feel awkward.

43. When specific work assignments seem to be going extremely well I get scared that I'll do something to ruin it.

44. I try the hardest when my work is being evaluated.

45. My family saw me as the academically successful one. (No)

46. If I get a low grade on a work assignment I feel cheated.

47. Once I have completed a task it seems less valuable.

48. I frequently explore academic areas that I know nothing about. (No)

49. I think I often have good ideas, but I frequently forget them.

50. Even though I feel that I have a lot of potential, I sometimes feel like a phoney or a fraud.

51. Occasionally, when I am winning a game I get so excited I miss a point.

52. One way to insure failure is to want something too much.

53. There are times when I don't think I have what it takes to be a success in the area I am interested in.

54. It's very difficult to do anything important really well.

55. Others judge you by the people you associate with.

56. When I hear about the accomplishments of my friends I tend to think about what I, myself, have or have not accomplished.

57. I often don't do as well as I am able because I put off my work until the last minute.

58. Often when I study I keep thinking of other things that I need to do.

59. My parents inaccurately assessed my intelligence.

60. I feel that it is important for people of higher status to like me.

61. While I'm learning something completely new I find praise necessary.

62. If school tasks are easy to finish I feel as though they were meaningless.

63. If I get a high grade on a work assignment I tend to feel that I fooled the teacher.

64. I become more excited while playing a game if people are watching.

65. When friends whose opinions I value compliment my work I feel good but uneasy.

66. At times, my work piles up so much that I have difficulty completing all of it.

67. Often when I win a competitive game, I get the idea that it was because of the other player's carelessness.

68. At times, my grades amaze me because it seems like I rarely prepare adequately.

69. At times I brag about the accomplishments of my friends.

70. It pays to discuss your ideas with a teacher or friend before handing in a finished paper.

71. If I don't think I can learn to do well at something, I prefer not to try.

72. As I near completing a task compliments may make me uneasy.

73. After studying hard for an exam, I often find the test itself tedious.

74. At times, I have accidently spilled something on the final copy of a school project.

75. My work is characterized by enthusiastic beginnings and indifferent endings.

76. It is easy to become distracted while taking a test.

77. I am doing exactly the work I want to do. (No)

78. There are areas in which I am talented. (No)

79. If it weren't for some remarkably good luck I would probably not have gotten as far as I have.

80. It is important not to get excited about the things one desires.

81. Without someone encouraging me I might not have done some of the important things I've accomplished.

82. I like the idea of having friends who are in positions of power and influence.

83. Although I have much difficulty doing so, I generally finish essential undertakings.

APPENDIX B

DIGIT-LETTER SUBSTITUTION TASK

DIGIT-LETTER SUBSTITUTION TASK

1	2	3	4	5	6	7	8	9	0
Z	M	V	K	E	H	N	J	F	B

SAMPLE

4	7	3	8	0	1	5	9	7	6

2	7	0	3	4	1	8	7	9	1	3	6	4	2	1	5	4	0	2	8	4	0	3	5	6

1	7	0	2	8	0	6	4	7	6	8	5	0	6	7	4	1	7	2	4	6	0	5	3	9

8	6	0	1	4	8	0	5	1	9	4	7	3	0	1	6	5	9	8	3	7	4	2	5	6

9	2	8	1	6	4	5	0	7	2	5	6	9	4	2	5	1	9	3	7	0	4	8	6	3

6	5	9	1	8	5	3	2	6	0	3	9	5	7	8	4	1	3	8	6	2	4	7	9	0

7	3	5	8	6	1	0	2	8	4	9	1	7	0	3	4	6	2	9	4	1	8	3	9	7

6	0	2	7	0	8	4	5	9	8	5	2	4	0	6	3	9	2	5	8	3	7	1	4	9

2	5	8	1	3	0	9	6	8	5	2	7	6	0	9	1	7	3	4	8	1	0	3	5	9

5	9	3	6	7	0	8	9	1	6	4	3	0	5	3	8	2	1	4	6	3	9	2	4	7

1	2	3	4	5	6	7	8	9	0
Z	M	V	K	E	H	N	J	F	B

6	0	1	7	3	1	5	8	4	7	3	5	9	8	4	0	2	7	4	6	5	1	3	8	9

0	4	1	7	2	6	3	9	4	8	6	0	2	5	1	6	4	5	9	2	1	8	0	9	3

5	8	4	1	7	0	8	3	7	2	8	6	1	9	7	5	2	4	0	8	2	9	7	5	1

1	7	4	2	8	3	5	0	7	8	2	0	3	9	5	6	9	2	4	0	1	3	8	6	1

4	7	3	0	9	2	7	1	0	9	6	3	7	1	2	8	3	9	0	6	5	8	4	7	5

7	9	3	8	1	4	9	2	6	4	3	0	7	1	9	4	8	2	0	1	6	8	5	3	7

2	6	0	8	6	2	3	7	0	9	8	3	5	1	8	0	4	5	2	7	1	6	9	3	7

9	0	1	8	5	2	7	6	3	9	1	6	2	9	1	0	3	7	2	9	1	8	3	5	9

6	9	7	3	0	9	3	4	8	7	5	1	6	3	9	8	0	7	1	5	4	6	3	0	8

1	9	7	4	8	5	2	1	4	7	3	9	5	1	8	6	0	2	4	7	2	5	8	0	3

APPENDIX C

INSTRUCTIONS FOR INTRODUCTORY PSYCHOLOGY INSTRUCTORS FOR SIGNING-UP SUBJECTS FOR PHASE I

INSTRUCTIONS FOR INTRODUCTORY PSYCHOLOGY INSTRUCTORS

FOR SIGNING-UP SUBJECTS FOR PHASE I

I am going to pass around sign-up sheets for those of you interested in participating in an experiment for extra credit. The experimenter is interested in improving the understanding of the factors which affect a student in academic situations and will ask you to fill out a Self-Awareness Questionnaire. The experiment will last approximately 30 minutes and will involve your completing the questionnaire. You will be given the opportunity to participate on either Monday, Tuesday, Wednesday, or Thursday night at 7:00 p.m. The experiment will be conducted in Ag Hall 202.

I would like to encourage you to participate, as the experimenter needs as many subjects as possible to obtain a large representative sample of college students. Please sign-up for the night on which you are available and tear off the tab corresponding to your name. As you will note, the tab contains the date, time, and location of the experiment. Thank you.

APPENDIX D

INSTRUCTIONS FOR PHASE I

INSTRUCTIONS FOR PHASE I

My name is Mr. X and this is Ms. Y (or visa versa). We are doctoral students in the Department of Psychology. We are now ready to begin this experiment. Please keep the questionnaire turned over until all of you have received all of the materials and I tell you to turn the questionnaire to the front. (Experimenter has 4 subjects hand out questionnaires, computer cards, and pencils.) This questionnaire is part of a research program the purpose of which is to improve the understanding of the factors which affect a student in academic situations. As you will see, the present questionnaire asks about certain of your personal feelings, attitudes, and experiences. Obviously, there are no 'right' or 'wrong' answers to any of these kinds of questions. They merely offer an opportunity to express feelings and ideas with regard to a large range of situations. The research value of this questionnaire will depend on how 'straight' you are in stating your feelings and attitudes. Please be as honest as possible. Please answer all items, giving only one answer for each. If you have any questions at this time ask them.

I am asking you to put your names and ID numbers on the computer card so that credit can be efficiently and accurately assigned to you for your participation in this experiment. Please turn over your questionnaire and follow along with me as I read the instructions aloud. (Experimenter reads instruction #1 and says:) Please fill out your computer card, now. You will notice that in the place marked "Test" a number <u>one</u> has already been filled in. This is to indicate that there is only one form to this test and is filled in for your convenience. (The experimenter gives the subjects time to fill out the computer cards. Then he continues to read instructions #2-6 and then says:) When you are through filling out the questionnaire, please bring the questionnaire, computer card, and pencil and give them to me or Ms. Y (or Mr. X). Results of the questionnaire will be presented in a class session later on in the semester. At this time if you have any further questions about the questionnaire, I will be available for individual conferences. Thank you for your cooperation. Now begin.

APPENDIX E

INSTRUCTIONS FOR BEGINNING THE RECRUITMENT OF SUBJECTS FOR PHASE II OF THE EXPERIMENT

INSTRUCTIONS FOR BEGINNING THE RECRUITMENT OF

SUBJECTS FOR PHASE II OF THE EXPERIMENT

I'd like to introduce myself. My name is Diane Hoehn, and I am presently a psychology doctoral student. We have found that in psychological research our data is often biased because students who volunteer for experiments comprise a 'special group' of students rather than a random sample. As you have studied in your introductory psychology class, subjects must be randomly chosen from the population. This is a requirement or an assumption which must be met before certain statistical analyses can be performed. This is to also insure that after the experiment, any generalizations made about the results will be valid.

For these reasons, I have obtained a list of all students in this class. In the next several weeks, I will be randomly selecting students from this list for participation in an experiment. If you are randomly selected, I will be calling you at your home to ask if you would be willing to participate. You will, of course, at this time be able to decline to participate. If you agree to participate and do, your name will be turned in to your instructor so that the extra credit can be assigned to you. The experiment will take approximately 30 minutes. Are there any questions? Thank you very much for your time and cooperation.

APPENDIX F

INSTRUCTIONS FOR THE OPPONENT CONDITIONS AND INSTRUCTIONS FOR THE NO OPPONENT CONDITION

INSTRUCTIONS FOR THE OPPONENT CONDITIONS

You are going to be asked to complete a task which is very similar to a section of several intelligence tests. These tasks have also been shown to correlate highly with success during and after college. I want to see how well you can do and how well you can compete with each other. I will also be able to give you an indication of how well you are doing in relation to other O.S.U. students who have previously taken this test.

(Experimenter picks up the task.)

This particular task consists of the substitution of letters for numbers as fast as you can do them. Two trials will be given, and after the first trial, I will announce how each of you are doing. (Experimenter places the task on the table.) Please look at the key and complete the sample substitution section marked below. For example, 4 is keyed with K, so a K is written beneath the 4. Seven is keyed with N, so N is written beneath the 7. Please complete the sample section and then stop. (Experimenter checks the sample work saying either "Correct" or correcting any mistakes.) Do the substitutions in the given order without skipping any. Work as quickly as possible and do as well as you can until I tell you to stop. Please begin.

INSTRUCTIONS FOR THE NO OPPONENT CONDITION

You are going to be asked to complete a task which is very similar to a section of several intelligence tests. These tasks have also been shown to correlate highly with success during and after college. I want to see how well you can do on this task and how well you can do in relation to other O.S.U. students who have previously taken this test.

(Experimenter picks up the task.)

This particular task consists of the substitution of letters for numbers as fast as you can do them. Two trials will be given, and after the first trial, I will announce how each of you are doing. (Experimenter places the task on the table.) Please look at the key and complete the sample substitution section marked below. For example, 4 is keyed with K, so a K is written beneath the 4. Seven is keyed with N, so N is written beneath the 7. Please complete the sample section and then stop. (Experimenter checks the sample work saying either "Correct" or correcting any mistakes.) Do the substitutions in the given order without skipping any. Work as quickly as possible and do as well as you can until I tell you to stop. Please begin.

APPENDIX G

FEEDBACK FOR THE OPPONENT CONDITIONS AND INSTRUCTIONS FOR TRIAL 2; FEEDBACK FOR THE NO OPPONENT CONDITION AND INSTRUCTIONS FOR TRIAL 2

FEEDBACK FOR THE OPPONENT CONDITIONS

AND INSTRUCTIONS FOR TRIAL 2

(After two minutes, the experimenter stops the opponents and says:) Please rest for a moment while I score trial 1. (She then picks up each paper and computes the scores, saying first to the subject;) You have completed ____ substitutions. That is very good, at the rate you are going you will do better than 90 percent of all O.S.U. students taking this test! (The experimenter then says to the confederate;) You have completed (15 substitutions less than the subject ____ substitutions. At the rate you are going you will score about average compared with other O.S.U. students.

Now we are ready for the second trial. Work as quickly as possible and do as well as you can until I tell you to stop. Please begin.

FEEDBACK FOR THE NO OPPONENT CONDITION

AND INSTRUCTIONS FOR TRIAL 2

(After two minutes, the experimenter stops the subject and says:) Please rest for a moment while I score trial 1. (She then picks up the subject's paper and says;) You have completed ____ substitutions. That is very good, at the rate you are going you will do better than 90 percent of all O.S.U. students taking this test! The average score for O.S.U. students is about (15 substitutions less than the subject's score) substitutions.

Now we are ready for the second trial. Work as quickly as possible and do as well as you can until I tell you to stop. Please begin.

APPENDIX H

POST-EXPERIMENTAL QUESTIONNAIRE

POST-EXPERIMENTAL QUESTIONNAIRE

An individual's feelings, attitudes and behaviors are an important part of any experimental research effort. The following questionnaire asks for information pertaining to current attitudes and behaviors as well as information pertaining to your experiences during the experiment. As this is an important part of this experiment, please answer all questions carefully.

Each of the following questions is answered by the use of a "scale" represented by a line between two extremes. Indicate by a slash mark on the continuums below your answer to these questions.

1. Knowing my score (# right) on the first trial made me feel _____ (use each of the scales below) about how I would do on the second trial.

uneasy, nervous _____ calm, relaxed

under more stress & tension _____ under less stress & tension

less certain (of my performance) _____ more certain (of my performance)

2. How important was it for you to do well (# of correct substitutions) on trial two?

not important at all _____ very important

3. Concentrating on the first trial was:

difficult _____ easy

4. Concentrating on the second trial was:

difficult _____ easy

Please answer the following questions by filling in the blanks.

5. My age is _____.

6. My current marital status is _____.
   a. single b. married c. divorced d. divorced and remarried
   e. widowed

7. The duration of my current marriage is _____ years.

8. "I tend to prefer . . . "
   a. male children b. female children c. do not particularly like children d. does not matter as to whether the child is male or female

9. My religious preference is _____.
   a. Protestant b. Jewish c. Catholic d. None

10. I am in my _____ year at Oklahoma State University.

11. My overall grade point average is _____.

12. I have changed my major _____ times while enrolled in college.

13. My future occupational goal is _____.

14. I am the _____ child in my family.
   a. first born b. second born c. third born d. fourth born
   e. if greater than fourth born list number

15. I have _____ brothers in my family.

16. I have _____ sisters in my family.

17. Were you your mother's favorite child _____?
   a. Yes b. No c. No difference

18. Were you your father's favorite child _____?
   a. Yes b. No c. No difference

19. Indicate on the continuums below by a slash mark the closeness you felt toward your parents <u>when you were a child</u>.

   very close _____ very distant (a)
   father

   very close _____ very distant (b)
   mother

20. My father's occupation is _____.

21. The highest grade my father completed in school was _____.

22. My mother's occupation is _____.

23. The highest grade my mother completed in school was _____.

24. I was raised in _____.
   a. a large city (pop. over 50,000) b. city (pop. between 10,000 and 50,000) c. town (pop. between 5,000 and 10,000) d. rural area (pop. less than 5,000) e. very rural area (pop. less than 300)

APPENDIX I

THREE BY THREE FACTORIAL ANALYSES OF VARIANCE FOR NONSIGNIFICANT FINDINGS

TABLE XII

ANALYSIS OF VARIANCE OF UNEASY/CALM FEELING RATINGS FOR THE EFFECTS OF OPPONENT CONDITIONS ON LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

Source	SS	df	MS	F
Fear of Success (A)	12.53	2	6.26	1.41
Opponent Conditions (B)	16.43	2	8.22	1.84
A x B	7.95	4	1.99	< 1
W.cell	360.94	81	4.46	
TOTAL	397.85	89		

TABLE XIII

ANALYSIS OF VARIANCE OF MORE STRESS/LESS STRESS FEELING RATINGS FOR THE EFFECTS OF OPPONENT CONDITIONS ON LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

Source	SS	df	MS	F
Fear of Success (A)	6.75	2	3.37	< 1
Opponent Conditions (B)	1.57	2	.79	< 1
A x B	25.08	4	6.25	1.15
W.cell	442.21	81	5.46	
TOTAL	475.61	89		

TABLE XIV

ANALYSIS OF VARIANCE OF MORE CERTAIN/LESS CERTAIN FEELING RATINGS FOR THE EFFECTS OF OPPONENT CONDITIONS ON LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

Source	SS	df	MS	F
Fear of Success (A)	13.38	2	6.69	1.77
Opponent Conditions (B)	17.88	2	8.94	2.36
A x B	12.26	4	3.06	< 1
W.cell	306.60	81	3.97	
TOTAL	350.12	89		

TABLE XV

ANALYSIS OF VARIANCE OF THE RATINGS OF IMPORTANCE OF DOING WELL ON TRIAL 2 FOR THE EFFECTS OF OPPONENT CONDITIONS ON LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

Source	SS	df	MS	F
Fear of Success (A)	1.93	2	.96	< 1
Opponent Conditions (B)	4.79	2	2.39	< 1
A x B	5.07	4	1.27	< 1
W.cell	233.19	81	2.88	
TOTAL	244.98	89		

APPENDIX J

ONE-WAY ANALYSES OF VARIANCE

FOR NONSIGNIFICANT FINDINGS

TABLE XVI

ANALYSIS OF VARIANCE OF THE RATINGS OF CLOSENESS TO MOTHER FOR LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

Source	SS	df	MS	F
Fear of Success (BG)	3.44	2	1.72	< 1
W.cell (WG)	387.49	87	4.45	
TOTAL	390.93	89		

TABLE XVII

ANALYSIS OF VARIANCE OF FATHER'S HIGHEST GRADE COMPLETED IN SCHOOL FOR LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

Source	SS	df	MS	F
Fear of Success (BG)	3.49	2	1.74	< 1
W.cell (WG)	724.57	87	8.33	
TOTAL	728.06	89		

TABLE XVIII

ANALYSIS OF VARIANCE OF MOTHER'S HIGHEST GRADE COMPLETED IN SCHOOL FOR LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS

Source	SS	df	MS	F
Fear of Success (BG)	.87	2	.43	<1
W.cell (WG)	318.73	87	3.66	
TOTAL	319.60	89		

APPENDIX K

CHI-SQUARE TESTS FOR NONSIGNIFICANT FINDINGS

TABLE XIX

LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS' PREFERENCE FOR CHILDREN[+]

Preference	Low FOS Subjects	Medium FOS Subjects	Higb FOS Subjects	X^2
Male Children	2 (3.00)	4 (3.00)	3 (3.00)	4.09
Female Children	4 (3.33)	4 (3.33)	2 (3.33)	
Do Not Particularly Like Children or Does Not Matter	24 (23.67)	22 (23.67)	25 (23.67)	

[+]Expected frequencies in parentheses.

TABLE XX

LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS' RELIGIOUS PREFERENCE[+]

Preference	Low FOS Subjects	Medium FOS Subjects	High FOS Subjects	X^2
Protestant	23 (23.67)	22 (23.67)	26 (23.67)	2.65
Catholic	3 (2.33)	2 (2.33)	2 (2.33)	
None	4 (4.00)	6 (4.00)	2 (4.00)	

[+]Expected frequencies in parentheses

TABLE XXI

LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS CLASSIFIED AS TO WHETHER THEY WERE THEIR MOTHERS' FAVORITE CHILD+

Mother's Favorite Child?	Low FOS Subjects	Medium FOS Subjects	High FOS Subjects	X^2
Yes	2 (3.00)	4 (3.00)	3 (3.00)	3.28
No	2 (4.33)	5 (4.33)	6 (4.33)	
No Difference	26 (22.67)	21 (22.67)	21 (22.67)	

+Expected frequencies in parentheses.

TABLE XXII

LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS CLASSIFIED AS TO WHETHER THEY WERE THEIR FATHERS' FAVORITE CHILD+

Father's Favorite Child?	Low FOS Subject	Medium FOS Subject	High FOS Subject	X^2
Yes	9 (8.33)	10 (8.33)	6 (8.33)	3.39
No	3 (3.67)	2 (3.67)	6 (3.67)	
No Difference	18 (18.00)	18 (18.00)	18 (18.00)	

+Expected frequencies in parentheses.

TABLE XXIII

LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS' FATHERS' OCCUPATIONS+

Fathers' Occupations	Low FOS Subjects	Medium FOS Subjects	High FOS Subjects	X^2
Professional Persons	8 (7.24)	8 (6.52)	5 (7.24)	5.95
Proprietors, Managers, and Officials	20 (16.90)	11 (15.21)	18 (16.90)	
Clerks, Skilled Workers through Unskilled Workers, and Foremen	2 (5.86)	8 (5.28)	7 (5.86)	

+Expected frequencies in parentheses.

TABLE XXIV

LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS' MOTHERS' OCCUPATIONS[+]

Mothers' Occupations	Low FOS Subjects	Medium FOS Subjects	High FOS Subjects	X^2
Professional Persons	3 (2.67)	1 (2.67)	5 (2.67)	8.36
Proprietors, Managers, and Officials	3 (3.33)	5 (3.33)	2 (3.33)	
Clerks, Skilled Workers, and Foremen	6 (9.67)	12 (9.67)	11 (9.67)	
Semiskilled and Unskilled Workers[++]	18 (14.00)	12 (14.00)	12 (14.00)	

[+] Expected frequencies in parentheses.

[++] All but one are housewives.

TABLE XXV

SIZE OF CITY IN WHICH LOW, MEDIUM, AND HIGH FEAR OF SUCCESS SUBJECTS WERE RAISED+

Size of City	Low FOS Subjects	Medium FOS Subjects	High FOS Subjects	X^2
A Large City (pop. over 50,000)	7 (8.67)	11 (8.67)	8 (8.67)	4.67
City (pop. between 10,000 and 50,000)	8 (7.67)	6 (7.67)	9 (7.67)	
Town (pop. between 5,000 and 10,000)	3 (4.00)	6 (4.00)	3 (4.00)	
Rural Area (pop. less than 5,000)	9 (7.33)	6 (7.33)	7 (7.33)	
Very Rural Area (pop. less than 300)	3 (2.33)	1 (2.33)	3 (2.33)	

+Expected frequencies in parentheses.

VITA

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Master of Science

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