

The Woman's College
University of North Carolina

The LIBRARY



CQ

no. 282

COLLEGE COLLECTION
GIFT OF THE AUTHOR

THE RELATIONSHIP BETWEEN MOTOR ABILITY AND SELF-CONCEPT
OF WOMEN NON-PHYSICAL EDUCATION MAJOR STUDENTS AND
PHYSICAL EDUCATION MAJOR STUDENTS

by
Nancy Kay Parker

A Thesis Submitted to
the Faculty of
the Woman's College of the University of North Carolina
in Partial Fulfillment
of the Requirements for the Degree
Master of Science in Physical Education

Greensboro

1961

Approved by

Paul M. Idemund
Adviser

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
II. STATEMENT OF PROBLEM	4
III. REVIEW OF LITERATURE	5
IV. PROCEDURE	22
V. ANALYSIS OF DATA.	28
VI. SUMMARY AND CONCLUSIONS	42
BIBLIOGRAPHY	45
APPENDIX	53

LIST OF TABLES

TABLE	PAGE
I. Mean and Standard Deviation for all Four Groups and Significance of Difference Between Motor Ability Test I and II for the Non-Physical Education Major Groups	30
II. Significance of Difference Between Groups on the Basis of the Scott Motor Ability Battery	31
III. Correlation Coefficients of Judges' Ratings of TST Statements	32
IV. Mean and Standard Deviation of Locus and Consensual Scores	35
V. Correlation Coefficients Between Locus and Motor Ability Scores and Consensual and Motor Ability Scores	36
VI. Significance of Difference Between Groups on the Basis of Consensual and Locus Scores.	37
VII. Raw Data of Motor Ability, Consensual, and Locus Scores	58

ACKNOWLEDGEMENTS

The writer wishes to express her appreciation to Dr. Gail M. Hennis for her assistance and guidance throughout the course of this study.

Also the writer is indebted to the graduate students of the Department of Physical Education of the Woman's College of the University of North Carolina for their help in administering the testing program for this study.

CHAPTER I

INTRODUCTION

Educators are constantly striving to increase their knowledge of the intricacies of human development in order to meet the demands of society to educate individuals to their fullest potential. The field of education, like other fields of endeavor, has established certain general objectives which should be accomplished as a result of educating the total man.

One of these general objectives is the realization of selfhood. This objective refers to the development of an understanding of the capabilities and potentials with which each individual is vested.

The development of the self is a long enduring process which begins once the child is old enough to be influenced by environment and associations. The self-concept is derived from two main sources. One is from the social interaction the individual encounters daily. From these associates, one internalizes and generally accepts the opinions people seem to have concerning him. The other source is from the experiences of life through which one constantly passes. A knowledge of one's abilities to deal with particular situations lead to the development of a self-concept, or self-understanding.

Physical education, as a part of the total educational design, must

also include in its specific objectives the development of self-knowledge. With movement as its tool and active participation as its environment, physical education is capable of making a unique contribution to the development of the self-concept in each student. By structuring the class situation to include a variety of experiences, which basically represent the forces encountered in daily living, the student should be able to better understand these forces and his reactions to them.

The development of a self-concept, to be as effective as possible, must be planned. In order for the physical educator to understand the development of the self, a broader knowledge of the factors influencing the self must be discovered. Since the study of the self-concept is relatively new, little is known about the relationship between motor ability and self-concept.

Considerable research has been done concerning motor ability. Besides investigating its component parts, researchers have also attempted to find whether motor ability is related to various psychological traits. Thus far, these studies have not included the relationship between motor ability and self-concept.

The possibility of the finding that a relationship between self-concept and motor performance does exist would enable the teacher to more fully understand the reactions of students who lack the necessary skill to be successful in various types of physical activity.

For example, a person with a low level of motor ability might be

more likely to have a less favorable concept about her self in relation to physical performance than would a well-skilled person with a high degree of motor ability. The knowledge of this fact would give the teacher more insight concerning students with unfavorable attitudes toward physical education or those who refuse to participate in the intramural activities.

With this awareness, teachers could more effectively counsel students in their physical education classes. They would be able to plan and structure class situations in order that the students realize and more readily accept their abilities in motor performance.

As the knowledge about the relationship between motor ability and self-concept increases, physical educators, by implementing these findings, will be better prepared to meet the needs of their students by integrating the objectives of physical education with the general aims of education.

It is hoped that this study will add to the knowledge concerning whether or not a relationship between motor ability and self-concept does exist.

CHAPTER II

STATEMENT OF PROBLEM

The purpose of this study was to determine the relationship between motor ability and self-concept of women major and non-major students of physical education.

A secondary purpose was to determine whether the self-concept differed among the groups.

The subjects for this study were seventy-one freshmen women enrolled at the Woman's College of the University of North Carolina. The non-physical education majors, chosen randomly, were divided on the basis of scores made on the Scott Motor Ability Test into three groups: low, middle, and high. The physical education group was classified as a separate high motor ability group. The Kuhn- McPartland "Who Am I?" Twenty Statements Test was used as the instrument for determining self-concept.

CHAPTER III

REVIEW OF LITERATURE

Motor Ability

Slowly but surely, research is seeking to establish facts and discover relationships that exist between experiences in physical activities and the physical, mental, emotional and spiritual outcomes generally ascribed to them. (57:261)

Motor ability has been an area in which considerable research has been done, but there still remains a gamut of knowledge to be discovered concerning this area of physical education.

Brace in his book Measuring Motor Ability states,

A modern program of physical education should provide for motor achievement, using the term motor to designate those muscular reactions resulting from the manipulation of the body. (1:XV)

The exact components of motor ability have been discussed by several of the leading experts in the field of physical education. For example, Mathews⁽⁸⁾ indicated that the three main factors of motor ability were strength, velocity, and muscular coordination. Scott⁽⁵¹⁾ stated that strength was of little value in estimating the ability of college women. She advocated a test battery consisting of an obstacle race, basketball throw for distance, and the Sargent Jump Test. McCloy⁽³⁹⁾ suggested a test of general motor ability composed of a strength test and a battery of track and field events. Humiston⁽³⁰⁾ listed the fundamental elements of

motor activity as running, jumping, getting up from the floor, going over obstacles, and hand-eye coordination. These skills were included in the Humiston Motor Ability Test. Larson and Yokum defined general motor ability as "the ability of the individual in the elements which underlie motor performance such as muscular strength, muscular power, endurance, coordination, agility, balance, etc." (5:79) In a discussion concerning measurement of motor ability, McCloy and Young⁽⁷⁾ stressed the importance of excluding highly specialized skills from motor ability tests. The McCloy General-Motor-Achievement Test for girls consists of pull-ups, a dash, a broad jump, and a throw.

Physical educators are not the only investigators of motor ability. Seashore, a psychologist, tested fifty men on eight serial motor performances. The subjects were classified as athletes, pianists, and those who had practiced the test previously. From the results of the tests Seashore concluded,

The independence of the skills measured in these tests argues against any theory of general motor ability and in favor of specific skills. The theory by which motor skills are determined by a relatively small number of basic motor capacities is strongly open to question. (52:273)

The possibility of improving motor ability through special and general physical education activity classes has been investigated. Research indicates that motor ability can be improved through participation in most physical education activity classes.

Porter⁽⁶⁹⁾, interested in the improvement of students with low motor ability, compared these students' motor ability scores received from administering the Scott Three-Item Motor Ability Battery at the beginning and end of a semester's participation in a basic activity and in general physical education classes. Her results showed a significant improvement in both of the groups' scores.

In studies similar to Porter's, Salit⁽⁴⁹⁾, Broer⁽¹⁸⁾, and Lafuze⁽³⁸⁾ also found that those students with low motor ability scores would improve these scores after participation in carefully planned, well directed physical education classes.

The differences between certain variables, for example, attitude toward physical education, intelligence, and level of aspiration, of students classified as having a high and a low level of motor ability have been explored. Mason⁽⁶⁷⁾, Clower⁽⁶⁴⁾, and Hult⁽⁶⁵⁾ found that the scores of students with a high level of motor ability were significantly higher than those motor ability scores of students with low motor ability.

Several studies have indicated that experienced participants score higher on motor ability tests than do those students of lesser experience. Rarick and McKee⁽⁴⁷⁾, studying the differences between twenty high and twenty low motor achievers in the third grade, drew the following conclusions. Those students with superior performance levels were older, taller, heavier, and stronger. They also seemed to be better adjusted to the

school situation and displayed more favorable personality traits. The superior group had attended playgrounds, had playground equipment in their own yards, and played with their parents frequently. Salit⁽⁴⁹⁾ found through investigating the backgrounds of college freshmen women, whose motor ability she had tested, that those in the high motor ability group had had more experience in physical education. In fact, fifty-one percent of the high motor ability group and twenty-six percent of the low motor ability group had participated in programs which included seven or more activities.

Motor Ability and Personality

Biddulph⁽¹⁵⁾, in studying the personality and social adjustment of high school boys of both high and low athletic achievement, found that athletic achievement was significantly related to personality and social adjustment. He emphasized the importance of the recognition of this relationship so that those students of low motor ability, once recognized, could be given special attention. He concluded by saying,

Other things being equal, the individual who has developed a high degree of motor skill will be better equipped to meet the problems of personal and social adjustment than will be the individual who is frustrated in the motor control of his body. (15:7)

Another study concerning character and personality traits in both boys' and girls' physical education classes supported Biddulph's study. Blanchard⁽¹⁶⁾, through his study, indicated that the desirable traits,

rather than the undesirable, were stimulated through physical education. Girls seemed to develop more personality traits through physical education classes than did boys. As both the boys and girls continued in physical education, these desirable traits also continued to develop.

Merriman⁽⁴²⁾ found that those students classified as upper motor ability ranked higher at the five percent level of significance in personality traits such as poise, ascendancy, self-assurance, intellectual, and interest modes measured by the California Psychological Inventory.

From the fact that few significant differences in personality traits were found when athletes and non-athletes were matched according to motor ability, the inference might be drawn that motor ability rather than participation in athletics is a potent factor in development of personality traits. (42:173)

Findings by Sperling⁽⁷⁰⁾ differed slightly from those in Merriman's study. The results of this study indicated a statistically reliable difference in personality patterns of varsity and intramural athletes as distinguished from non-athletes. Also, according to this study, there were tendencies for the non-athletic group to be more liberal-minded, more aesthetically and theoretically minded. Self ratings indicated that the varsity and intramural athletes evaluated themselves as being more motivated by power than social reward. It was also found that a difference existed among athletes according to the number of seasons of participation. Sperling, therefore, concluded from this study that athletic experience over a long period of time is the essential factor for extensive personality

development.

Keogh's⁽³⁶⁾ study, investigating the relationship of motor ability, amount of participation in athletics, and personality development, found no significant relationship between any of the variables. He admitted that this was contrary to previous finding, but added that this might be an indication that results should be discussed only in relation to the group which is being studied.

In studying the relationship between physical fitness and certain personality variables, Wells⁽⁷¹⁾ found that there was a significant relationship between fitness and psychological variables as measured by Catell's Sixteen Personality Factors, ratings by psychiatrists, interviews, and questionnaire tests by friends. He also concluded from his study that body measurement relates significantly to many personality variables, thus supporting the theory that personality is related to physique.

Secord and Jourard, studying body cathexis, stated the following,

It is the thesis of the present writers that the individual's attitudes toward his body are of crucial importance to any comprehensive theory of the person. . . . body cathexis is believed to be integrally related with the self-concept. (53:343)

According to a study done by Beck⁽⁶³⁾, involving 170 junior high school girls, there was a relationship between general motor ability, social adjustment, and social acceptance. In the seventh grade there was a significant relationship among the three variables, while in the eighth and ninth grades a significant relationship was found only between

the social adjustment and social acceptance variables.

McCraw and Tolbert⁽⁴⁰⁾, using a sociogram, discovered that there seemed to be some relationship between sociometric status and general athletic ability of junior high school boys. However, according to the study, there appeared to be very little relationship between sociometric status and mental maturity.

Studies concerning the personality traits of physical education major students have also been undertaken. In a study concerning the comparison of personality traits of physical education majors and non-physical education majors, Duggan⁽²⁶⁾ concluded that a difference in these traits did exist. Physical education majors, significantly superior to the non-physical education major group in motor ability scores, preferred exciting, competitive, outdoor work and play while the non-physical education majors preferred quiet, non-competitive, indoor work and play. The personality test results also indicated that the physical education majors tended to be less neurotic, more extrovert, and more dominant.

Mochel⁽⁶⁸⁾ administered the Minnesota Multiphasic Personality Inventory to both men and women physical education majors and to general education majors in an attempt to determine the usefulness of the test as a tool for guidance and selection of physical education major students. Besides concluding that this test would be a dependable tool for both selection and guidance of physical education major students, Mochel

discovered that there were differences in the personality patterns of the two groups. The physical education majors appeared to be better adjusted with fewer abnormal tendencies than the non-physical education majors. In this study the suggestion was made that separate college norms be determined since the norms established from this particular group of students were significantly higher than those of the normative group.

Self-Concept

There are practically as many definitions of the self as there are interested authors in this area. Davis^(2:211) defined the self as "a structure of attitudes, not a group of habits, ...having a development and structure of its own."

Mead, one of the pioneers in the study of the self, stated,

The self is something which has a development; it is not initially there at birth, but arises in the process of social experience and activity, that is, develops in the given individual as a result of his relations to that process as a whole and to other individuals within that process.^(9:135)

Mead continued by outlining two stages of the full development of the self. First is the recognition and organization of attitudes of others toward the self during various communicative activities. In these communicative activities Mead included play and games. He stressed the important role play and game activities have in the development of the self. The second stage pertains to the relationship of the individual with the entire social group, and becoming in response, a reflexion of the social group's standards.

Hilgard⁽²⁷⁾ defined the self as a social product. His theory was that the self needs to be expressed in social interactions to be completely meaningful.

Horowitz, as stated by Symonds,⁽¹¹⁾ asked adults and children where the self was located. Most of the adults referred to the head, more specifically, the brain, eyes, and face. Symonds defined the origin of the self as arising from increased understanding of body experiences.

As a person develops physically, socially, and emotionally, such influences as extending the control of the body⁽⁹⁾, past memories, continual self-evaluation and self-criticism^(27,8), external surroundings, and attendants⁽²⁾ continually effect the development of the self.

Jones and Mussen⁽³⁵⁾, studying the self-concept of seventeen year old girls who were either early or late maturers, concluded that the early maturing girls had a more favorable self-concept. Also the late maturers scored high on the need for recognition, indicated poorer parent-child relationship, and showed some tendency for stronger dependency than the early maturing girls.

Hill⁽²⁹⁾ tested the self-attitudes of students in the ninth, tenth, and twelfth grades before and after a social studies unit on class and social structure. The groups were divided into the top and lower social classes. The purposes of the study were to determine the influence of knowledge of social standing on self-attitude and also to test whether the

attitude toward the self varied with chronological age. The results indicated that the unit of study had little influence on the individual's self-attitude, regardless of his class standing. However, the study indicated that as age increases the attitude toward the self improves.

In a study by Turner⁽⁶¹⁾ in which the subjects had to analyze a moral story which involved friends and parents, there was an indication that the self-concept was formed in relation to those involved in the story.

A study by Stock⁽⁵⁸⁾ also verified the fact that the feeling one had concerning himself effected the way in which he regarded others. Her conclusions pointed out that the person with a negative self-concept would generally have a negative concept concerning others.

Pointing out the importance of self knowledge for the understanding of others Jersild^(33:412) said, "A person's wisdom as he looks outward upon others can only be as deep as the wisdom he possesses as he looks inward upon himself." Jersild continued with suggestions for development of self-understanding:

1. To gain knowledge of self one must have the courage to seek it and the humility to accept what one may find.
(learn through experience)
2. It is only in an interpersonal setting that a person can be helped to come to grips with some of the meanings of these attitudes. (involved in one's view of one's self)^(33:412)

Torrance⁽⁶⁰⁾ advocated the use of the knowledge of self-concept in guidance and counseling. In his study he had freshmen students rate themselves in relation to the other freshmen and then these self-ratings

were compared with actual ratings. The results indicated whether the students had a proper perspective of the total situation, resistance to change, and the need to develop a more realistic self-concept. The conclusions of the study indicated little relationship between self-concept and actual class standing, predicted grades, and actual grades. The study also indicated that women rate themselves more accurately than men and underrate themselves more frequently than men.

The relationship between self-attitude and success has also been studied. Lecky^(6:153) stated,

Any value entering this system (of organizing the self valuation) which is inconsistent with the individual's valuation of himself cannot be assimilated: it meets with resistance and is likely, unless the general reorganization occurs, to be rejected.

Roth,⁽⁴⁸⁾ in a study concerning the relationship between self-concept and achievement (in reading), found a significant difference in the self perception of those who improved, did not improve, and who dropped out of the course. "Changes in self-concept and grade point are indicated as further support for the theory that those who achieve as well as those who do not, do so as a result of needs of their own self system." (48:281)

Shaw,⁽⁵⁴⁾ by the use of an adjective checklist compared the self-concept of male and female high school juniors and seniors who were rated as academic achievers and under achievers. He concluded that male under achievers had a more negative opinion about the self than did the male achievers. According to this study a difference does exist in the self-concept

of female achievers and under achievers, but the females have a tendency to be less certain about their feelings. Shaw concluded by stating that it was difficult to indicate whether under achievement caused or was the result of difference in self-concept.

Baldwin and Levin,⁽¹⁴⁾ studying the effect of public and private success or failure on children's repetitive motor behavior, found that success and failure effected visuomotor tasks, but whether the task is done privately or publicly has no significant effect. Success tended to reduce output and increase accuracy while failure produced increase in output and decrease in accuracy.

Diller⁽²⁵⁾ rated self-attitudes of sixty male college students after success and failure at performing controlled tests. The study indicated that the students tended to rate themselves low because of the social stigma attached to personal admission of strengths as an indication of conceit on the part of the student. Even though the self-analysis on the overt rating was not a true estimate, the students unconsciously rated themselves higher on the covert ratings. Failure had a lowering effect upon the self-attitude in the covert rating, but an insignificant effect upon the overt rating.

Isenberger^(31, 32) has reported two studies pertaining specifically to self-attitudes of physical education majors and teachers. The purpose of the first study⁽³¹⁾ was to determine the relationship of the self-attitudes of physical education majors and measures of interest and success.

As subjects she used 277 women physical education major students and 115 women physical education teachers. She administered the "Who Am I?" Twenty Statements Test, the Strong Vocational Interest Blank, and the Minnesota Teacher Attitude Inventory. Also included in the data were the available motor ability scores of the physical education major students. The Pearson Product Moment Method of Correlation was the statistical tool employed to determine the relationship between the resultant variables.

The relationship between the motor ability of the 206 physical education major students and the locus score of the TST was .11 which was positive, but not significant. A low but significant relationship was found between physical education skill grades and the TST locus score.

The general conclusions of the study indicated no significant relationship between self-attitude and measures of interest and success. In fact, judges' ratings of teacher traits produced a negative, though not significant, relation to self-attitude. There was a small, but positive, relationship between motor ability and self-attitude. There were inconsistencies in results on identical tests from various schools. No definite reason was offered for the lack of consistency.

In the other study by Isenberger⁽³²⁾ the purpose was to determine the relationship of the self-attitudes of physical education major students and physical education teachers. The "Who Am I?" Twenty Statements Test was employed to measure the self-attitude of the same three student groups

and teachers used in the above study. The group of teachers was divided into categories according to the number of years of teaching experience.

There was a significant difference between the mean locus scores of the group of teachers with ten or more years of experience and also between the teacher group as a whole.

Significant differences were found in the student groups within school groups and between schools. A number of reasons for this difference was cited. "The significant difference between mean locus scores of the three schools might emphasize the importance of the social structure of the various institutions upon student attitudes." (32:51)

Self-attitudes of teachers and students in a teacher training institution were similar, but differed from the self-attitudes of those attending either a liberal arts or teachers' college affiliated with a university.

Self-Concept Measurement

Although the self has long been the symbolic interaction approach to social psychology, little if anything has been done to employ it directly in empirical research. There are several reasons for this, one of the most important of which is that there has been no consensus regarding the class phenomena to which the self ought to be operationally ordered. The self has been called an image, a conception, a concept, a feeling, an internalization, a self looking at oneself, and most commonly simply the self. One of these many designations of the self has been as attitudes. (37:68)

Directly related, Cantril⁽²²⁾ has said, "The more extreme an attitude

is in its direction the more intensely it is likely to be held. "(22:132)

There are some limitations concerning attitude testing. For example, an individual may or may not tell the truth concerning his opinions, preferences, or inclinations. Thurstone^(59:532) concluded, "Therefore we must remain content to use opinions and other forms of action, merely as indices of attitudes."

Various tools for testing or determining the self-concept have been devised. Perkins⁽⁴⁵⁾ administered a self-sort, ideal-sort test three times on 251 fourth and sixth graders to study the influence of four factors: social-emotional climate, teacher participation in an inservice child study program, teacher acceptance of self and others, and grade level on the teacher's perception of changes in children's self-concept.

Smith⁽⁵⁶⁾ developed a self-rating device consisting of seventy bipolar adjectives. His hypothesis was that it was not possible to measure self-concept by a single evaluative dimension. Through a factor analysis of the seventy adjectives Smith found five interpretable factors. These were self esteem, anxiety-tension, independence, estrangement, and body image. Smith's opinion was that these results gave reason for the low correlation between so many self-concept tests. Other tests of self-concept have been devised by Bugental and Gunning⁽²⁰⁾, Omwake⁽⁴³⁾, Bruce⁽¹⁹⁾, and Slotkins⁽⁵⁵⁾.

Kuhn—McPartland⁽³⁷⁾ have devised a Twenty-Statement Test which

measures self-attitude. This test is based upon an empirical evaluation of the self. The authors identified the self as an attitude the individual has concerning himself.

The object of the test is to determine self-attitude by having the individual answer twenty times the question "Who Am I?". There is a twelve minute time limit on the test.

The test administrator, in analyzing the results, must categorize the responses into dichotomous groups.

These categories distinguish between statements which refer to groups and classes whose limits and conditions of membership are matters of common knowledge, i. e., consensual; and those which refer to groups, classes, attributes, traits, or any other matters which would require interpretation by the respondent to be precise or to place him relative to other people, i. e., subconsensual. (37:69)

The results of the test indicate the individual's degree of social anchorage or identification of the self in a social system.

The psychological term anchoring... refers to a process by which judgments are more confidently made by relating them to some standard. (10:326)

To determine whether or not students taking the test would answer the question honestly, the authors ran a pilot study. A group of college students were asked to write autobiographies and to answer in paragraph form the question "Who are you?". The results of the two writings were compared and essentially the same traits were portrayed in both.

The validity of the test was established through testing the behavior patterns of stable groups with the results upholding the hypothesis ad-

vanced by the authors. Also the logic of construction or face validity was also accepted. The coefficient of reproducibility for the test is .903 and the test-retest reliability is .85. The test is quite useful since the variable involved can be correlated with other behaviors.

CHAPTER IV

PROCEDURES

Selection of Test

After a thorough investigation of the literature concerning self-concept tests which could reasonably be administered, the Kuhn — McPartland "Who Am I?" test was selected for use in this study.

This test was constructed to discover "general self-attitudes." The directions instruct the individual to answer the question, "Who am I?" as if he were answering to himself. These directions help eliminate any type of answering to satisfy the test administrator.

The results of the test are categorized by the administrator into two groups, consensual or subconsensual responses. Consensual refers to those statements which refer to groups or classes whose membership need no interpretation. Subconsensual refers to groups, classes, and traits whose membership needs interpretation by the respondent. The greater the number of consensual responses the greater the self identification with the social system.

Because of an absence of validated tests measuring self attitudes it was impossible for the authors of the "Who am I?" test to validate this tool by the use of a standardized test as criterion for establishing validity. Thus the test was validated by examining the logic of construc-

tion and "correlating the test results with the criterion behavior indicated by the theory." (37:72)

In testing the reliability of the judges' categorization of the responses, it was found that the differences between two judges occurred less than three times in categorizing 100 responses. Based upon 151 respondents, the coefficient of reproducibility was .903. The test-retest reliability was approximately .85.

Selection of Subjects

In the fall of 1960 entering freshmen at the Woman's College of the University of North Carolina, with the exception of the physical education majors, were given the Scott Three-Item Motor Ability Battery. The raw score results of this test were converted into T-score values. It was from this group and these scores that the subjects representing the non-physical education majors in this study were selected.

The T-scores representing the boundary for the low and high motor ability groups were forty and below for the low motor ability group and sixty and above for the high motor ability group.

Separate lists containing the names of all of the freshman girls in the category of low motor ability and all of those having a high motor ability were compiled. From each list fifty names were selected by the use of a Table of Random Numbers.

Letters explaining the study and the testing program were sent to

each of the 100 subjects. Enclosed in each letter was a postcard on which the subject was asked to check the dates she would be available for testing if she were willing to participate in the study.

After the postcards were returned, a master schedule for testing was arranged with one hour testing periods, from 5:00 p.m. to 6:00 p.m., for each of the five school days. Appointment cards, indicating time, date, place of the testing, and the clothes to be worn, were sent to each of the subjects. A sample of the letter, postcard, and appointment card are included in the Appendix.

Of the 100 cards sent to subjects fifty were returned indicating a willingness to participate, fifteen could not participate and thirty-five cards were not returned.

Administration of the Tests

The students reported to Coleman Gymnasium, where each retok the Scott Three-Item Motor Ability Battery. The tests were administered by graduate students in physical education who had been given written directions for administering the tests. An explanation of these tests can be found in the Appendix.

After each student had completed the three tests in the battery, a final T-score was computed according to the regression equation suggested by Scott⁽¹¹⁾. Regardless of the final T-score each student was directed to a classroom where she was instructed about the Kuhne-McPartland "Who am

I?" test. A graduate student in charge of this phase of the testing issued a copy of the test as she collected the score card on which the students' motor ability score was recorded. This score was recorded on the top of the individual's mimeographed copy of the test. This procedure insured proper categorization of the written tests. The graduate student who administered the test read the directions for the test and informed the students of the twelve minute time limit for taking the test. At the end of the allotted time the tests were collected.

Since the twenty-five freshmen physical education major students had not taken the motor ability test, it was necessary to administer this test to them for the first time. All of the physical education majors were tested during one of their regularly scheduled physical education class periods. Graduate students also helped to administer these tests. Of the twenty-five students taking the test at this time, twenty-one were qualified to participate in the remainder of the study as they had a motor ability score of sixty or above. Eighteen of those students who were qualified agreed to take the "Who am I?" test. There was no specific time for the physical education majors to take the written test as a group; therefore, they were asked to take the test any time during the five day testing period of the non-physical education major students.

Treatment of Data

The original plans for the study included analysis of the data collected

from three groups: freshmen non-physical education majors with a motor ability score of forty and below, freshman non-physical education major students with a motor ability of sixty and above, and freshman physical education major students with a motor ability score of sixty and above. During the testing period, however, it was decided that the test results of those students who improved their scores from below forty to forty-four and above should also be included in the study. Thus the final number of groups for which data were analyzed was four.

In the majority of cases there was an improvement in the motor ability scores between the fall administration and the testing done for this study. Therefore, the significance of difference was computed between the initial and second motor ability score of each of the three groups having two sets of scores, namely, the non-physical education major low motor ability group, the high motor ability group, and the group which improved from the low motor ability to average motor ability group.

The "Who Am I?" Twenty Statements Test responses required analysis by judges. Two judges were used for the statement analysis in this study. Two processes were involved in the final attainment of the scores used in the study.

First, it was necessary to establish the reliability of each judge's rating of the responses. Next, the correlation between the judges' ratings was computed. The Phi Correlation⁽⁴⁾, a correlation technique for

dichotomous variables, was used in both instances.

After analyzing the responses on the "Who Am I?" test, two correlations, using the Pearson Product Moment Method⁽⁴⁾, were computed for each of the four groups of subjects: those non-physical education majors with a low motor ability, a high motor ability, an average motor ability, and the physical education major group with a high motor ability. One correlation was between the motor ability score and the number of consensual statements made by each student in her respective group. The second was between the motor ability and the locus scores of the test responses.

Finally, Fisher's "t" Test of Significance Between Means⁽⁴⁾ was employed to determine whether a significant difference existed among the groups on the basis of each of the scores derived from the "Who Am I?" test.

CHAPTER V

ANALYSIS OF DATA

The purpose of this study was to determine the relationship between motor ability and self-concept of freshmen women physical education major students and non-physical education major students.

The subjects for this study were eighteen freshmen women physical education majors and fifty-three freshmen women non-physical education majors. All were enrolled at the Woman's College of the University of North Carolina.

The motor ability of all students participating in this study was measured by the Scott Three-Item Motor Ability Battery. On the basis of the scores received from a previous testing of entering freshmen and the battery administered by the author, the non-physical education majors were divided into three categories: low, middle, and high motor ability groups. Only one set of scores was available for the physical education majors who were classified as a high motor ability group. For the remainder of this discussion the groups will be referred to as low, middle, and high, meaning the non-physical education major motor ability groups, and the physical education major group.

The mean and standard deviations of the motor ability test scores were determined for each of the four groups. These data are presented in Table I.

Difference scores were used as the basis for determining the significance of difference between the first and second administration of the motor ability test for each of the non-physical education major groups. The improvement of each of the three groups was significant beyond the one per cent level of confidence. These data are also included in Table I.

The significance of difference among the motor ability scores of the four groups: low, middle and high non-physical education major students and the physical education major students, was calculated by the use of Fisher's "t" Test of Significance Between Means. There was a significant difference at the one per cent level of confidence among all groups with the exception of the physical education major group and the high motor ability group. The significance of difference between these two groups was significant at the five per cent level of confidence. These results are shown in Table II, Page 31.

The "Who Am I?" Twenty Statements Test (TST) which was used to measure the self-attitudes of the subjects required an analysis of the responses by judges. Two judges were used to categorize the statements. The Phi Correlation was employed to determine whether each judge's ratings of the responses was reliable. This method of correlation was also used to find the relationship between the two judges' ratings of the statements. These data can be found in Table III, Page 32.

TABLE I
 MEAN AND STANDARD DEVIATION FOR ALL FOUR GROUPS AND SIGNIFICANCE
 OF DIFFERENCE BETWEEN MOTOR ABILITY TEST I AND II FOR THE NON-
 PHYSICAL EDUCATION MAJOR GROUPS

Test	Group	No.	M.A. I		M.A. II		"t" between M.A. I and M.A. II
			Mean	S. D.	Mean	S. D.	
Scott Motor Ability	Low	10	35.9	1.64	40.8	2.40	3.6957*
	Middle	15	36.67	3.04	50.6	2.98	14.5803*
	High	28	65.63	5.18	67.79	5.24	5.7091*
	Physical Education	18	---	---	71.33	5.90	---

* Significant at the one per cent level of confidence

TABLE II
SIGNIFICANCE OF DIFFERENCE BETWEEN GROUPS ON
THE BASIS OF SCOTT MOTOR ABILITY BATTERY

Groups	Low	Middle	High
Middle	8.3241*		
High	14.8166*	11.1226*	
Physical Education	15.3889*	11.9799*	2.0418**

* Significant at the one per cent level of confidence

** Significant at the five per cent level of confidence

TABLE III

CORRELATION COEFFICIENTS OF JUDGES' RATINGS OF TST STATEMENTS

	Low	Middle	High	Major
Judge A	.8734	.907	.8916	.9361
Judge B	.87	.8685	.86	.8744
Between Judges	.9193	.837	.8402	.8090

Two scores were used in the analysis of the TST. One was the total number of consensual responses made by the respondent throughout the twenty statements. Consensual statements were those in which the respondent identified himself directly with a social group, class, or trait which is of common knowledge to all and needs no further interpretation by the respondent to be understood by the judges.

The second was the locus score, that number at which the subject failed to continue to make consensual responses. Both scores indicated the subjects' degree of social anchorage, the identification of the self in a social system. The mean and standard deviation for each group on the basis of consensual and locus scores are shown in Table IV.

The Pearson Product Moment Method was used to correlate the motor ability and locus scores, and the motor ability and consensual scores, within each group. There were no significant relationships between the motor ability scores and either of the TST results for any of the four groups. The major and middle motor ability groups indicated positive, but not significant, relationships between motor ability and both locus and consensual scores. The low and high motor ability groups evidenced a slight, but negative relationship between motor ability and both TST scores. The results of these correlations are shown in Table V, Page 36.

The Fisher's "t" Test of Significance Between Means was used to determine whether there were any differences among the four groups on the

basis of the responses made on the TST. The significance of difference was found between both the locus scores and the consensual scores. The only significant difference was found to exist between the low and the physical education major groups. This difference was significant at the one per cent level of confidence for both the locus scores and the consensual score. In each case the mean scores of the low group exceeded those of the physical education major group. There were no significant differences among any of the other groups. These results can be found on Table VI, Page 37.

TABLE IV
MEAN AND STANDARD DEVIATION OF LOCUS AND CONSENSUAL SCORES

Group	No.	<u>Locus Score</u>		<u>Consensual Score</u>	
		M	SD	M	SD
Low	10	11.3	6.86	9.9	5.99
Middle	15	7.6	5.96	7.53	4.92
High	28	7.93	6.34	7.5	5.38
Physical Education	18	5.17	4.23	5.17	3.02

TABLE V

CORRELATION COEFFICIENTS BETWEEN LOCUS AND MOTOR ABILITY
SCORES AND CONSENSUAL AND MOTOR ABILITY SCORES

Test	Low	Middle	High	Major
Locus - Motor Ability	-.1480	.1408	-.1034	.0267
Consensual - Motor Ability	-.1266	.1647	-.1192	.1776

TABLE VI
SIGNIFICANCE OF DIFFERENCE BETWEEN GROUPS ON
BASIS OF CONSENSUAL AND LOCUS SCORES

Group	Test	Middle	High	Major
Low	Locus	1.4576	1.3792	2.8386*
	Consensual	.5983	1.1533	2.7362*
Middle	Locus		.2117	1.2728
	Consensual		.0177	1.6359
High	Locus			1.5940
	Consensual			1.6577

* Significant at the one per cent level of confidence

INTERPRETATION OF FINDINGS

A significance of difference at the one per cent level of confidence was found between the first and second trials of the Scott Three-Item Motor Ability Battery for all three non-physical education major groups. The middle group evidenced the greatest amount of improvement. They had previously been assigned to the low motor ability group, but it was necessary after the second testing to classify them as a middle group since their T-scores were above the established limit of forty-four for the low group.

Two possible explanations could be given for this improvement. One is that the conditions under which the girls were first tested differed from the environment of the second testing. The students' first tests were administered in a group situation during Freshman Orientation Week and the second individually by appointment with the author.

Secondly, it has been found that motor ability scores do improve after one semester of physical education. Porter⁽⁶⁹⁾ found that after a semester's activity in various physical education classes students with low motor ability scores did improve significantly.

Another source which supported the possibility of improving motor ability was a study done by Salit⁽⁴⁹⁾. Her general conclusions indicated that experience in physical education activity classes led to the improvement of motor ability.

A significance of difference at the one per cent level of confidence was found between all motor ability groups except the major and high motor ability group. This difference was significant at the five per cent level of confidence.

These findings are supported by Mason⁽⁶⁷⁾ who used the Scott Three-Item Motor Ability Battery to measure the difference between two groups of students, one having a high and the other a low level of motor ability.

Likewise, Hult⁽⁶⁵⁾ and Clower⁽⁶⁴⁾, who also used the Scott Three-Item Battery, found similar results.

The difference between the means of the major and high motor ability group was significant at the five per cent level of confidence even though the lower limits of the motor ability classification were the same for both groups. Since the mean motor ability score was significantly higher for the major group than the mean score for the high group, it could be concluded that the major group had a higher level of motor ability.

No significant relationship was found to exist between motor ability and either of the TST scores. The middle and major groups indicated a positive, though not significant relationship. These results correspond to the findings of Isenberger⁽³¹⁾ who also used the TST with physical education major students. She found a slight, but positive relationship between self-attitude and motor ability.

Even though the low and high motor ability groups evidenced negative

relationships, these were not significant and, therefore, could have been caused by chance alone.

These findings tend to contradict a conclusion drawn by Biddulph in his study concerning athletic achievement, personal, and social adjustment.

The ability to control the nerve-muscle mechanisms of the body in acts of skill fosters the growth of the individuals' sense of personal worth, self-reliance, personal freedom, and increases his worth as a social being.

...Other things being equal, the individual who has developed a high degree of motor skill will be better equipped to meet the problems of personal and social adjustment than will be the individual who is frustrated in the motor control of his body. (15:6)

Also indirectly pertaining to this study was the conclusion drawn by Merriman⁽⁴²⁾ concerning the relationship between personality traits and motor ability. He found a definite relationship between these two variables.

The only significance of difference which was found to exist between the locus scores and the consensual scores was between the low motor ability and physical education groups. The low motor ability group was significantly higher at the one per cent level of confidence than the physical education major group on both of the TST scores. This finding would appear to indicate that the low group in this study was more socially anchored than the physical education group. Social anchorage refers to the identification of the self in a social system.

A thorough investigation of the literature revealed a lack of information directly concerning the relationship between motor ability and self-concept.

However, numerous studies have been done concerning the relationship between personality variables of majors and non-majors in physical education.

Mochel⁽⁶⁸⁾ used the Minnesota Multiphasic Personality Inventory to measure the difference in personality adjustment between men and women physical education majors and non-physical education majors. She concluded that, on the whole, the physical education majors were better adjusted socially than the non-physical education majors.

Duggan⁽²⁶⁾ compared five personality traits of women majors and non-majors in physical education and found the physical education majors to be less neurotic, more extrovert, and more dominant. Duggan's results were similar to Mochel's in that they showed an existing difference in personality traits of majors and non-majors in physical education.

A comparison of previous research in relation to the findings of this study shows little evidence to substantiate these findings concerning the relationship between motor ability and self-concept. This lack of evidence is a result of little or no research having been done concerning motor ability and self-concept rather than a conflict in findings.

Previous studies concerning motor ability do support the conclusions of this study which indicate the possibility of improving motor ability scores and also that there is a significant difference between the groups which were classified according to motor ability scores.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of this study was to determine the relationship between motor ability and self-concept of freshmen women non-physical education major students and physical education major students. All subjects were students at the Woman's College of the University of North Carolina. The non-physical education major students were categorized according to motor ability scores into three groups: low, middle, and high motor ability groups. The physical education major group was classified as a separate high motor ability group.

A secondary purpose was to determine whether a difference existed among these four groups on the basis of both the consensual and locus scores derived from the "Who Am I?" Twenty Statements Test.

Difference scores were used to determine the relationship between the first and second administrations of the Scott Three-Item Motor Ability Battery for the three non-physical education major groups. Fisher's "t" Test of Significance Between Means was employed to determine the relationship between the second administration of the motor ability test for the four groups. The results indicated:

1. All three of the non-physical education major groups evidenced improvement in motor ability scores significant beyond the one

per cent level of confidence.

2. There was a significance of difference at the one per cent level of confidence among the second administration of the motor ability tests for all groups except between the physical education major and high non-physical education motor ability group. This difference was significant at the five per cent level of confidence.

The Pearson Product Moment Method was used to determine the relationship between consensual and motor ability scores and locus and motor ability scores for each group. According to this study, the results indicated:

1. No significant relationship between motor ability and either of the scores derived from the TST test.
2. Slight but negative relationships between motor ability and both consensual and locus scores were indicated by the low and high non-physical education major groups.
3. Slight but positive relationships between motor ability and both consensual and locus scores were evidenced by the middle non-physical education major and the physical education major student groups.

Fisher's "t" Test of Significance Between Means was employed to determine the difference between the four groups on the basis of both the consensual and locus scores. According to the study, the following results

were found:

1. A significance of difference at the one per cent level of confidence was evidenced between the low non-physical education major and physical education groups on the basis of both the consensual and locus scores.
2. No significant differences were found between any of the other groups.

It may be concluded from the findings of this study that there is no relationship between motor ability and self-concept as measured by the "Who Am I?" Twenty Statements Test. The only significant difference which existed between the self-concept of the various groups was indicated between the low non-physical education major group and the physical education major group.

LIMITATIONS

It is the opinion of this writer that additional devices are needed for measuring self-concept. The Kuhn-McPartland Twenty Statements Test measures degree of social anchorage or identification of self in a social system. It does not take into consideration that aspect of self-concept which is concerned with the recognition and organization of attitudes of others toward the self during various communicative activities. It is possible that the addition of an instrument measuring this phase of self-concept development might have given very different results.

BIBLIOGRAPHY

BIBLIOGRAPHY

A. BOOKS

1. Brace, David K. Measuring Motor Ability. New York: A. S. Barnes and Company, 1930. 138 pp.
2. Cowell, Charles C. Scientific Foundations of Physical Education. New York: Harper and Brothers, 1953. 260 pp.
3. Davis, Kingsley. Human Society. New York: The Macmillan Company, 1955. 655 pp.
4. Guilford, J. P. Fundamental Statistics in Psychology and Education. New York: McGraw-Hill Book Company, Incorporated, 1950. 633 pp.
5. Lars on, Leonard A. and Rachel D. Yokum. Measurement and Evaluation in Physical, Health, and Recreation Education. St. Louis: The C. V. Mosby Company, 1951. 507 pp.
6. Lecky, P. Self Consistency, A Theory of Personality. New York: Island Press, 1951. 154 pp.
7. McCloy, Charles Harold and Norma D. Young. Tests and Measurements in Physical Education. Third edition; New York: Appleton-Century-Crofts Company, 1954. 597 pp.
8. Mathews, Donald K. Measurement in Physical Education. Philadelphia: W. B. Saunders Company, 1958. 159 pp.
9. Mead, George. Mind, Self and Society. Chicago: University of Chicago Press, 1934. 401 pp.
10. Newcomb, Theodore. Social Psychology. New York: Dryden Press, 1950. 690 pp.
11. Scott, M. Gladys and Esther French. Measurement and Evaluation in Physical Education. Dubuque: Wm. C. Brown Company, 1959. 493 pp.
12. Symonds, P. M. The Ego and the Self. New York: Appleton-Century-Crofts, 1951. 292 pp.

13. Thurstone, L. L. and E. J. Chave. The Measurement of Attitudes. Chicago: University of Chicago Press, 1929. 96 pp.

B. PERIODICALS

14. Baldwin, A. L. and H. Levin. "Effects of Public and Private Success or Failure on Children's Repetitive Motor Behavior," Child Development, 29:363-372, September, 1958.
15. Biddulph, Lowell. "Athletic Achievement and the Personal and Social Adjustment of High School Boys," The Research Quarterly, 25:1-7, March, 1954.
16. Blanchard, B. Everard. "A Comparative Analysis of Secondary School Boys' and Girls' Character and Personality Traits in Physical Education Classes," The Research Quarterly, 17:33-40, March, 1946.
17. Brace, D. K. "Studies in Motor Learning of Gross Bodily Motor Skills," The Research Quarterly, 17:247-253, December, 1946.
18. Broer, Marion R. "Evaluation of a Basic Skills Curriculum for Women Students of Low Motor Ability at the University of Washington," The Research Quarterly, 26:15-27, March, 1955.
19. Bruce, P. "Relationship of Self-Acceptance to Other Variables with Sixth Grade Children Oriented in Self-Understanding," Journal of Educational Psychology, 49:229-238, October, 1958.
20. Bugental, J. F. T. and E. C. Gunning. "Investigations into Self-Concept: Stability of Reported Self-Identifications," Journal of Clinical Psychology, 11:41-46, January, 1955.
21. Calden, G. "Sex Differences in Body Concept," Journal of Consulting Psychology, 23:378, August, 1959.
22. Cantril, Hadley. "The Intensity of an Attitude," Journal of Abnormal and Social Psychology, 41:129-136, April, 1946.
23. Cunningham, R. "Toward Maturity We Grow in Self Understanding," Childhood Education, 27:103, November, 1950.
24. Davies, E. A. "Relationship Between Selected Postural Divergencies and Motor Ability," The Research Quarterly, 28:1-4, March, 1957.

25. Diller, L. "Conscious and Unconscious Self Attitude after Success and Failure," Journal of Personality, 23:1-12, September, 1954.
26. Duggan, Anne S. "A Comparative Study of Undergraduate Women Major and Non-Majors in Physical Education with Respect to Certain Personal Traits," The Research Quarterly, 13:38-45, October, 1937.
27. Fleming, R.S. "Discovery the Self," Childhood Education, 33:290-291, March, 1957.
28. Hilgard, E. R. "Human Motives and the Concept of Self," American Psychologist, 4:374-382, September, 1949.
29. Hill, T. J. "Attitudes Toward Self," Journal of Educational Sociology, 30:395-397, May, 1957.
30. Humiston, Dorothy. "A Measurement of Motor Ability in College Women," The Research Quarterly, 8:181-185, May, 1937.
31. Isenberger, Wilma. "Self-Attitudes of Women Physical Education Major Students as Related to Measures of Interest and Success," The Research Quarterly, 30:167-179, May, 1959.
32. _____. "Self-Attitudes of Women Physical Education Majors and Women Physical Education Teachers," The Research Quarterly, 30:44-54, March, 1959.
33. Jersild, A. T. "Understanding Others Through Facing Ourselves," Childhood Education, 30:410-414, May, 1954.
34. Jervis, Frederich. "The Meaning of a Positive Self-Concept," Journal of Clinical Psychology, 15:370-373, October, 1959.
35. Jones, M. C. and P. H. Mussen. "Self Conception, Motivation, and Intrapersonal Attitudes of Late- and Early-Maturing Girls," Childhood Development, 29:491-503, December, 1958.
36. Keogh, Jack. "Relationship of Motor Ability and Athletic Participation in Certain Standardized Personality Measures," The Research Quarterly, 30:438-446, December, 1959.
37. Kuhn, Manford and Thomas McPartland, "An Emperical Study of Self-Attitudes," American Sociological Review, 19:68-76, February, 1954.

38. Lafuze, Marion, "The Learning of Fundamental Skills by Women of Low Motor Ability," The Research Quarterly, 22:149-158, May, 1951.
39. McCloy, C. H. "The Measurement of General Motor Capacity and General Motor Ability," Research Quarterly Supplement, 5:46-61, March, 1934.
40. McCraw, L. W. and J. W. Tolbert. "Sociometric Status and Athletic Ability of Junior High School Boys," The Research Quarterly, 24:72-80, March, 1953.
41. Mann, M. "What does Ability Grouping do to the Self Concept?" Childhood Education, 36:357-360, April 1960.
42. Merriman, J. Burton. "Relationship of Personality Traits and Motor Ability," The Research Quarterly, 31:163-174, May, 1960.
43. Omwake, K. T. "Relationship Between Acceptance of Self and Acceptance of Others Shown by Three Personality Inventories," Journal of Consulting Psychology, 18:443-446, December, 1954.
44. Overstreet, B. W. "Rediscovery of the Private Self," National Parent Teacher Magazine, 53:10-12, June, 1959.
45. Perkins, H. V. "Factors Influencing Changes in Children's Self-Concepts," Child Development, 29:221-230, June, 1958.
46. Phillips, E. Lakin. "Attitudes toward Self and Others: A Brief Questionnaire Report," Journal of Consulting Psychology, 15:79-81, February, 1951.
47. Rarick, G. L. and Robert McKee. "A Study of Twenty Third Grade Children Exhibiting Extreme Levels of Achievement on Tests of Motor Proficiency," The Research Quarterly, 20:142-152, May, 1949.
48. Roth, Robert M. "The Role of Self-Concept in Achievement," Journal of Experimental Education, 27:265-283, June, 1959.
49. Salit, Elizabeth Powell. "The Development of Fundamental Sports Skills in College Women of Low Motor Ability," The Research Quarterly, 15:330-339.

50. Scott, M. Gladys. "An Assessment of Motor Ability of College Women Through Objective Tests," The Research Quarterly, 10:63-85, October, 1939.
51. _____. "Motor Ability Tests for College Women," The Research Quarterly, 14:402-405, December, 1943.
52. Seashore, Harold G. "Some Relationships of Fine and Gross Motor Abilities," The Research Quarterly, 13:259-274, March, 1942.
53. Secord, P. F. and S. M. Jourard. "Appraisal of Body-Cathexis: Body Cathexis and Self," Journal of Consulting Psychology, 17:343-347, October, 1953.
54. Shaw, M. C. "Self-Concept of Bright Underachieving High School Students as Revealed by Adjective Checklist," Personnel and Guidance Journal, 39:193-196, November, 1960.
55. Slotkins, H. "Technique for Self-Measurement," Personnel and Guidance Journal, 32:415-416, March, 1954.
56. Smith, Philip A. "A Factor Analytic Study of the Self-Concept," Journal of Consulting Psychology, 24:191, April, 1960.
57. Steinhaus, Arthur H. "Introduction," The Research Quarterly Supplement, 31:261-262, May, 1960.
58. Stock, Dorothy. "An Investigation into the Interrelations Between the Self-Concept and Feeling Directed Toward Other People," Journal of Consulting Psychology, 13:176-180, June, 1949.
59. Thurstone, L. L. "Attitudes Can be Measured," American Journal of Sociology, 33:529-554, January, 1928.
60. Torrance, E. P. "Some Practical Uses of a Knowledge of Self-Concept in Counseling and Guidance," Educational and Psychological Measurement, 14:120-127, May, 1954.
61. Turner, Ralph H. "Self and Others in Moral Judgment," American Sociological Review, 19:249-260, June, 1954.
62. Zimmerman, H. "Self-Acceptance and its Relationship to Conflict," Journal of Consulting Psychology, 18:447-449, December, 1954.

UNPUBLISHED MATERIALS

63. Beck, Joanne. "Relationship Between General Motor Ability, Social Adjustment, and Social Acceptance of Junior High School Girls," Unpublished Master's thesis, State University of Iowa, Iowa, 1956, 56 pp.
64. Clower, Mary Alice. "A Comparison of College Freshmen Women of High and Low Motor Ability with Regard to Selected Physical and Psychological Capacities," Unpublished Master's thesis, The Woman's College of The University of North Carolina, North Carolina, 1958, 107 pp.
65. Hult, Joan Selma. "A Comparative Relationship of Leg Strength and Hip Flexibility to Jumping Skill for College Women of Low and High Motor Ability," Unpublished Master's thesis, The Woman's College of The University of North Carolina, 1957, 68 pp.
66. McPartland, Thomas. "The Self and Social Structure: An Emperical Approach," Unpublished Doctoral dissertation, State University of Iowa, Iowa, 1953, 169 pp.
67. Mason, Marilyn. "The Comparison of College Freshmen Women with High and Low Scores on the Scott Motor Ability Test," Unpublished Master's thesis, The Woman's College of The University of North Carolina, 1953, 58 pp.
68. Mochel, Marguerite. "The Minnesota Multiphasic Personality Inventory as a Factor in the Selection and Guidance of Physical Education Major Students," Unpublished Doctor's dissertation, University of Southern California, California, 1949, 127 pp.
69. Porter, Nancy Ann. "A Study to Determine the Effects of a Course in Basic Activities on the General Motor Ability of College Freshmen Women of Low Motor Ability," Unpublished Master's thesis, The Woman's College of The University of North Carolina, North Carolina, 1954, 71 pp.
70. Sperling, Abraham P. "The Relationship Between Personality Adjustment and Achievement in Physical Education Activities," Unpublished Doctor's dissertation, New York University, New York, 1941, 115 pp.

71. Wells, Harold. "Relationships Between Physical Fitness and Psychological Variables," Unpublished Doctor's dissertation, University of Illinois, Illinois, 1958, 134 pp.

APPENDIX

COPY OF LETTER SENT TO SUBJECTS

Box 623
Woman's Hall
Woman's College
February 18, 1961

As partial fulfillment of the requirements for a Master of Science degree in Physical Education I am writing a thesis on the relationship between motor ability and self-concept of freshmen women. You have been selected as one of those qualified for the study.

If you are willing to participate in the study, you will be involved in re-taking the motor ability test you took in September and also in answering a "Who Am I?" questionnaire. The maximum amount of time required of any student will be 1 hour. Since the primary concern of the study is the combined results of the tests, there will be no use of names with the tests or in the thesis.

The dates the tests will be given are listed on the enclosed postcard. If you are willing to participate in the study please respond on the enclosed postcard and return it by February 24, 1961. If you should wish more information concerning the study, you may contact me by writing or calling the address below.

Your participation in this study will be greatly appreciated and will be invaluable to the success of my thesis. Thank you.

Sincerely,

Nancy Parker
623 Woman's Hall
Phone: 238

SAMPLE OF CARD ENCLOSED IN LETTER

Name _____

Please return by February 24, 1961

 I will participate.

I will be able to take tests-check available times.

 March 1 - 5:00 P.M. March 2 - 5:00 P.M. March 3 - 4:00 P.M. & 5:00 P.M. March 6 - 5:00 P.M. March 7 - 5:00 P.M. I will not be able to participate.If you plan to participate you will be notified as to
time and place.Thank you,
Nancy Parker

SAMPLE OF REMINDER CARD

REMINDER

Your testing time for the thesis will be :00 P.M., March
in the large gym in Coleman Gymnasium. Please wear gym
dress, tennis shoes and bring a pencil.

See you there.

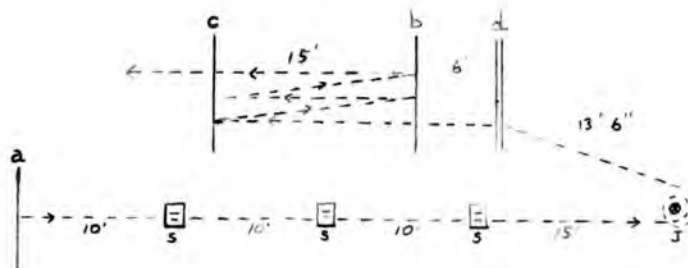
Thank you,
Nancy Parker

SCOTT THREE-ITEM MOTOR ABILITY BATTERY⁽¹¹⁾

1. Obstacle Race

A. Equipment:

The space needed is 55 feet by 12 feet; equipment needed, three jump standards and a cross bar at least 6 feet long; lines on the floor (see diagram below).



- a - starting line.
- b - line for shuttle.
- c - finish line.
- d - cross bar (18 inches high).
- J - jump standard.
- S - spot on floor (12x18 inches).

----- - path of runner.
 Distance from end of cross-bar to line of inner sides of spots,
 4 feet 4 inches.

B. Description:

Start in a back-lying position on the floor with the heels at line a. On the signal, Ready, Go! get up and start running toward J. As you come to each square on the floor, step on it with both feet. Run twice around J, turn back to d, go under the cross bar, get up on the other side, run to line c and continue running between line b and c until you come to c for the third time. The score is the number of seconds (to the nearest .1 second) that is required to run the course.

2. Basketball Throw for Distance

A. Equipment:

Space needed is about 80 feet long and 20 feet wide, a throwing line marked about 8 feet from one end of the course and parallel lines every 5 feet beginning 15 feet in front of the throwing line.

B. Description:

Start anywhere you wish behind the throwing line, but do not step on or across the line when throwing. Throw in any way you wish, three consecutive times. The score is the distance from the throwing line to the spot where the ball touches the floor. Only the longest throw counts.

3. Standing Broad Jump

A. Equipment:

If the test is given outside, it is necessary to have a jumping pit with sunken take-off board within 30 inches of the edge of the pit. If given indoors, the test requires mats at least 7 1/2 feet long and a solid board at least 2 feet long (beat boards used with apparatus are excellent) placed against the wall to prevent slipping. If the mat is marked in 2-inch intervals, it eliminates the need to measure each jump with a tape.

B. Description:

Stand on the take-off board with feet parallel, toes may be curled over the edge of the board. Take-off from both feet simultaneously; jump as far forward as possible. The score is the distance from the edge of the take-off board to the nearest heel (or to the nearest part of the body if the balance is lost). The best of three trials will be counted.

TABLE VII
 RAW DATA OF MOTOR ABILITY,
 CONSENSUAL, AND LOCUS SCORES

Subject No.	M.A. I	M.A. II	C.S.	L.S.
Low Group				
1.	34	44	13	12
2.	34	44	5	8
3.	39	42	12	14
4.	37	42	13	18
5.	38	41	19	20
6.	29	41	1	1
7.	36	41	7	7
8.	36	39	0	0
9.	36	38	14	13
10.	38	36	15	20
High Group				
1.	67	68	4	4
2.	65	63	7	6
3.	64	67	0	0
4.	60	67	1	1
5.	64	65	15	16
6.	67	69	7	5
7.	63	64	1	1
8.	61	62	7	7
9.	62	66	11	8
10.	72	81	1	2
11.	60	63	12	18
12.	61	62	5	1
13.	66	70	5	8
14.	71	75	2	3
15.	78	81	10	16
16.	62	64	14	16
17.	60	64	6	7
18.	61	64	8	8
19.	67	71	0	0
20.	60	67	14	18

Subject No.	M.A. I	M.A. II	C.S.	L.S.
21.	64	75	14	16
22.	67	68	13	10
23.	62	61	12	12
24.	61	69	17	18
25.	62	64	14	15
26.	60	63	8	6
27.	76	77	0	0
28.	71	68	2	0
Middle Group				
1.	39	56	3	4
2.	39	54	6	6
3.	34	54	4	3
4.	33	53	8	7
5.	38	53	17	17
6.	38	51	7	4
7.	39	51	14	18
8.	38	51	16	18
9.	36	50	3	2
10.	39	50	11	13
11.	38	50	7	5
12.	33	47	2	2
13.	39	47	0	0
14.	28	46	6	4
15.	39	46	9	11
Major Group				
1.		71	7	4
2.		69	1	1
3.		81	5	4
4.		67	5	9
5.		66	3	4
6.		77	8	7
7.		71	6	6
8.		62	3	2
9.		71	4	1
10.		62	10	9
11.		64	2	2
12.		71	1	0
13.		71	7	9

Subject No.	M.A. I	M.A. II	C.S.	L.S.
14.		71	2	3
15.		71	12	18
16.		81	6	4
17.		77	3	2
18.		81	8	8

THE RATING OF A
SAMPLE "WHO AM I?" QUESTIONNAIRE

Directions - Read Carefully

There are twenty numbered blanks on the page below. Please write twenty answers to the simple question "Who am I?" in the blanks. Just give twenty different answers to this question. Answer as if you were giving the answers to yourself, not to somebody else. Write the answers in the order that they occur to you. Don't worry about logic or 'importance'. Go along fairly fast, for time is limited.

	Rating
1. <u>college girl</u>	C
2. <u>I am someone's girlfriend</u>	C
3. <u>home economics major</u>	C
4. <u>Baptist</u>	C
5. <u>Democrat</u>	C
6. <u>sister</u>	C
7. <u>a daughter</u>	C
8. <u>citizen of the U. S. A.</u>	C
9. <u>enjoy sports</u>	C
10. <u>enjoy reading</u>	C
11. <u>like to sew</u>	C
12. <u>I have a slight temper</u>	N
13. <u>I like parties</u>	N
14. <u>love children</u>	C
15. <u>average appearance</u>	N
16. <u>average intelligence</u>	N
17. <u>I had rather be in a small group</u>	N
18. <u>I would like to marry when I finish college</u>	N
19. <u>I try to do well in all things I am interested in</u>	N
20. <u>I am afraid of the ocean, but like to swim in lakes</u>	N

C - Consensual statement	Locus Score - 14
Key	
N - Non-consensual statement	Consensual Score - 12