

THE RELATIONSHIP OF COMPETITIVE AND COOPERATIVE  
ATTITUDES OF STUDENTS PARTICIPATING IN  
TEAM SPORTS

---

A Thesis  
Presented to  
The Division of Physical Education  
Kansas State Teachers College of Emporia

---

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science

---

by  
Virginia Puffer  
May 1973

*Billy D. Sedwell*

Approved for the Major Department

*John E. Peterson*

Approved for the Graduate Council

7

335146

# Kansas State Teachers College

## Abstract

Puffer, Virginia: The Relationship of Competitive and Cooperative Attitudes of Students Participating in Team Sports (M.S. 1973)

Committee Members: Miss Jeanne C. Galley, chairman  
Dr. Dorothy Martin  
Miss Mary Headrick  
Dr. George Milton

This study investigated the difference between the competitive and cooperative attitudes of (1) the Ss involved in the PE, intramural, and interscholastic programs, (2) the Ss enrolled in grades 9 through 12, and (3) the Ss attending 4 different SHS. Finally, the competitive and cooperative test scores were compared with the instructor's or coach's ranking of the Ss attitudes. Each girl in the SHS PE class and in the interscholastic BB program completed a questionnaire and the TSI. The questionnaire was used to classify the Ss into 1 of 3 groups, nonparticipants, intramural participants, and interscholastic participants, and into grade levels 9th, 10th, 11th, and 12th. The Ss were further compared according to schools. Even though there was no significant difference, comparing the difference between the M at the .05 level of confidence between the 3 groups, 4 grade levels, and 4 schools, the interscholastic participants, 9th grade, and School D all possessed slightly higher competitive and cooperative attitudes. The PE instructor and

BB coach ranked the Ss according to their competitive and cooperative attitudes. The  $\underline{r}$ , using Pearson product-moment  $\underline{r}$ , between the competitive and cooperative test scores and the PE instructor's or BB coach's rankings was found not to be significant. The results of this study imply that the BB program does not tend to intensify the participants competitive and/or cooperative attitudes any more than does the PE program or intramural program. Higher degrees of these 2 attitudes might occur during an actual game situation, Ss putting pressure on themselves, or coaches putting pressure on the Ss. It is recommended that a different test be devised, a comparison made between men's and women's attitudes, and a comparison made between the S's attitudes existing at the beginning with the attitudes existing at the end of the programs.

SHS = senior high school

PE = physical education

BB = basketball

TSI = Test of Social Insight

Ss = subjects

M = mean

$\underline{r}$  = correlation

## ACKNOWLEDGMENT

Several persons have been instrumental in facilitating the preparation of this study. I wish to express my appreciation to my committee chairman, Miss Jeanne C. Galley, who has helped during the thesis research from the development of my ideas to the writing of the thesis. I am also grateful to Dr. Marjorie Stone for the organization and writing and to Dr. Dorothy Martin for helping with the statistical procedures and the writing of this thesis.

The investigator is indebted to the physical education teachers for permitting the investigator to interrupt their classes so the subjects could be tested. Gratitude is extended to the basketball coaches for their efforts in arranging a time and place so the girls' basketball team could be tested. I wish also to extend my appreciation to the students who participated in this study.

I am particularly grateful to my colleagues Miss Heide Haugaard and Mrs. Judy Parke for their help and encouragement while the thesis was being written. Finally, I sincerely thank my parents and husband, John E. Puffer, for all their encouragement.

## TABLE OF CONTENTS

	Page
ACKNOWLEDGMENT . . . . .	iii
LIST OF TABLES . . . . .	vii
Chapter	
I. INTRODUCTION . . . . .	1
THE PROBLEM . . . . .	2
Statement of the Problem . . . . .	2
Hypotheses of the Study . . . . .	3
Significance of the Study . . . . .	3
Definition of Terms . . . . .	6
Limitations of the Study . . . . .	7
Method of Acquiring Data . . . . .	8
Method of Evaluation . . . . .	9
Summary . . . . .	10
II. REVIEW OF RELATED LITERATURE . . . . .	12
COMPETITION AND COOPERATION . . . . .	12
COMPETITION, COOPERATION, AND THE SCHOOL . . . . .	13
ATTITUDES . . . . .	14
PSYCHOLOGICAL AND EDUCATIONAL STUDIES . . . . .	16
SUMMARY . . . . .	21
III. TESTING PROCEDURES . . . . .	24
Administration of the Questionnaire and Test . . . . .	25
Statistical Procedures . . . . .	27

Chapter	Page
PILOT STUDY . . . . .	27
Background of the Subjects . . . . .	28
Analysis of the Test Results . . . . .	29
SUMMARY OF THE PILOT STUDY . . . . .	36
IV. TREATMENT AND ANALYSIS OF THE DATA . . . . .	39
PROCEDURES . . . . .	39
BACKGROUND OF THE SUBJECTS . . . . .	40
COMPARISON OF NONPARTICIPANTS, INTRAMURAL PARTICIPANTS, AND INTERSCHOLASTIC PARTICIPANTS . . . . .	42
COMPARISON AMONG GRADE LEVELS . . . . .	44
COMPARISON AMONG THE FOUR HIGH SCHOOLS . . . . .	48
COMPARISON BETWEEN TEST SCORES AND THE INSTRUCTORS' OR THE COACHES' RANKINGS . . . . .	53
SUMMARY . . . . .	56
V. SUMMARY AND RECOMMENDATIONS . . . . .	59
SUMMARY . . . . .	59
RECOMMENDATIONS . . . . .	66
BIBLIOGRAPHY . . . . .	68
APPENDIX . . . . .	72
A. Student's Questionnaire . . . . .	73
B. Instructor's or Coach's Ranking Questionnaire . . . . .	77
C. Description of the Test of Social Insight . . . . .	81
D. The Test of Social Insight . . . . .	82
E. The Team Sport Background of the Interscholastic Participants, the Intramural Participants, and the Nonparticipants in the Pilot Study . . . . .	97

Chapter

Page

F. The Team Sports Background of the Interscholastic Participants, the Intramural Participants, and the Nonparticipants in the Study . . . . . 100



## LIST OF TABLES

Table	Page
I. A Comparison of the Competitive Mean Scores Between the Nonparticipants, the Intramural Participants, and the Interscholastic Participants in the Pilot Study . . . . .	30
II. A Comparison of the Cooperative Mean Scores Between the Nonparticipants, the Intramural Participants, and the Interscholastic Participants in the Pilot Study . . . . .	32
III. A Comparison of the Competitive Mean Scores Among Grade Levels in the Pilot Study . . . . .	33
IV. A Comparison of the Cooperative Mean Scores Among Grade Levels in the Pilot Study . . . . .	35
V. A Comparison of the Competitive Mean Scores of the Nonparticipant, the Intramural Participant, and the Interscholastic Participant Groups . . . . .	43
VI. A Comparison of the Cooperative Mean Scores of the Nonparticipant, the Intramural Participant, and the Interscholastic Participant Groups . . . . .	45
VII. A Comparison of the Competitive Mean Scores Among Grade Levels . . . . .	47
VIII. A Comparison of the Cooperative Mean Scores Among Grade Levels . . . . .	49
IX. A Comparison of the Competitive Mean Scores Among School A, School B, School C, and School D . . . . .	51
X. A Comparison of the Cooperative Mean Scores Among School A, School B, School C, and School D . . . . .	52
XI. A Comparison Between the Competitive Test Scores and the Instructors' or Coaches' Competitive Rankings . . . . .	55

Table

Page

XII. A Comparison Between the Cooperative Test  
Scores and the Instructors' or Coaches'  
Cooperative Rankings . . . . . 57

## CHAPTER I

### INTRODUCTION

Educators know that a student's attitudes are learned from class associates, parents, teachers, coaches, and friends. Attitudes are difficult to measure compared to the skills an individual has learned, the knowledge that has been acquired, and the physical fitness level that has been attained. Because of a closer association with the student, the physical education teacher has more opportunity to teach desirable attitudes than instructors in any other field.<sup>10</sup>

The attitudes learned through these influences and through interactions with other individuals are specifically concerned with behavior and personality development. Therefore, attitudes play an important role in the physical education program as well as in the intramural program and in the interscholastic program. Consequently, physical education needs to be concerned with the development of the attitudes of each individual because this program involves more individuals than the intramural program or the interscholastic program.

## THE PROBLEM

### Statement of the Problem

The purpose of this study was to determine the differences between the competitive and cooperative attitudes of the girls involved in the required physical education program, the intramural program, and the interscholastic program. The current emphasis of expanding the interscholastic program for girls raises the following question for investigation: What competitive and cooperative attitudes do the girls enrolled in the required physical education program, the girls participating in the intramural program, and the girls participating in the interscholastic program possess? An answer to this question might help the physical education teacher and/or coach establish a physical education program, an intramural program, or an interscholastic program which is more pleasurable and consequently more educational. Some students learn more when they are involved in a cooperative situation. Therefore, the highly competitive or cooperative individual may benefit more when she participates with other girls who are highly competitive or cooperative, the moderately competitive or cooperative individual may benefit more when she participates with other girls who are moderately competitive or cooperative, and the less competitive or cooperative girl may benefit more when she participates with those girls who are less

competitive or cooperative.

### Hypotheses of the Study

In order to investigate the previous question the following hypotheses were tested: (1) there was no significant difference between the competitive and cooperative attitudes of the nonparticipants, the intramural participants, and the interscholastic participants; (2) there was no significant difference between the subjects enrolled in grades nine through twelve or between the subjects enrolled in the various high schools when comparing the competitive and cooperative attitude; (3) there was no significant difference between the competitive and cooperative test scores and the instructor's or coach's ranking of the subject's competitive and cooperative attitude.

### Significance of the Study

The required physical education program, the intramural program, and the interscholastic program provide opportunities for both competition and cooperation. In some team sports situations competition and cooperation may be reinforced. For example intra-team competition, competing to make the most points, and intra-team cooperation, not letting the team down, may develop in a team sport situation.

The effects of competition may be beneficial or detrimental depending on the attitudes and values of the physical education teacher or coach when considered together

with the needs and personality characteristics of the students involved in team sport activities. There are as many different degrees of competition as there are people competing. The differences may depend on each individual's needs, skills, competitive style, and attitudes toward competition.<sup>4</sup>

Frequently, competition is closely associated with hostility.<sup>24</sup> Therefore, whether or not individuals have pleasurable experiences in their first attempts involving competition and team sports will help determine the extent of their future participation in the intramural and interscholastic programs. If there is much hostility, discouragement may result and this could greatly retard the student's interest and learning. Highly competitive individuals tend to judge others on their team as highly competitive.<sup>4</sup> After judging others as very competitive the individual may need to learn that others on the team have weaknesses and shortcomings as well as varying degrees of competitive attitudes which need to be tolerated. The same situation pertains to students who judge their teammates as very cooperative. Some students may benefit more when they compete with individuals possessing similar competitive and cooperative attitudes.

Because the girls' interscholastic basketball program in Iowa is such an extensive program, the investigator was concerned whether or not there would be any significant

difference involving the competitive and cooperative attitude of the students involved in one or more of the following programs: (1) the required physical education program, (2) the intramural program, or (3) the interscholastic program. Occasionally, the students who were involved in one, two, or all of these programs were enrolled in the same required physical education program and they were also on the same team in class. The investigator was interested in determining if the hostility or frustration, which might occur, could be due to the different competitive and cooperative attitudes which a student may have expressed during the game as a result of the possible intensity of her team sport participation background.

If the differences in competitive and cooperative attitudes are causing some hostility or frustration, then our programs need to be reevaluated. "It is distinctly worthwhile to measure attitudes if one wishes to trace honestly the degree of success which a program is achieving."<sup>20</sup> If the students do not find favorable class or activity situations they will not try to learn, and the intramural and interscholastic program will be ignored.

One method of classifying students is through attitudes toward competition and cooperation. The Test of Social Insight might be given to each student to obtain her competitive and cooperative attitudes. The student's competitive and cooperative attitudes, the student's needs, and

the student's personality characteristics may all need to be considered when establishing teams in the required physical education program.

### Definition of Terms

1. Attitude. Attitude, as defined by Thurston, denotes "the sum-total of man's inclinations and feelings, prejudice or bias, preconceived notion, ideas, fears, threats, and convictions about any specific topic."<sup>17</sup>
2. Competition. Competition is a situation in which an individual endeavors to achieve a goal for himself or his group by methods which tend to deprive others of that same goal.<sup>21</sup>
3. Cooperation. Cooperation is the action of individuals within a group integrated toward a single effect or toward the achievement of a common purpose.<sup>8</sup>
4. Interscholastic Team Sport Program. The interscholastic team sport program is an activity involving a team from one school playing a team from another school. There are established practice periods, adult coaches, and scheduled games in the sport.
5. Interscholastic Participant. The interscholastic participant is a girl who has taken or is taking part in the interscholastic team sport program while attending high school.
6. Intramural Team Sport Program. The intramural



team sport program is competition within a school; a team plays another team from the same school. The teams have no established practice periods or adult coaches; however, the games are scheduled.

7. Intramural Participant. The intramural participant is a girl who has taken part in the intramural team sport program while attending school.

8. Nonparticipant. The nonparticipant is any individual who has not taken part in the intramural or interscholastic team sport program but has been and/or is enrolled in the required physical education class while attending school.

9. Required Physical Education. The physical education program is comprised of supervised physical activity periods required by the state of Iowa and/or by the local authorities. Each student must complete this requirement before graduation.

10. Team Sport. A team sport is a highly organized game played by two groups consisting of more than two players on each side.<sup>8</sup>

#### Limitations of the Study

This study was restricted to high school girls who were enrolled in the required physical education program, or who participated in the interscholastic basketball program in the Des Moines area. One high school was involved in the

pilot study, and four other high schools were involved in the final study.

The selection of the physical education class to be tested depended on the time when the class met in order to permit the presence of the investigator, and the instructor's planning of the physical education class was also considered. The time when the basketball team was tested depended upon when the investigator could be present and when the girls' basketball coach could arrange for the team to get together.

The total number of subjects who followed directions and completed the test was small. The number of intramural participants was small because an intramural program was not included in every school district involved in the study. Many interscholastic participants had also been involved in the intramural program, but because they had taken part in the interscholastic basketball program they were classified as interscholastic participants.

#### Method of Acquiring Data

Information pertaining to the subject's team sport participation background was used to classify the subjects into one of the three groups: (1) nonparticipants, (2) intramural participants, and (3) interscholastic participants. A copy of this questionnaire may be found in Appendix A, page 73. The Test of Social Insight was administered to obtain the competitive and cooperative attitudes.

A description of the Test of Social Insight may be found in Appendix C, page 81. The questionnaire, an IBM answer sheet, and the test booklet were distributed to each subject in the required physical education class, which included the non-participants and the intramural participants. During a different time the questionnaire, answer sheet, and test booklet were administered to each student involved in the girls' interscholastic basketball program.

While the subjects were completing the questionnaire and the Test of Social Insight, each physical education instructor or coach ranked the girls according to their competitive and cooperative attitudes. A copy of the instructor's and coach's ranking questionnaire may be found in Appendix B, page 77.

A pilot study was conducted the last week in February of 1970. The questionnaire and the Test of Social Insight were administered to twenty-one subjects who were enrolled in the required physical education class and to nineteen students who were members of the girls interscholastic basketball team.

#### Method of Evaluation

The competitive and cooperative scales from the Test of Social Insight were used to measure the attitudes of the nonparticipants, the intramural participants, and the interscholastic participants involved in the study. The

highest possible competitive score a subject could have achieved when taking the Test of Social Insight would have been sixty. This means all sixty questions would have had to have been answered with the competitive response. The same situation pertains to the cooperative scores. The significance of the difference between the mean of the non-participants, the intramural participants, and the interscholastic participants was determined according to the Z test at the .05 level of confidence. The Pearson product-moment correlation was employed to calculate the correlation between the competitive and cooperative test scores and the ranking by each instructor or coach.

### Summary

Because attitudes play an important part in the students' learning and the interscholastic program for girls is growing, the difference between the competitive and cooperative attitudes of the girls involved in the required physical education program, the intramural program, and the interscholastic program was investigated. A questionnaire was used for obtaining the team sports background of the subjects and for classification purposes of the students. The Test of Social Insight, which was used for obtaining the competitive and cooperative attitudes, was administered in the physical education class and to the girls' basketball team within four schools in the Des Moines area. Each

physical education teacher and/or coach ranked the subjects according to their competitive and cooperative attitudes.

The significance of the difference between the means of the nonparticipants, the intramural participants, the interscholastic participants was determined according to the Z test at the .05 level of confidence. The Pearson product-moment correlation was employed to obtain the correlation between the competitive and cooperative test scores and the teacher's or coach's competitive and cooperative rankings.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

The review of literature will be presented in four sections under the headings of "Competition and Cooperation", "Competition, Cooperation and the School", "Attitudes", and "Psychological and Educational Studies".

#### COMPETITION AND COOPERATION

Cratty suggested that games consisting of competition relate to the culture where they are found.<sup>4</sup> Competition is definitely a part of our twentieth century western culture. This is illustrated by the fact that our culture is sports oriented, that competition contributes to individual progress, and that high standards of living exist in our culture.

Faleigh found that skillful participation in a normal pattern of social and competitive play is associated with better adjustment, and, conversely, less participation in competitive play is associated with poorer adjustment.<sup>2</sup> Coaches and physical educators are concerned with two types of competition, direct and indirect. Direct competition involves an attempt to score against an opposing team and at the same time prevent the opponents from scoring. The second type of competition, which is indirect competition,

pertains to a team striving for a specific standard.<sup>13</sup>

Competitive behavior tends to be a more fundamental human quality than cooperative behavior.<sup>4</sup> Even before the child enters school, he has learned that doing something better than another child results in approval and prestige. Individuals can learn to be reasonable and cooperative through guidance and evaluated opportunities. When cooperation is incorporated into the program, the student learns

.... that he must discipline himself to meet his responsibilities if the group of which he is a member is to achieve success in which he may share.<sup>1</sup>

Some individuals tend to work more directly for a group than for themselves. Cratty confirmed this by stating that when a person is supported in his competitive efforts by members of a similar economic group the performance is usually improved.<sup>4</sup> Some individuals value group improvement. Malpass said: "Intra-group cooperation encourages more effective effort in inter-group competition".<sup>13</sup> The assumption usually made is that groups which have experienced close and satisfactory relationships will tend to reinforce each other's performance because of common past experiences, established leadership patterns, and mutual encouragement.<sup>18</sup>

#### COMPETITION, COOPERATION, AND THE SCHOOL

America is at the same time a democratic nation that demands cooperation and a society that is competitive. The

schools possess the opportunity to develop both the competitive and cooperative skills in their students. According to Jursild, the schools must provide opportunities for cooperation as well as wholesome forms of competition. If competition were eliminated from the schools, the youngsters themselves would find ways to compete.<sup>2</sup>

Athletic programs provide an opportunity to develop both competition and cooperation. Through sport competition, desirable personal and social values can be developed, but these objectives, which depend on appropriate leadership are not automatic. Competition can be a desirable social value when the emphasis is on excellence in performance. Grossack stated that the way an individual perceives himself, as either competitive or cooperative, depends upon the performance level reached while this situation prevails.<sup>4</sup> Individuals are stimulated in competition when it involves competing against themselves or other individuals who have parallel accomplishments. Repeated failures create stress within the group which results in either greater group unity or group destruction.<sup>4</sup>

#### ATTITUDES

Attitudes are individualized learned response tendencies which vary in intensity. They are acquired through various experiences, such as being influenced by other individuals, analyzing various experiences and differentiating



among them, encountering traumatic experiences, identifying with another person or an institution, and analyzing attitudes relating to other conditions or associates.<sup>10</sup> The physical educator's class has long been concerned with the development of desirable attitudes which are included in the list of objectives. Developing desirable attitudes in the physical education activity program can be accomplished through various methods. The teacher or coach can set an example. Knowledge, skills, and understanding are encouraged; allowance is made for individual differences; and there are provisions for practicing the outward actions reflecting desirable attitudes.<sup>10</sup> These situations can be accomplished through sports and games which are included in the physical education, intramural, and interscholastic programs. Attitudes often have a great influence on the student's readiness to learn. Dewey has said, concerning education and attitudes:

.... collateral learning in the way of formation of enduring attitudes, or likes and dislikes may be, and often is, much more important than the spelling lesson or the lesson in geography. For these attitudes are fundamentally what count in the future.<sup>5</sup>

Some attitudes are stable, and they are not easy to change. The individual must be ready and motivated before a change will occur. A change in attitudes must often occur before there is a change in the individual's behavior. As a group learns to operate more effectively, the attitudes generally change.

Attitudes are often measured with self report tests. Whether or not this method is a reliable predictor is a matter of debate. The attitude studies done in physical education have been concerned with attitudes toward physical education activities in college and in high school; toward intensive athletic competition; toward psychological, moral-spirited, and sociological values in physical education activities, and toward leadership experiences. The related studies are primarily psychological and educational studies.

#### PSYCHOLOGICAL AND EDUCATIONAL STUDIES

Studies concerning competition and cooperation have been primarily concerned with fine motor activities and simple mental tasks rather than with gross motor activities.

Deutsch used a mental task problem for his study in 1949.<sup>3</sup> The fifty participants were divided into ten groups which met once a week for five weeks. Each group solved a puzzle problem and a human relations problem every time it met. Five groups were given instructions aimed toward making the individuals compete with one another when solving the problems, and the other five groups were given instructions aimed toward making them cooperative while solving the problem. Each group was rated by the experimenter according to its productivity and the discussion of the problem. The cooperative groups, as a whole, solved the problems more readily than did the competitive groups. Individual

productivity was also greater within the cooperative groups. There was some indication that competition created more personal insecurity through anticipation of hostility from others.

Read, in 1968, investigated the influence of competition and cooperation in the physical education class regarding body-image and self-concept.<sup>28</sup> Two tests, the Body Cathexis Test and the Tennessee Self Concept Scale were administered to thirty-seven competitive subjects and thirty-two noncompetitive subjects. These two groups were subdivided into constant winners, totaling eleven, and constant losers, totaling eleven. No significant difference was found between the body-image and self-image of the subjects in the competitive group and noncompetitive group. The constant winners, however, did have significant higher positive body-image and self-concept scores than did the subjects who were constant losers. This illustrates that a critical losing point needs to be determined so the student does not encounter detrimental effects. Groups that never continually won or lost did not have a significant change in their body-image and self-concept. This study indicates the importance of controlling competition in the physical education class.

The test used in Furuhata's study in 1964 involved matching triangular cards according to their numbers.<sup>27</sup> The object of the test was to make as many matches as possible

within a ten minute time period. During the game the plays were recorded and observations were made concerning verbal behavior. The sociometric instrument was used to pair up the subjects, and they were randomly assigned to a competitive or cooperative situation. It was found that interpersonal attraction involved in the cooperative situation did not necessarily create considerable more attraction to the partner after the game than the competitive situation did.

Shaw in 1958 used a tracking experiment for his study.<sup>25</sup> The task involved keeping the rotating cursor, which was operated with a handwheel, in alignment with the rotating target. The apparatus had two handwheels and two targets. The cursor could be controlled by either handwheel, but not by both simultaneously. Two scores were obtained from this task: the time the cursor was in the target area and the average distance between the cursor and target during the task. Ten subjects, five females and five males, were allowed twenty-two trials with a time limit of thirty seconds each. Each subject believed the person sitting next to him was another subject for the study, but this other individual was not another subject. Before the trials each subject was given a practice trial and then he was informed about the type of situation involved: competitive, cooperative, or solitary. For fifteen seconds the experimenter randomly shifted the control and for the remaining fifteen

seconds the subjects had control. After the session the subjects completed a questionnaire. The subjects indicated they preferred the competitive situation to the cooperative or individual situation. The subjects performed better when they thought the situation was cooperative rather than competitive. It is believed that the subjects performed better in a cooperative situation because of the emotional factors involved. The subjects in the competitive situation encountered more stress than did the subjects in the cooperative situation. Trying too hard may have had a negative effect on the subject's performance.

Vaughn, in 1936, found that when an individual encounters doubt concerning his success and he also possesses a strong desire to win, a disruption of behavior might occur.<sup>26</sup> When an individual is required to perform under competitive conditions which he believes are unfavorable with his abilities, he may substitute another goal which seems to be more favorable with his abilities. The suggestion has been made that these other goals are not very influential in stimulating behavior. An example of this type of behavior might be when individuals on the basketball team play as individuals and not as a team. These conclusions came from a study involving ten individuals who used a .22 caliber Springfield Army rifle for one hour a day, once a week, during a twelve week period. Each subject shot at a target designed with concentric circles which was fifty feet

away. The space between the circles were assigned numbers and the averages of the shots scored during different situations was used for statistical purposes. Three contests were conducted each time the individuals shot. In the first contest, the prize was awarded for the highest average score, while in the second competitive situation the winner was determined on the basis of the highest score including the handicap. The prize in the third contest was awarded to the individual showing the greatest improvement.

Meyers in 1962 selected one hundred eighty ROTC students to make up sixty teams of three men each.<sup>22</sup> There were thirty teams in each of the competitive and noncompetitive leagues. In the competitive division there were five separate leagues of six teams each of which participated in a 25-bout round robin tournament. The win-loss records for each team were kept and announced. The noncompetitive leagues competed against three qualifying standards which were ranked according to degree of difficulty. The following measures were collected after each firing session: the individual's esteem for his teammates, the individual's perception of his acceptance by the team, and the individual's evaluation of the reasons for failure. Competitive experiences produced good adjustment when success was encountered, but under conditions of failure the competitive experience was not as positive as when there was success. The noncompetitive group showed poorer group adjustment.

Teammates who were absent were blamed for the group's failure.

Stitt in 1964 tested 114 junior high school girls and 118 senior high school girls who had been assigned to four groups and then further classified into high and low motor ability subgroups.<sup>29</sup> Before each practice session all the groups but one were informed about the type of situation which prevailed: individual competition, class competition, and school competition. One group was not given any incentives. Three gross motor tasks were administered to all the groups: (1) the paddle bounce task, (2) the hop balance task, and (3) the basketball dribble task. The conclusion from this study indicates that age, maturity, and skill level need to be considered when selecting the degree and difficulty of competitive activities for heterogeneous activity classes motivated through different competitive situations. That is, one competitive technique used in a physical education class will not motivate everyone.

#### SUMMARY

Competitive behavior tends to be a more fundamental human quality than cooperative behavior. In our twentieth century western culture, competition plays a definite part. Often cooperation within a group stimulates competition between groups. This particular situation occurs within the schools.

The athletic programs within the school systems provide opportunities to develop both competition and cooperation. How a player perceives himself or another individual determines whether a player is stimulated to play competitively or cooperatively. Numerous failures can create stress within the team which will cause either unity or destruction.

The physical education class has been concerned with attitudes for a long time. Different competitive and cooperative situations can be established in sports and games in the physical education program, the intramural program, and in the interscholastic program. Attitudes, which can be changed, play an important part in the student's readiness to learn.

The studies concerning competition and cooperation usually involved teams with only two people on a team and simple motor tasks rather than gross motor activities. A group which was cooperative, as a whole, tended to solve problems more readily than did the group which was competitive, as a whole. The cooperative group also had greater individual production and their performance was also better in a cooperative situation than it was in a competitive situation. There was some indication that competition created more personal insecurity through anticipation of hostility from other players. The individuals involved in a cooperative situation also performed better than in a



competitive situation due to less stress being encountered.

Group members who never continually won or lost did not have a significant change concerning their body-image and self-concept. When an individual is required to perform under competitive conditions which are unfavorable with his abilities, he may choose different goals which do not seem to influence inspiring behavior. Age, maturation, and skill level need to be considered when selecting the degree and difficulty of competitive activities for heterogeneous classes which are motivated through different competitive situations.

## CHAPTER III

### TESTING PROCEDURES

The purpose of this study was to investigate the differences between the competitive and cooperative attitudes of the girls involved in (1) the required physical education program, (2) the intramural program, and (3) the interscholastic program. Each subject completed a questionnaire which was used to obtain information about each subject's team sport participation background including the types of athletic programs in which she had taken an active part. This information helped to classify the students into one of the three groups, (1) nonparticipants, (2) intramural participants, and (3) interscholastic participants.

The adult edition of the Test of Social Insight was administered to each student to obtain her competitive and cooperative attitudes. A copy of the Test of Social Insight may be found in Appendix D, page 82. The reliability for the competitive part was .372 and for the cooperative part the reliability was .516.<sup>7</sup> A test-retest reliability of .895 was obtained for the entire test.<sup>7</sup> A sample of about fifty men and women were involved in determining this type of reliability. The reliability coefficient for women was .940.<sup>7</sup>

The Test of Social Insight was found to have face validity as evaluated by more than 200 students enrolled in psychology graduate classes. The psychology students agreed in a written class assignment that the questions found in the Test of Social Insight measured social adjustment and personality. The concurrent validity studies with similar test yielded many significant relationships; however, no validity studies were published for the separate scales of the test.

A questionnaire, written by the investigator, was given to each physical education instructor and girls' basketball coach who ranked the subjects according to competitive and cooperative attitudes. The physical education instructors and coaches were asked to rank the subjects because they were more familiar with the student's competitive and cooperative attitudes which were expressed in team sport situations during the year. No assumption was made that competitive and cooperative attitudes were direct opposites, for example a person scoring high on a cooperative scale would not necessarily be ranked low on a competitive scale. This is why two ranking scales were used.

#### Administration of the Questionnaire and Test

Four schools were involved in this study, and in each school the girls' interscholastic basketball team and one girls' required physical education class were selected to

complete the questionnaire and the Test of Social Insight. A test booklet including the questionnaire and the IBM answer sheet was distributed to each student in the required physical education class and to each subject on the interscholastic basketball team. The girls were requested to record their initials in the upper right hand corner of the questionnaire and on the IBM answer sheet. If another girl in the same class or on the same basketball team had the same first and last initials, both girls were requested to use their middle initial. The investigator read the introductory letter, the definitions, and the directions aloud. The girls were permitted to ask questions if they did not understand the definitions or directions. After the questionnaire was completed, the directions for the Test of Social Insight were read aloud. The girls were again permitted to ask questions if they did not understand the directions. While the students were taking the test each physical education instructor or coach was asked to rank the students according to their competitive and cooperative attitudes. For example in a class with twenty-five students, the most competitive would receive a ranking of one and the least competitive a ranking of twenty-five. The physical education teacher and girl's basketball coach used the students' initials when ranking the girls so a comparison could be made between the test scores and the instructor's or coach's ranking.

## Statistical Procedures

The competitive and cooperative attitudes were compared by measuring the differences between the mean scores of the nonparticipants, the intramural participants, and the interscholastic participants. The difference between the competitive and cooperative attitudes was further compared by measuring the differences between the mean scores of the students enrolled in the four high schools, and of the students enrolled in grade levels nine through twelve. The Z test was utilized to determine the significance of the difference between the mean scores at the .05 level of confidence. The Pearson product-moment correlation was used to determine the correlation between competitive and cooperative test scores and the instructor's or coach's ranking of the subjects' competitive and cooperative attitudes.

### PILOT STUDY

One school within the Des Moines area was used for the pilot study. Eleven, or 52 percent, of the twenty-one subjects enrolled in the girls' required physical education class were the subjects in the pilot study. The other ten, or 48 percent, of the subjects in the girls' required physical education class were eliminated from the class because of invalid questionnaires and improper identification. Fifteen, or 79 percent, of the nineteen participants in the interscholastic basketball program were involved in

the pilot study. The other four, or 21 percent, of the girls on the interscholastic basketball team were not included in the study because of invalid questionnaires and improper identification. The total sample for the pilot study involved twenty-six students.

### Background of the Subjects

Information from the questionnaire concerning in what team sport program or programs the subjects took an active part while attending junior high school and senior high school was used to classify the subjects into one of the following groups: (1) the nonparticipants, (2) the intramural participants, and (3) the interscholastic participants.

Among the eight pilot study nonparticipants, 87 percent played volleyball, 75 percent played basketball, and 38 percent played softball in the required physical education program. While the three intramural participants were enrolled in the required physical education program, 67 percent did not participate in any team sports; however, 33 percent participated in basketball, softball, and volleyball. Eighty-seven percent of the fifteen interscholastic participants were involved in the intramural program while they attended junior high school. During the required physical education program 93 percent of the interscholastic participants played basketball, 60 percent played volleyball, and 53 percent played softball. While participating in the

interscholastic program 87 percent of the subjects also participated in the required physical education program. Each student, if she were interested, had the option of participating in the required physical education program while also being involved in the interscholastic program. The team sport background for the nonparticipants, the intramural participants, and the interscholastic participants in the pilot study may be found in Appendix E, page 97.

#### Analysis of the Test Results

The competitive and cooperative attitudes of the pilot study subjects were obtained by administering the Test of Social Insight to one girls' required physical education class and to the girls' interscholastic basketball team. The eight nonparticipants had a competitive mean score of 6.87, the three intramural participants had a competitive mean score of 9.00, and the fifteen interscholastic participants had a competitive mean score of 7.60. The mean difference between the three groups was not significant at the .05 level of confidence. Table I, page 30, shows the data involved in testing part of hypothesis one. There was no significant difference between the competitive attitudes of the nonparticipants, the intramural participants, and the interscholastic participants.

The nonparticipants had a cooperative mean score of

TABLE I

A COMPARISON OF THE COMPETITIVE MEAN SCORES BETWEEN THE NONPARTICIPANTS,  
THE INTRAMURAL PARTICIPANTS, AND THE INTERSCHOLASTIC PARTICIPANTS  
IN THE PILOT STUDY

GROUP	GROUP SYMBOL	N	MEAN	S D	GROUP COMPARISON	MEAN DIFFERENCE	Z	LEVEL OF CONFIDENCE
Nonparticipants	A	8	6.87	2.98				
Intramural Participants	B	3	9.00	3.74	A-B	2.13	.57	> .05
					A-C	.73	.27	> .05
					B-C	1.40	.52	> .05
Interscholastic Participants	C	15	7.60	1.95				

A Z score of 1.96 was needed for significance.



33.25, the intramural participants had a cooperative mean score of 32.66, and the interscholastic participants had a mean score of 34.60. The mean difference found to exist between the three groups was not significant at the .05 level of confidence. Table II, page 32, shows the data involved in testing part of hypothesis one. There was no significant difference between the cooperative attitudes of the nonparticipants, the intramural participants, and the interscholastic participants.

This pilot study was further concerned with the competitive and cooperative attitude differences that the students enrolled in grade levels nine through twelve possessed. The information concerning the grade level each subject was enrolled in was obtained from the student's questionnaire. The tenth grade subjects had a competitive mean score of 8.45, and eleventh grade subjects had a competitive mean score of 7.00, and the twelfth grade subjects had a competitive mean score of 6.71. The mean difference between the three groups was not significant at the .05 level of confidence. Table III, page 33, shows the data involved in testing part of hypothesis two. There was no significant difference between the competitive attitudes of the subjects enrolled in grade levels ten, eleven, or twelve.

The tenth grade subjects had a cooperative mean score of 33.64, the eleventh grade subjects had a cooperative mean score of 32.75, and the twelfth grade subjects had a

TABLE II

A COMPARISON OF THE COOPERATIVE MEAN SCORES BETWEEN THE NONPARTICIPANTS,  
THE INTRAMURAL PARTICIPANTS, AND THE INTERSCHOLASTIC PARTICIPANTS  
IN THE PILOT STUDY

GROUP	GROUP SYMBOL	N	MEAN	S D	GROUP COMPARISON	MEAN DIFFERENCE	Z	LEVEL OF CONFIDENCE
Nonparticipants	A	8	33.25	3.49				
Intramural Participants	B	3	32.66	2.58	A-B	.59	.26	> .05
					A-C	1.34	.70	> .05
					B-C	1.94	.39	> .05
Interscholastic Participants	C	15	34.60	4.82				

A Z score of 1.96 was needed for significance.

TABLE III

A COMPARISON OF THE COMPETITIVE MEAN SCORES AMONG GRADE LEVELS IN THE PILOT STUDY

GROUP	N	MEAN	S D	GROUP COMPARISON	MEAN DIFFERENCES	Z	LEVEL OF CONFIDENCE
Tenth	11	8.45	2.23				
				10-11	1.45	1.36	> .05
Eleventh	8	7.00	2.12				
				10-12	1.74	1.16	> .05
				11-12	.29	.18	> .05
Twelfth	7	6.71	3.24				

A Z score of 1.96 was needed for significance.

cooperative mean score of 33.57. The mean difference between the three groups was not significant at the .05 level of confidence. Table IV, page 35, shows the data involved in testing part of hypothesis two. There was no significant difference between the cooperative attitudes of the subjects enrolled in grades ten, eleven, or twelve.

The Pearson product-moment correlation coefficient was used to compare the competitive and cooperative attitudes of the subjects with the rankings of the physical education instructor and the basketball coach. The correlation between the competitive test scores and the physical education instructor's competitive ranking of the students enrolled in the required physical education class was .211 which was not significant at the .05 level of confidence. The correlation between the cooperative test scores and the physical education instructors' cooperative ranking of the students enrolled in the required physical education class was  $-.370$  which was not significant at the .05 level of confidence.

The correlation between the competitive test scores and the girls' basketball coach's competitive ranking of the students participating on the girls' interscholastic basketball team was .065 which was found not to be significant at the .05 level of confidence. The correlation between the cooperative test scores and the basketball coach's cooperative ranking of the girls on the interscholastic basketball

TABLE IV

A COMPARISON OF THE COOPERATIVE MEAN SCORES AMONG GRADE  
LEVELS IN THE PILOT STUDY

GROUP	N	MEAN	S D	GROUP COMPARISON	MEAN DIFFERENCES	Z	LEVEL OF CONFIDENCE
Tenth	11	33.64	5.65				
				10-11	.89	.28	> .05
Eleventh	8	32.75	6.92	10-12	.07	.03	> .05
				11-12	-.82	-.29	> .05
Twelfth	7	33.57	2.72				

A Z score of 1.96 was needed for significance.

team was  $-.130$  which was not significant at the  $.05$  level of confidence.

#### SUMMARY OF THE PILOT STUDY

Each subject in the girls' required physical education class and on the girls' interscholastic basketball team completed a questionnaire, made by the investigator, and the Test of Social Insight. The questionnaire helped the investigator obtain information about each student's team sport participation background including the type of athletic programs which was the basis for classifying the students into three groups: (1) the nonparticipants, (2) the intramural participants, and (3) the interscholastic participants. The Test of Social Insight was used to obtain the subject's competitive and cooperative attitudes. The girls' physical education instructor and the girls' interscholastic basketball coach ranked the girls according to their competitive and cooperative attitudes.

The subjects competitive and cooperative attitudes were compared by measuring the difference between the mean score of the nonparticipants, the intramural participants, and the interscholastic participants. The mean scores of the three groups was determined according to the Z test at the  $.05$  level of confidence. The mean difference found to exist between the competitive and cooperative test scores of the nonparticipants, the intramural participants, and

the interscholastic participants was not significant.

The subjects competitive and cooperative attitudes were further compared by measuring the difference between the tenth, eleventh, and twelfth grade level students. The mean difference found to exist between the competitive and cooperative test scores of the three grade levels was not significant at the .05 level of confidence.

The Pearson product-moment correlation coefficient was used to compare the competitive and cooperative attitudes with the competitive and cooperative ranking by the girls' physical education instructor or the girls' basketball coach. It was determined that there was no significant difference between the competitive or cooperative test scores and the girls' physical education instructor or girls' basketball coach's competitive or cooperative rankings in the pilot study.

Upon the completion of the pilot study, the essential improvements required were concerned with the students' questionnaire. The terms incorporated into the questionnaire were defined first to help the students better understand the questions. The definition of high school was eliminated from the study because the definition was considered to be common knowledge. The students did not completely understand three questions, since the answers to these questions did not relate to the other answers, so a phrase was added to each question to make it more explicit.

One question pertaining to participation in the physical education program while involved in the interscholastic team sport program was included in the section concerning interscholastic competition. This was done because of the subject matter involved in this question. The question pertained to only the students involved in the interscholastic program. Additional numbers were added to the interscholastic question so that as many as six years of participation in the interscholastic team sport program could be indicated. These were the only changes made concerning the study. The testing devise and the statistical procedures were not changed.



## CHAPTER IV

### TREATMENT AND ANALYSIS OF THE DATA

The purpose of this study was to investigate the differences between the competitive and cooperative attitudes of the girls involved in (1) the required physical education program, (2) the intramural program, and (3) the interscholastic program. The differences between the competitive and cooperative attitudes was further compared between the girls scheduled in grades nine through twelve and the students enrolled in the four different high schools. Finally, a comparison was made between the competitive and cooperative test scores and the instructor's or coach's ranking of the subjects' competitive and cooperative attitudes.

### PROCEDURES

Information concerning the subjects team sport participation background was used to classify the students into one of the three groups: (1) the nonparticipants, (2) the intramural participants, and (3) the interscholastic participants. This information was obtained from the questionnaire each subject completed. The subjects' competitive and cooperative attitudes were derived from the Test of Social Insight. The physical education instructor and

girl's basketball coach ranked the subjects according to their competitive and cooperative attitudes.

Four schools within the Des Moines area were involved in this study. A test booklet which included the questionnaire and the IBM answer sheet was distributed to each student in a required physical education class and to each student on the girls' interscholastic basketball team. The students were requested to write their initials in the upper right hand corner of the questionnaire and answer sheet.

Sixty-one, or 44 percent, of the 140 subjects enrolled in the girls' required physical education class were involved in the study. The other seventy-five, or 56 percent, of the subjects were eliminated from the study because of absences, incomplete tests, invalid questionnaires, improper identification, or lack of the instructor's ranking. Forty-six, or 49 percent, of the ninety-three participants in the interscholastic basketball program were used in the study. The other forty-seven, or 51 percent, of the subjects were not included because of absences, incomplete tests, invalid questionnaires, improper identification, or lack of the coach's ranking. The total sample size was 107 subjects.

#### BACKGROUND OF THE SUBJECTS

Information from the questionnaire pertaining to the specific team sport program or programs in which the subjects participated was used to classify the subjects into one of

the following groups: the nonparticipants, the intramural participants, and the interscholastic participants. Regardless of the other team sport programs in which a subject participated, if she was involved in the interscholastic program at any time she was classified as an interscholastic participant. If a student participated in the required physical education program and the intramural program she was considered an intramural participant. The nonparticipant was the student who took part only in the required physical education program.

Among the twenty-two nonparticipants, 86 percent were involved in volleyball, 73 percent were involved in soccer, and 68 percent were involved in basketball in the required physical education program. While enrolled in the required physical education program twenty intramural participants, or 100 percent, played volleyball, 70 percent played basketball, and 65 percent played soccer. During the required physical education program 92 percent of the sixty-five interscholastic participants took part in volleyball, 88 percent took part in basketball, and 83 percent took part in softball. Ninety-one percent of the interscholastic participants did take an active part in the required physical education program while involved in the girls' interscholastic basketball program. The team sport background of the nonparticipants, the intramural participants, and the interscholastic participants may be found in Appendix F, page 100.

COMPARISON OF NONPARTICIPANTS, INTRAMURAL  
PARTICIPANTS, AND INTERSCHOLASTIC  
PARTICIPANTS

This study was primarily concerned with competitive and cooperative attitude differences that the girls enrolled in the required physical education program, the girls involved in the intramural program, and the girls involved in the interscholastic program possessed. The competitive and cooperative attitudes were obtained from a written test, the Test of Social Insight. The significance of the difference between the competitive and cooperative mean score of the three groups, (1) the nonparticipants, (2) the intramural participants, and (3) the interscholastic participants were determined according to the Z test at the .05 level of confidence. The competitive mean scores ranged from 7.52 to 6.77 and the standard deviation ranged from 2.13 to 2.64. Even though there was no significant difference among the three groups, the interscholastic participants had the highest competitive mean score, and the nonparticipants had the lowest competitive mean score. Table V, page 43, shows the data involved in testing part of the first hypothesis. There was no significant difference between the competitive attitudes of the nonparticipants, the intramural participants, and the interscholastic participants.

The cooperative mean scores ranged from 32.84 to 31.90 and the standard deviation ranged from 4.62 to 5.65.

TABLE V

A COMPARISON OF THE COMPETITIVE MEAN SCORES OF THE NONPARTICIPANT, THE INTRAMURAL PARTICIPANT, AND THE INTERSCHOLASTIC PARTICIPANT GROUPS

GROUP	GROUP SYMBOL	N	MEAN	S D	GROUP COMPARISON	MEAN DIFFERENCE	Z	LEVEL OF CONFIDENCE
Nonparticipants	A	22	6.77	2.13				
Intramural Participants	B	20	7.05	2.57	A-B	.28	.37	> .05
					A-C	.75	1.32	> .05
					B-C	.47	.70	> .05
Interscholastic Participants	C	65	7.52	2.64				

A Z score of 1.96 was needed for significance.

The cooperative mean difference that was found to exist among the nonparticipants, the intramural participants, and the interscholastic participants was not significant. Even though there were no significant differences among the three groups, the interscholastic participants had the highest cooperative mean score, and the nonparticipants had the lowest cooperative mean score. Table VI, page 45, shows the data involved in testing part of the first hypothesis. There was no significant difference between the cooperative attitudes of the nonparticipants, the intramural participants, and the interscholastic participants.

A slightly higher degree of competitive and cooperative attitude possessed by the interscholastic participants may be the result of a deep desire to win so the team could participate in the girls' state basketball tournament, which is a very exciting sport event in Iowa. The pressure put on each individual during a game by herself or by the coach through his coaching techniques may be another reason why the interscholastic participant possessed a higher degree of competitive and cooperative attitudes.

#### COMPARISON AMONG GRADE LEVELS

This study was further concerned with the competitive and cooperative attitude differences that the subjects enrolled in grade levels nine through twelve possessed. This information concerning the grade level in which each subject

TABLE VI

A COMPARISON OF THE COOPERATIVE MEAN SCORES OF THE NONPARTICIPANT, THE INTRAMURAL PARTICIPANT, AND THE INTERSCHOLASTIC PARTICIPANT GROUPS

GROUP	GROUP SYMBOL	N	MEAN	S D	GROUP COMPARISON	MEAN DIFFERENCE	Z	LEVEL OF CONFIDENCE
Nonparticipants	A	22	31.90	5.65				
Intramural Participants	B	20	32.15	4.62	A-B	.25	.15	> .05
					A-C	.94	.67	> .05
					B-C	.69	.55	> .05
Interscholastic Participants	C	65	32.84	5.43				

A Z score of 1.96 was needed for significance.

was enrolled was obtained from the questionnaire the students completed and then the students were regrouped according to the grade level in which they were enrolled. The significance of the difference between the competitive and cooperative mean scores of the four grade levels, ninth, tenth, eleventh, and twelfth, were determined according to the Z test at the .05 level of confidence.

The competitive mean scores ranged from 8.00 to 7.58 and the standard deviation ranged from 1.86 to 2.85. The competitive mean difference among the grade levels nine, ten, eleven, and twelve was not significant. Although the range of competitive mean scores was small and no significant difference existed among the four grade levels, the ninth grade students had the highest competitive mean score and the twelfth grade subjects had the lowest competitive mean score. Table VII, page 47, shows the data involved in testing part of the second hypothesis. There was no significant difference between the competitive attitudes of the ninth, tenth, eleventh, and twelfth grade students.

The cooperative mean scores ranged from 33.444 to 31.29 and the standard deviation ranged from 3.06 to 6.46. The cooperative mean difference among the four grade levels, ninth, tenth, eleventh, and twelfth, was not significant at the .05 level of confidence. Although the range of the cooperative mean scores was small and there was no significant difference among the grade levels, the ninth grade



TABLE VII

## A COMPARISON OF THE COMPETITIVE MEAN SCORES AMONG GRADE LEVELS

GROUP	N	MEAN	S D	GROUP COMPARISON	MEAN DIFFERENCE	Z	LEVEL OF CONFIDENCE
Ninth	9	8.00	2.36	9-10	-.42	-.44	> .05
				9-11	-.72	-.76	> .05
Tenth	31	7.58	2.59	9-12	-1.30	-1.43	> .05
				10-11	-.30	-.46	> .05
Eleventh	40	7.28	2.85	10-12	.88	1.48	> .05
				11-12	-.58	-1.00	> .05
Twelfth	27	6.70	1.86				

A Z score of 1.96 was needed for significance.

girls had the highest cooperative mean score, and the tenth grade girls had the lowest cooperative mean score. Table VIII, page 49, shows the data involved in testing part of the second hypothesis. There was no significant difference between the cooperative attitudes of the subjects enrolled in ninth, tenth, eleventh, or twelfth grade levels.

The ninth grade students may have had a higher degree of competitive and cooperative attitudes because they were eager to be a member of the girls' basketball team and have the opportunity of participating in the interscholastic program. The twelfth grade subjects possessed the lowest scores perhaps because they may have been tired of playing basketball or participating in the interscholastic program. Their interests may have been directed toward future plans and they were working so the plans could be accomplished.

#### COMPARISON AMONG THE FOUR HIGH SCHOOLS

This study was also concerned with the competitive and cooperative attitude differences that the subjects enrolled in the four high schools which were involved in this study possessed. The students were regrouped according to the high school they were attending. The significance of the difference between the competitive and cooperative mean scores of the four different high schools was determined according to the Z test at the .05 level of confidence. The high schools will not be referred to by their names but by

TABLE VIII

## A COMPARISON OF THE COOPERATIVE MEAN SCORES AMONG GRADE LEVELS

GROUP	N	MEAN	S D	GROUP COMPARISON	MEAN DIFFERENCE	Z	LEVEL OF CONFIDENCE
Ninth	9	33.44	3.06	9-10	-2.15	-1.54	> .05
				9-11	-.46	-.34	> .05
Tenth	31	31.29	4.88	9-12	-.48	-.09	> .05
				10-11	1.69	1.40	> .05
Eleventh	40	32.98	5.10	10-12	1.67	1.06	> .05
				11-12	-.02	-.01	> .05
Twelfth	27	32.96	6.46				

A Z score of 1.96 was needed for significance.

letters of the alphabet. This was done so the questionnaire would be answered honestly, and possible undesirable procedures would not reflect on the particular school.

The competitive mean scores ranged from 7.57 to 7.09 and the standard deviation ranged from 2.24 to 2.92. The competitive mean difference among the four participating high schools, school A, school B, school C, and school D was not significant. The range of the competitive mean scores was small. However, the students attending school D had the highest competitive mean score, and the girls attending school B had the lowest competitive mean score. Table IX, page 51, shows the data involved in testing part of the second hypothesis. There was no significant difference between the competitive attitudes of the subjects enrolled in the various high schools compared with other students in the different high schools.

The cooperative mean scores ranged from 33.03 to 31.78 and the standard deviation ranged from 4.31 to 6.33. The cooperative mean difference among the four high schools involved in this study was not significant. The range of the cooperative mean scores was small. However, the students attending school D had the highest cooperative mean score, and the girls attending school B had the lowest cooperative mean score. Table X, page 52, shows the data involved in testing part of the second hypothesis. There was no significant difference between the cooperative

TABLE IX

A COMPARISON OF THE COMPETITIVE MEAN SCORES AMONG SCHOOL A,  
SCHOOL B, SCHOOL C, AND SCHOOL D

GROUP	N	MEAN	S D	GROUP COMPARISON	MEAN DIFFERENCE	Z	LEVEL OF CONFIDENCE
School A	31	7.29	2.68	A-B	.20	.31	> .05
School B	32	7.09	2.28	A-C	.05	.71	> .05
				A-D	-.28	-.35	> .05
School C	21	7.24	2.24	B-C	-.15	-.23	> .05
				B-D	-.48	-.65	> .05
School D	23	7.57	2.92	C-D	-.33	-.41	> .05

A Z score of 1.96 was needed for significance.

attitudes of the students enrolled in the various high schools.

School D did not compete with any of the other schools participating in this study. Both School A and School B defeated School C. School B possessed the lowest degree of competitive and cooperative attitude scores which may indicate that in an actual game situation the degree of competitive and cooperative attitudes do change. It is the investigator's belief that if School D and School A would compete the game would be very exciting and School D would win.

#### COMPARISON BETWEEN TEST SCORES AND THE INSTRUCTORS' OR THE COACHES' RANKINGS

The Pearson product-moment correlation coefficient was used to compare the competitive and cooperative attitudes of the subjects with the rankings given by the physical education instructors or the basketball coaches. Because there were different individuals ranking the subjects, a correlation between the test results and the rankings was computed separately for each school's required physical education class and the girls' basketball team.

The correlation between the competitive test scores of the girls' required physical education class and the physical education instructor's competitive rankings was found not to be significant. The competitive correlation

ranged from school B which scored the strongest competitive correlation, .317, to school D which scored the weakest competitive correlation, .013.

The correlation between the competitive test scores of the girls' interscholastic basketball team and the girls' basketball coach's competitive ranking was found not to be significant. The competitive correlation ranged from school D having the strongest correlation,  $-.501$ , to school A having the weakest correlation,  $-.063$ . Table XI, page 55, shows the data used in testing part of the third hypothesis. There were no significant differences between the competitive test scores, and the instructor's or coach's ranking of the subject's competitive attitudes. The instructor's or coach's ranking and the Test of Social Insight appeared to be measuring different aspects of competition since there was no significant relationships between the two measures.

The correlation between the cooperative test scores of the girls' required physical education class and the physical education instructor's cooperative rankings was found not to be significant. The cooperative correlation ranged from school D scoring the strongest correlation,  $-.109$ , to school C scoring the weakest correlation,  $-.002$ .

The correlation between the cooperative test scores of the girls' interscholastic basketball team and the girls' basketball coach's competitive ranking was found not to be significant. The cooperative correlation ranged from school

TABLE XI

A COMPARISON BETWEEN THE COMPETITIVE TEST SCORES AND THE INSTRUCTORS'  
OR COACHES' COMPETITIVE RANKINGS

GROUP	INSTRUCTORS			COACHES		
	N	Z	LEVEL OF CONFIDENCE	N	Z	LEVEL OF CONFIDENCE
School A	12	.283	> .05	19	-.063	> .05
School B	22	.317	> .05	10	.183	> .05
School C	12	-.292	> .05	9	.344	> .05
School D	15	.013	> .05	8	-.501	> .05

A Z score of 1.96 was needed for significance.



A having the strongest correlation,  $-.427$ , and school C having the weakest correlation. Table XII, page 57, shows the data involved in testing part of the third hypothesis. There were no significant differences between the cooperative test scores, and the instructor's or coach's ranking of the subject's cooperative attitudes. The instructor's or coach's ranking and the Test of Social Insight appeared to be measuring different degrees of competition since there was no significant relationships between the two measures.

The correlation between the competitive test scores and the cooperative test scores was  $-.287$ . The correlation between the two tests was significant at the  $.05$  level of confidence. The competitive and cooperative test scores are inversely related, when the competitive attitude score increased, the cooperative attitude scores tended to decrease.

#### SUMMARY

This study investigated the differences between the competitive and cooperative attitudes of the nonparticipants, the intramural participants, and the interscholastic participants. This study further investigated the competitive and cooperative attitudes of the students enrolled in the four different high schools involved in the study and the students scheduled in the ninth through twelfth grade levels. In conclusion, a study was made to compare the competitive and cooperative rankings made by the physical education

TABLE XII

A COMPARISON BETWEEN THE COOPERATIVE TEST SCORES AND THE INSTRUCTORS'  
OR COACHES' COOPERATIVE RANKINGS

GROUP	INSTRUCTORS'			COACHES'		
	N	Z	LEVEL OF CONFIDENCE	N	Z	LEVEL OF CONFIDENCE
School A	12	-.017	> .05	19	-.427	> .05
School B	22	-.068	> .05	10	.242	> .05
School C	12	-.002	> .05	9	.104	> .05
School D	15	-.109	> .05	8	-.217	> .05

A Z score of 1.96 was needed for significance.

instructor or girls' basketball coach and the subject's competitive and cooperative test scores.

Each student completed a questionnaire which was used to classify the students as either nonparticipants, intramural participants, or interscholastic participants. The Test of Social Insight was administered for the purpose of obtaining the subject's competitive and cooperative attitude. Each physical education instructor and girl's basketball coach ranked their class or basketball team members according to their competitive and cooperative attitudes.

The following null hypotheses were accepted: (1) there was no significant difference between the competitive and cooperative attitudes of the nonparticipants, the intramural participants, and the interscholastic participants; (2) there was no significant difference between the competitive and cooperative attitudes of the subjects enrolled in the various high schools or between the girls enrolled in grade levels nine through twelve; (3) there was no significant difference between the competitive and cooperative test scores and the instructor's or coach's ranking of the subject's competitive or cooperative attitudes.

## CHAPTER V

### SUMMARY AND RECOMMENDATIONS

#### SUMMARY

The primary purpose of this study was to investigate the differences between the competitive and cooperative attitudes of the girls involved in the required physical education program, the intramural program, and the interscholastic program. This study was further concerned with the competitive and cooperative attitude differences of the students in grade levels nine through twelve, and the students enrolled in the four different high schools within the Des Moines area. Finally a comparison was made between the competitive and cooperative test scores and the instructor's or coach's ranking competitive and cooperative attitude of the subjects.

Studies in the literature pertaining to competition and cooperation usually involved only two individuals on a team and simple motor tasks rather than gross motor activities for acquiring the data were used. Groups which were cooperative tended to solve problems more readily than did the groups which were competitive. There was greater individual production and performance involved in a cooperative situation than in a competitive situation. There was some

indication that competition created more personal insecurity due to anticipation of hostility from other players. Individuals participating in a cooperative situation also performed better than the individuals participating in a competitive situation because less stress was encountered. When an individual is required to participate under competitive conditions which are unfavorable to his abilities he may choose the goals which tend to be in agreement with his abilities. The degree and difficulty of competitive activities used for motivating a heterogeneous activity class need to be considered when the instructor is planning. That is, one competitive technique used in a physical education class will not motivate everyone.

In this study, each student, nonparticipants and intramural participants, enrolled in the girls' required physical education program and each student who was involved in the girls' interscholastic basketball program completed a questionnaire and the Test of Social Insight. The questionnaire was used to obtain information about each subject's team sport participation background including the type of athletic program in which she had taken an active part. This helped to classify the subjects into one of the three groups: (1) the nonparticipants, (2) the intramural participants, and (3) the interscholastic participants. After evaluating the questionnaire sixty-five students were considered as interscholastic participants, twenty students were intramural

participants, and twenty-two students were nonparticipants. The subjects who were taking an active part in the interscholastic and intramural programs were classified as an interscholastic participant. Because Iowa has a very competitive girls' basketball program, the investigator believed the subjects who participated in this type of competition might possess a more competitive and/or cooperative attitude than the subjects who did not participate in the girls' interscholastic program. In order to evaluate this idea all the girls who participated in the interscholastic program were classified as interscholastic participants. The number of intramural participants was small because this program was not included in every school district involved in this study.

Sixty-one students enrolled in the required physical education program and forty-six girls involved in the interscholastic basketball program were the subjects for this study. Because of absences, incomplete tests, invalid questionnaires, improper identification, or lack of the teacher's or coach's ranking, 118 subjects were eliminated from the study. The main reason so many were eliminated was absences.

The Test of Social Insight was administered to each subject to measure her competitive and cooperative attitude. Each question had a specific answer which was considered as competitive, cooperative, withdrawn, passive, or aggressive.

The subjects seemed to understand the questions but some responses did not include all possible reactions to the stated situation. This instrument is presently the only one available according to the investigator's knowledge to measure competition and cooperation. It is the investigator's belief that a better instrument should be devised.

The Z test was used to determine the statistical significance of the difference between the mean scores of the nonparticipants, the intramural participants, and the interscholastic participants, as well as the four grade levels, and the four different high schools at the .05 level of confidence. Based on the Test of Social Insight, the following results were found: (1) the nonparticipants, the intramural participants, and the interscholastic participants possessed about the same degree of competitive and cooperative attitudes, (2) the students in the ninth, tenth, eleventh, and twelfth grade levels possessed about the same degree of competitive and cooperative attitude, and (3) the students attending School A, School B, School C, and School D possessed about the same degree of competitive and cooperative attitudes.

Even though the nonparticipants, the intramural participants, and the interscholastic participants possessed about the same degree of competitive and cooperative attitudes, the interscholastic participants had a higher degree of competitive and cooperative attitude. A slightly higher

degree of competitive and cooperative attitude might be due to the following reasons: (1) there is a drive to win so the team can represent the school in the state tournament, which is a very exciting experience for any girl in Iowa, (2) the pressure each girl puts on herself, and (3) the coach may have instilled these attitudes, competition or cooperation, in the girls through his coaching techniques. The ninth grade girls possessed a higher degree of competitive and cooperative attitudes. These attitudes may have been slightly stronger because they were very eager to be a member of the girls' basketball team and have the opportunity to play in the interscholastic program. The twelfth grade girls possessed the lowest scores possibly because by this time they may have made the team for the past few years and now were tired of playing basketball. Their interests may have been directed toward future plans and they were working so the plans could be achieved.

A slightly higher degree of competitive and cooperative attitudes existed in School D which had a season's record of sixteen and six for the 1970-1971 girls' basketball season. School D did not compete with any of the other schools which were involved in this study. School A did play one school involved in the study, School C, and School A won. If School D were to play School A, it is the investigator's belief that this would be a very exciting game and School D would win. School C was defeated by both



School A and School B. School B possessed the lowest degree of competitive and cooperative attitude scores, which may also indicate that in an actual game situation the degree of competitive and cooperative attitudes do change.

In this study competition and cooperation were defined in a general way compared with other studies, such as in Meyer's study, where competition and cooperation were directly related to the activity involved in the study. The mode of competition or cooperation was not established before administering the Test of Social Insight as in the study employing simple or gross motor activities. For example, Stitt informed each group about the type of situation which prevailed; individual competition, class competition, or school competition prior to each activity period.

While the students were completing the questionnaire and the Test of Social Insight the physical education instructor or girls' basketball coach ranked the students according to their competitive and cooperative attitudes. The physical education instructor and the girls' basketball coach ranked the subjects so a comparison could be made between the competitive and cooperative test scores and the competitive and cooperative attitudes which were expressed in team sport situations during the year. The Pearson product-moment coefficient was used to determine the relationship between the competitive and cooperative test scores and the ranking by the physical education instructor or the

girls' interscholastic basketball coaches. The competitive and cooperative attitudes of the subjects involved in this study and the cooperative rankings made by the girls' physical education teacher or by the girls' basketball coach did not measure the same degree of competition and cooperation. For the purpose of this study, only the questions in the Test of Social Insight which were answered as competitive or cooperative were used. The responses were either competitive or cooperative but not competitive and cooperative. When the instructor or coach ranked the subjects according to their competitive or cooperative attitudes, the different degrees of these two attitudes became evident. For example, a student could be ranked high in one attitude and low in the other attitude or she could be ranked the same, between high and low, in both attitudes.

The results of this study imply that girls' interscholastic basketball programs do not tend to intensify the participant's competitive and/or cooperative attitude any more than do the intramural and/or physical education programs. In Iowa the intramural programs have almost been eliminated from the curriculum because of the problems involved with scheduling the school's gymnasium. More programs are being scheduled in recreational centers since people have more leisure time. Individuals participating in the recreational program now have the opportunity of choosing in which competitive program they wish to

participate. Some programs are similar to the school's intramural program and some are similar to the school's interscholastic program.

The following hypotheses were accepted at the .05 level of confidence: (1) there was no significant difference between the competitive and cooperative attitudes of the nonparticipants, the intramural participants, and the interscholastic participants; (2) there was no significant difference between the subjects enrolled in grade levels nine through twelve or between the subjects enrolled in the various high schools when comparing the competitive and cooperative attitudes; (3) there was no significant difference between the competitive and cooperative test scores and the instructor's or coach's ranking of the subject's competitive and cooperative attitudes.

#### RECOMMENDATIONS

The investigator encourages the physical education teachers and the interscholastic coaches to continue observing competitive and cooperative attitudes pertaining to their specific teaching and/or coaching situation especially the team sports programs within the total physical education program. The statistical evaluation was based on the mean which takes into consideration high and low scores. We still should consider those students with extreme competitive and/or cooperative attitudes when they

are participating in class activities so possible frustration or hostility does not occur.

The following recommendations may help increase our knowledge about competitive and cooperative attitudes. It is recommended that a test be constructed to measure competition and cooperation in team sport situations. A written test that includes specific team sport situations and requires different responses that could occur during a game situation might be one possibility. A test or chart for evaluating competitive and cooperative behavior while the subject is participating in team sport competition would be another possibility.

Secondly, it is recommended that the men's competitive and cooperative attitudes involved in team sport programs be investigated. A comparison between the competitive and cooperative attitudes of men and women involved in team sport programs should also be made. These findings may be valuable to coaches and instructors of both men's and women's teams.

Thirdly, it is recommended that a study be conducted to investigate the possibility of any change in the subject's competitive and cooperative attitude during a team sports unit in the required physical education class or during the interscholastic team sport program.

BIBLIOGRAPHY

## BIBLIOGRAPHY

### A. BOOKS

1. Athletics in Education: A Platform Statement by the Division of Men's Athletics. Washington D.C.: American Association for Health, Physical Education, and Recreation, 1963.
2. Bucher, Charles A. and Ralph K. Dupee Jr. Athletics in Schools and Colleges. New York: The Center for Applied Research in Education, 1965.
3. Cartwright, Dorwin and Alvin Zander. ed. Group Dynamics Research and Theory. Morton Deutsch. Evanston: Row Peterson and Co., 1953.
4. Cratty, Bryant J. Social Dimensions of Physical Activity. Englewood Cliffs: Prentice-Hall Inc., 1967.
5. Dewey, John. Experience and Education. New York: MacMillan Co., 1938.
6. Downie, N. M. and R. W. Heath. Basic Statistical Methods. 3d ed. New York: Harper and Row Publishers, 1970.
7. Examiner's Manual: The Test of Social Insight Youth and Adult Edition. New Rochelle: Martin M. Bruce, 1963.
8. Good, Carter V. Dictionary of Education. 2d ed. New York: McGraw-Hill Book Co., 1959.
9. Johnson, Warren R. (ed.). Science and Medicine of Exercise and Sports. New York: Harper and Brothers Publishers, 1960.
10. Knapp, Clyde and Patricia Hagman Leonhard. Teaching Physical Education in Secondary Schools: A Textbook on Instructional Methods. New York: McGraw-Hill Book Co., 1953.
11. Kozman, Hilda Clute, Rosalind Cassidy, and Chester O. Jackson. Methods in Physical Education. 3d ed. Philadelphia: W. B. Sanders Co., 1958.

12. McGinnis, Elliott. Social Behavior: A Functional Analysis. Boston: Houghton Mifflin Co., 1970.
13. Malpass, Leslie F. "Competition, Conflict, and Cooperation as Social Values," Values in Sports. Washington D.C.: American Association for Health, Physical Education, and Recreation, 1963.
14. Nash, Jay B. Physical Education: Its Interpretations and Objectives and Its Relationship to Health and Recreation. Dubuque: Wm. C. Brown Co. Publishers, 1963.
15. Scott, Gladys and Esther French. Measurement and Evaluation in Physical Education. Dubuque: Wm. C. Brown Co. Publishers, 1959.
16. Somers, Florance A. Principles of Women's Athletics. New York: A. S. Barnes and Co., 1930.
17. Thurston, L. L. and E. J. Chave. The Measurement of Attitude: A Psychological Method and Some Experiments with A Scale for Measuring Attitude Toward the Church. Chicago: The University of Chicago Press, 1929.

#### B. PERIODICALS

18. Cratty, Bryant J. and Jack N. Sage. "Effects of Primary and Secondary Group Interaction Upon Improvement in a Complex Movement Task," Research Quarterly, XXXV (October, 1964), 265-273.
19. Foehrenbach, Lenore M. "Why Girls Choose After-School Sports," Journal of Health, Physical Education, and Recreation, XXIV (June, 1953), 34-36.
20. Kelly, Ellen. "Attitudes Are Important," The Physical Educator, XII (October, 1955), 86.
21. McCleary, Isabel and Thomas D. McDonough Jr. "Competition and Cooperation," The Physical Educator, XX (March, 1963), 9-10.
22. Myers, Albert. "Team Competition, Success, and the Adjustment of Group Members," Journal of Abnormal and Social Psychology, LXV (May, 1962), 325-332.
23. Rice, Sidney, "Attitudes and Physical Education," Journal of Health, Physical Education, and Recreation, XVII (April, 1946), 256-257.

24. Sage, George H. "Team Morale and the Problem of Intra-Squad Competition," The Athletic Journal, XLIX (November, 1968), 44-45.
25. Shaw, Marvin E. "Some Motivational Factors in Cooperation and Competition," Journal of Personality, XXVI (June, 1958), 154-168.
26. Vaughn, James. "An Experimental Study of Competition," Journal of Applied Psychology, XX (February, 1936), 1-15.

#### C. UNPUBLISHED DISSERTATIONS

27. Kazutaka, Furuhata. "Effects of Cooperation, Competition and Interpersonal Attraction on Task Performance." Unpublished Doctor's dissertation, University of Illinois, 1964.
28. Read, Donal Algott. "The Influence of Competitive and Non-Competitive Programs of Physical Education on Body-Image and Self-Concept." Unpublished Doctor's dissertation, Boston University, 1968.
29. Stitt, Elizabeth Ann. "The Effects of Competitive Type Incentives Upon the Learning and Performance of Gross Motor Tasks." Unpublished Doctor's dissertation, Los Angeles: University of Southern California, 1964.



**APPENDIX**

APPENDIX A

STUDENT'S QUESTIONNAIRE

1200 Grandview Avenue  
Des Moines, Iowa

Dear Student:

You have been chosen to help me complete the research requirements for a master's degree from Kansas State Teachers College in Emporia, Kansas. Within the next half hour you will be asked to complete a questionnaire. Please answer all the questions carefully. Your name or initials will not be used in the interpretation of the data.

Thank you for your cooperation.

Sincerely,

Virginia Ann Puffer

The following definitions of the terms used in this questionnaire will help you understand the questions. Please read the definitions with me.

Definition of Terms:

1. Required physical education: The physical education program is comprised of supervised physical activity periods required by the state of Iowa and/or by the local authorities. Each student must complete this requirement before graduation.
2. Team sport: A team sport is a highly organized game played by two groups consisting of more than two players on each side.
3. Intramural team sport program: The intramural team sport program is competition within a school; a team plays another team from the same school. The teams have no established practice periods or adult coaches; however, the games are scheduled.
4. Interscholastic team sport program: The interscholastic team sport program is an activity involving a team from another school. There are established practice periods, adult coaches, and scheduled games in the team sport.

After reading each question place a (✓) on the blank in front of the answer which best describes you. If you want to make an explanation about your answer please do so in the space provided.

A. Physical Education:

1. In what grade are you currently enrolled?

ninth

tenth

eleventh

twelfth

2. In what team sports have you taken an active part this year and past years while enrolled in the high school physical education class?

none

speedball

basketball

volleyball

softball

others  
(please list)

soccer

B. Intramural Team Sport Program:

3. Did you take an active part in the intramural team sport program while attending junior high school?

Yes

No

4. In what intramural team sport or sports have you taken an active part while attending junior high school? Please circle the number of years you participated.

_____ basketball	1	2	3
_____ softball	1	2	3
_____ volleyball	1	2	3
_____ others (please list)	1	2	3

C. Interscholastic Team Sport Program:

5. This year are you taking an active part in the interscholastic team sport or sports program?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

6. In what interscholastic team sport or sports have you or are you taking an active part while enrolled in high school or junior high school? Please circle the total number of years you have participated. Include this year in the total years.

_____ basketball	1	2	3	4	5	6
_____ softball	1	2	3	4	5	6
_____ volleyball	1	2	3	4	5	6
_____ others (please list)	1	2	3	4	5	6

7. Did you take an active part in the high school physical education program while involved in the interscholastic team sport program?

\_\_\_\_\_ Yes

\_\_\_\_\_ No (please explain)

APPENDIX B

INSTRUCTOR'S OR COACH'S RANKING QUESTIONNAIRE

1200 Grandview Avenue  
Des Moines, Iowa

Dear :

You have been selected to assist me in completing the research requirements for a master's degree from Kansas State Teachers College in Emporia, Kansas. Within the next few minutes you will be asked to complete a questionnaire. Please answer the questions carefully. Your name will not be used in the interpretation of the data.

Thank you for your cooperation.

Sincerely,

Virginia Ann Puffer

The following definitions should be used to interpret the terms used in the questionnaire. Please read the definitions before answering any questions.

Definition of Terms:

1. Competition: Competition is a situation in which an individual endeavors to achieve a goal for himself or his group by methods which tend to deprive others of that same goal.
2. Cooperation: Cooperation is the action of individuals within a group integrated toward a single effect or toward the achievement of a common purpose.
3. Team Sport: A team sport is a highly organized game played by two groups consisting of more than two players on each side.

Please rank all of the girls in your physical  
on girls'

education class from the most competitive to the least  
basketball team

competitive in team sport situations. Number one repre-  
sents the most competitive and (assuming that you have  
thirty girls in your class) number thirty represents the  
on team )

least competitive.

In making this rank order, please use the girls'  
initials rather than their names. If two girls have the  
same initials please use their middle initial.



Please rank all of the girls in your physical  
on girls'

education class from the most cooperative to the least  
basketball team

cooperative in team sport situations. Number one represents  
the most cooperative and (assuming that you have thirty girls  
in your class) number thirty represents the least coopera-  
on team )  
tive.

In making this rank order, please use the girls'  
initials rather than their names. If two girls have the  
same initials please use their middle initial.

## APPENDIX C

### DESCRIPTION OF THE TEST OF SOCIAL INSIGHT

The adult edition of the Test of Social Insight includes sixty multiple choice items, with each item having five alternatives. Each alternative indicates one of the following modes: competitive, cooperative, withdrawn, passive, or aggressive. The social problems covered in this test fall into four separate types: home, family, work, and social situations.

## APPENDIX D

### THE TEST OF SOCIAL INSIGHT

1. You approach a person of the opposite sex whom you mistook to be a new friend. After several minutes of conversation you discover your error. What do you do?
  - a. Apologize, and walk away.
  - b. Stop talking, and smile in a friendly way.
  - c. Apologize, and introduce yourself.
  - d. Insist that you recall the person, and try to remember from where.
  - e. Scold yourself for the mistake.
  
2. An instructor has given you a much lower grade than you feel you deserve. What do you do?
  - a. Insist that you receive a fair grade.
  - b. Ask the instructor for an explanation.
  - c. Do nothing, and act natural.
  - d. Transfer to another instructor.
  - e. Ask for an examination to show that you really know the materials.
  
3. Members of your family insist that you join them on a holiday picnic, but you prefer to remain home and rest. As the father of the family, what do you do?
  - a. Discuss the matter with the family, and give them your reasons.
  - b. Insist that they go without you.
  - c. Suggest that everyone go deep sea fishing with you.
  - d. Go along to the picnic, but sleep in the family car while there.
  - e. Tell them you have an important business matter for the day.

4. The boss has just scolded you severely in public for a mistake for which you indicated you were sorry. What do you do?
  - a. Pretend you hear him, but don't listen.
  - b. Say you are sick, and leave.
  - c. Tell him many other persons have made the same mistake.
  - d. Ask him to scold you in private.
  - e. Tell him you are very sorry, and that you will do better.
  
5. While visiting at the home of a close friend, a second guest, unknown to you, tries to sell a funeral plan. What do you do?
  - a. Listen to the sales speech.
  - b. Tell him you are not in the market for a funeral plan.
  - c. Tease the salesman about being rude to your friend's guests.
  - d. Talk with other persons during the sales speech.
  - e. Go home immediately, and give an excuse to your friend.
  
6. You believe that it was your pet dog that destroyed a neighbor's flower garden, but the dog was not actually observed. What do you do?
  - a. Explain your regrets, and offer to pay for the damages.
  - b. Suggest that the neighbor is at fault for not building a fence.
  - c. Say that there are many other dogs in the neighborhood.
  - d. Get rid of your dog, and say nothing.
  - e. Say nothing unless asked by the neighbor.
  
7. A bright student received an "A" last term. You observe him cheating in an examination. What action do you take?
  - a. Tell the student that cheating is a violation of self honor.
  - b. Report the incident to the instructor
  - c. Transfer out of the class.
  - d. Do nothing unless asked by the instructor.
  - e. Ask the other students to hide their materials from the cheating student.

8. Other members of your family are eager to watch a special television show that comes on the same time as your favorite weekly program. What do you do?
- Go out for the night on business.
  - Go to the local bar, and watch your favorite program there.
  - Say nothing and look at the special program.
  - Invite the family to see a big stage show that is currently playing.
  - Insist that you watch your own favorite program.
9. Fellow employees are collecting money for an expensive gift to give a departing boss whom you dislike very much. What do you do?
- Do what others are doing.
  - Refuse to donate, and say nothing.
  - Donate a very small sum, and say nothing.
  - Have a separate going-away party for the boss at your house.
  - Refuse to donate, and explain exactly how you feel.
10. The school principal has called you to say that your "teen" age boy is playing "hookie" for the third day this week. What do you do?
- Insist that your boy quit school and get a job if he plays "hookie."
  - Ask your son to decide if he wants to go to school or quit.
  - Call your son in, and ask for an explanation.
  - Call your son in, and punish him severely.
  - Ask your son to act as his own policeman, and to report to you the next time he plays "hookie."
11. Several adults in a mixed sex group are telling dirty (sexy) stories. You don't think this is respectable. What do you do?
- Walk away, and say nothing.
  - Remain, but do not participate.
  - Try to tell better stories than they do.
  - Tell them you do not approve of telling such stories.
  - Tell them that such behavior is very childish, and they ought to be ashamed.

12. You observe two boys from your neighborhood shoplifting (stealing) in a nearby store. What do you do?
- Do nothing, and mind your own business.
  - Call the police, and report the incident.
  - Leave the store, and forget the incident.
  - Ask the boys to return the stolen materials.
  - Give the boys a lecture on honesty loud enough for others to hear.
13. You find yourself at the circus sitting next to a friend who is married, but he is obviously dating another woman. What do you do?
- Ask him about his wife and family.
  - Try to change your seats.
  - Make sarcastic remarks about false husbands that he can hear.
  - Pretend you do not notice him.
  - Act natural, and do not embarrass him.
14. A fellow employee often tries to give you orders. What do you do?
- Pretend you don't hear what he says.
  - Walk away, and say nothing.
  - Tell him to mind his own business.
  - Order him around.
  - Discuss the matter in a friendly way with the boss.
15. You have forgotten to attend a party given by a close friend. You wanted very much to attend. What do you do?
- Call the friend and apologize; and request that you be invited to the next party he gives.
  - Say you had an important meeting, and could not make his party.
  - Do nothing.
  - Insist that your friend was at fault for not calling to remind you.
  - Avoid seeing your friend so that you will not have to explain.
16. While studying in a crowded library, you are disturbed by a loud talker. What do you do?
- Check out some books, and go home.
  - Look for a quiet corner to study in.
  - Ask the loud person to be quiet.
  - Talk very loudly yourself.
  - Call the librarian, and insist that the talking be stopped.

17. In a social game of poker you observe a friend cheating several times. What do you do?
- Pretend you do not notice.
  - Quit playing, say you are sick, and go home.
  - Say you are tired of playing, and drop out of the game.
  - Start cheating yourself.
  - Ask your friend why he is cheating.
18. You have worked many hours in a church charity drive, but your name did not appear in a news release along with the names of many other members who have worked less than you. What do you do?
- Ask the director for an explanation.
  - Do or say nothing.
  - Start going to another church.
  - Try to work harder in the next church program.
  - Call the person in charge, and tell him off in a very angry way.
19. You overhear a conversation among some strangers in which you feel that a close friend of yours is being talked about very unfairly. What do you do?
- Say nothing, but listen very carefully.
  - Tell the strangers that the person about whom they are speaking is a friend of yours, and that they are "dead" wrong.
  - Walk away, and don't listen.
  - Tell the strangers some of the other rumors about your friend.
  - Get angry at the strangers, and tell them off.
20. Your boss has invited you and your wife to his home for dinner, but your wife can not stand his wife. What do you do?
- Tell the boss you have another engagement.
  - Take your wife to the dinner, but insist that she not argue with his wife.
  - Go to their home for dinner, and act natural.
  - Accept the invitation only if they will come to your house the following week for dinner.
  - Insist that your wife get along with his wife so as not to jeopardize your job.

21. A friend calls you a liar in the presence of other friends. What do you do?
- Get into a fight immediately.
  - Tell him you feel sure he has told many lies.
  - Ask him to explain what he means by the accusation.
  - Pretend you don't hear what he says.
  - Walk away, and say nothing.
22. You overhear a female "teen" age "hoodlum" swearing at the wife of the church pastor. As the mother of another "teen" age girl, what do you do?
- Ask the girl to stop using such foul language.
  - Do nothing.
  - Beat her if she insists on continuing such behavior.
  - Threaten to tell her parents if she doesn't stop.
  - Leave the scene, and pretend you don't hear the swearing.
23. You are strongly against the use of alcoholic drinking of any kind, but two of your friends insist that you have a highball with them to celebrate an important event. What do you do?
- Leave, and go home.
  - Do not pay any attention to your friends.
  - Explain your belief about drinking, and do not take the drink.
  - Take the drink.
  - Get angry with your friends, and insist on your rights.
24. Lately your superior has been scolding you for many small things he doesn't seem to mention to others. What do you do?
- Threaten to quit if he doesn't stop.
  - Ask for an explanation of recent criticism.
  - Look for another job, and say nothing.
  - Discuss the unfairness with your wife.
  - Discuss the unfairness with your superior's boss.
25. You learn that a long time friend has a five year prison record. This shocks you. What do you do?
- Avoid seeing the friend in the future.
  - Gradually break off your friendship.
  - Tell him how you feel about it.
  - Criticize your friend for not telling you.
  - Pass the story on to other friends.



26. You learn that a friend of yours is illegally using narcotics. What do you do?
- Suggest that he get medical help.
  - Say nothing, and keep the information in confidence.
  - Break off your relationship with this friend.
  - Turn your friend over to the law.
  - Invite your friend to live in your home, and offer to help him break the habit.
27. A friend tells you about a surprise party that is being planned for you. What do you do?
- Express your anger, and tell him that it isn't fair to spoil the surprise.
  - Indicate that you already know about the surprise.
  - Walk away, and avoid seeing him in the future.
  - Do nothing.
  - Pretend he is joking, and change the conversation immediately.
28. A friend has just bought a complete new outfit which you do not like. He asks your honest opinion. What do you do?
- Discuss some part of the outfit you like.
  - Tell him you do not like it.
  - Tell about a nicer garment you purchased.
  - Change the conversation.
  - Walk away, and ignore the question.
29. Many close friends at work stop at a tavern each Thursday evening, and arrive home quite late. They insist on your joining them, but you are not interested. What do you do?
- Stop with them for a short time, but go home early.
  - Say you are sorry, and go straight home.
  - Go with them to the tavern, but complain to your wife.
  - Go with them, and insist that they remain until the bar closes.
  - Agree to go for the one evening, but insist that it not be a regular event.

30. You see a badly crippled "teen" age boy being beaten by a younger uncrippled boy. What do you do?
- Do nothing, but remain present.
  - Ask the younger uncrippled boy to stop fighting, and pick on someone his match.
  - Call the police, and report the fight.
  - Beat up the uncrippled boy yourself.
  - Walk away, and say nothing.
31. In the middle of an important public lecture you start coughing very loudly. What do you do?
- Cough it out, and remain present.
  - Leave the audience until your cough is over.
  - Try to muffle your cough.
  - Get real angry with yourself.
  - Go to the doctor.
32. In an airplane flight during a bad storm you are thrown into the lap of a beautiful young lady. What do you do?
- Apologize, and return to your seat.
  - Try to flirt with the lady.
  - Get angry, and blame the weather or the pilot.
  - Go to the rest room immediately.
  - Become embarrassed, and say nothing.
33. While playing volley ball in a friendly game you miss a very easy ball that loses that game. What do you do?
- Apologize to your friends and team for the mistake.
  - Try to make it up by playing better.
  - Say nothing, and continue playing.
  - Pretend you are ill, and quit.
  - Get real angry at yourself.
34. You have been stopped for speeding by a policeman in an area where there are no speed limit signs posted. What do you do?
- Tell the policeman that you did not know the speed limit.
  - Admit your mistake, and pay the fine.
  - Insist that nearly everyone speeds in the area.
  - Take the case to court, and prove you are innocent.
  - Tell the policeman you were in a hurry because of an emergency.

35. The person sitting next to you in a public bus is annoying you very much by chewing and cracking his gum quite loudly. What do you do?
- Tell the person to quit chewing so loudly.
  - Chew gum just as loudly.
  - Say nothing, and remain.
  - Get off the bus, and take the next one.
  - Change seats immediately.
36. You feel a close friend, who you are visiting for the weekend, is very rude to you. What do you do?
- Go home immediately.
  - Remain for the weekend, and say nothing.
  - Discuss the rude incidents and how you feel about them with your friend.
  - Be rude to your friend.
  - Tell your friend off in an angry way.
37. You learn that the man you are about to marry has been divorced. He hasn't told you about it. What do you do?
- Break your engagement immediately.
  - Keep seeing him, but act very cold until you are sure what you will do.
  - Ask him for an explanation of his actions and decide, and base further actions on his explanations.
  - Get real angry with him, and really tell him off.
  - Call an old boy friend, and tell him you have decided to date again.
38. You enjoy dancing very much, and so do your friends, but your husband almost never takes you dancing. When he does go, he rarely dances. What do you do?
- Invite friends to the house who enjoy dancing.
  - Give up dancing, and develop other interests that suit him.
  - Insist that he take you to dances at least twice a month.
  - On the rare occasion your husband takes you to a dance, dance with friends who are good dancers.
  - Get active in church and other activities so that you have very little time on your hands.

39. You have been told that a friend has been spreading rumors about you that are not true. These tend to hurt your good name. What do you do?
- Spread rumors about this friend.
  - Ask your friend for an explanation.
  - Call on your friend, and tell him off in an angry way.
  - Do nothing.
  - Avoid seeing your friend, and break off your friendship.
40. You have a "teen" age son who always plays with boys who are several years younger. You feel that he should have friends his own age. What do you do?
- Discuss the matter with him, and ask him to try and find friends his own age.
  - Do nothing.
  - Insist that he not play with any boys who are younger than he.
  - Ask some girls to the house to teach him to dance.
  - Have him attend young people groups where he can meet boys his own age.
41. A family friend who you dislike very much insists on trying to date you. What do you do?
- Pretend you do not understand his intentions.
  - Pretend he is joking, and try to change the conversation.
  - Discuss the matter with him, and say you do not date family friends.
  - Tell him you have too many things to do right now for dating.
  - Tell him "no," and indicate that he is not your kind of person.
42. You observe a "teen" age neighbor's girl stealing money in your home while she is visiting your daughter. What do you do?
- Pretend you did not see the stealing.
  - Insist that the girl leave your home, and not return.
  - Volunteer to give the girl money to buy what she wants.
  - Have your daughter watch her very carefully while she is in your home.
  - Call her parents, and discuss it.

43. You invite several house guests to have dinner at a nearby expensive restaurant. You discover that you have forgotten your wallet before the dinner starts. What do you do?
- Try to get a check cashed.
  - Pretend you are sick, and leave before the meal.
  - Tell your friends about your plight, and ask for suggestions.
  - Go home, get your wallet, and come late to dinner.
  - Express anger with yourself.
44. You have a "teen" age son who is working after school in a grocery store. You feel he should pay a small portion of his earnings for room and board to help learn the value of money. What do you do?
- Ask him to put half of his earnings in trust with you until he is older.
  - Hint that he pay some board money, but do no more.
  - Discuss your idea with him, and agree on an amount he should pay.
  - Ask him to buy any clothes or special things that he wants while he is working.
  - Don't mention a word to him, but expect him to offer to pay some money for his room and board.
45. In an important wedding procession you stumble and tear your garment very badly, causing you to be exposed. What do you do?
- Try to hold the torn parts together.
  - Leave the torn parts as they are.
  - Get real angry about your clumsiness.
  - Leave the wedding procession at once.
  - Follow the suggestions of those who are close to you in the line.
46. You are asked to teach a regular class in your church, but you feel that you don't have the time for preparation. What do you do?
- Ask that you be made a substitute teacher only.
  - Tell the person in charge that you do not have time.
  - Accept the class, and say nothing.
  - Start going to another church.
  - Tell them to get someone who doesn't do his share.

47. You are at home having a loud argument with your wife. You notice a visitor standing at the door. What do you do?
- Walk away, and quit the argument.
  - Stay where you are, but stop the argument.
  - "Shush" your wife, and ask the visitor in.
  - Argue louder, hoping the visitor will be embarrassed and leave.
  - Change the argument to a discussion, and ask the visitor to give an opinion.
48. A game warden finds a large, out of season, recently caught fish in your possession. What do you do?
- Tell him someone else caught the fish.
  - Tell him you were just going to throw it back into the water.
  - Pretend that you just got ill, or you would have thrown it back.
  - Explain that it was just caught, and ask what to do.
  - Do nothing, and wait for the game warden to speak.
49. A minority group member is being very friendly with you, but your wife insists that you break off his friendship at once. What do you do?
- Act the same to the minority group member as to other persons.
  - Avoid seeing the person.
  - Invite the person to your home, so your wife can learn to know him.
  - Discuss the matter with your wife, and indicate how you feel.
  - Get angry with your wife, and tell her about equality.
50. The boss asks you to go home to remove an "off-shoulder" dress which you wore to work. What do you do?
- Tell him your dress is none of his business.
  - Quit your job, and find another one.
  - Go home, change your dress, and return immediately.
  - Pretend you get sick, and stay home the rest of the week.
  - Tell him that many of the low-cut dresses that other girls in the place wear are worse than yours.

51. You want to play the lead in a community play, but you are asked to take a minor role by the director. What do you do?
- Ask the director to try you in a more important role.
  - Take the minor part, and say nothing.
  - Get angry, and tell the director off.
  - Tell the director that the minor role is not important enough for your ability and experience.
  - Tell the director you will not have time to help out in the play.
52. Your father has just been sent to a long prison term for embezzlement. It is a big shock to you. What do you do?
- Brag about your father's record.
  - Avoid any discussion about your father.
  - Tell persons who ask questions that it is none of their business.
  - Act natural, and answer all questions civilly.
  - Move out of town.
53. You are a young unmarried lady. Your married boss, whom you have refused to date, is showing much attention to you. What do you do?
- Look for another job immediately.
  - Pretend you do not notice.
  - Ask him politely to treat you as he does all other employees.
  - Boast to your friends about his special favors.
  - Threaten to tell his superior if he doesn't quit flirting with you.
54. You observe a stranger leaving a restaurant with your hat. There is a similar old hat on the rack. What do you do?
- Call the police, and report him.
  - Ask him if he has your new hat which he mistook for his own.
  - Do nothing, and wait to see what he will do.
  - Tell him that he may have your new hat if he can't afford to buy one for himself.
  - Leave the restaurant, and don't eat there again.

55. After waiting in a very crowded restaurant for 20 minutes for a waitress to bring your order, she arrives with the wrong order. What do you do?
- Insist that she make the correction immediately.
  - Walk out, leave the wrong order on table, and do not pay for it.
  - Say nothing, and accept the order.
  - Report the error to the manager.
  - See if you can make satisfactory exchanges at your table.
56. You see two fellow employees destroying company property; and you have been told you are to be promoted in the near future. What do you do?
- Tell them to stop destroying the property or you will report them.
  - Walk away, and say nothing.
  - Pretend you do not see what they are doing.
  - Report them to the management immediately.
  - Give them a good lecture for being so juvenile.
57. An older sister who lives in the same community and attends the same church, but who dislikes you very much, continually embarrasses you in public. What do you do?
- Walk away, and say nothing.
  - Pretend you do not hear her.
  - Visit her, talk over the matter, and explain your feelings.
  - Tell her you will have to take her to court if she continues.
  - Try to get the church pastor to get her to stop embarrassing you.
58. You have been informed that because you are a member of a certain minority group you may not have the job which had been promised you before this minority group membership was known. What do you do?
- Say nothing, and look for another job.
  - Scold the person who informed you.
  - Ask to discuss the matter with the employment manager.
  - Discuss the unfair practice with your friends and wife.
  - Report it to the newspaper.



59. The people who live in the next apartment are often noisy until far into the morning, and particularly during the weekends. What do you do?
- Say nothing, and look for another apartment.
  - Say nothing, and remain.
  - Discuss the matter with the apartment manager.
  - Try to make some noise yourself the next weekend, so that they will understand how distracting it can be.
  - Call the neighbor on the phone when they are making the noise; express your annoyance.
60. Shortly after you have criticized a show for its rather poor performance, and while the listeners are still present, one of the actors from the show approaches, and asks for your honest opinion. What do you do?
- Select a portion of the show which you feel was quite good, and discuss it.
  - Indicate how you think the show might be improved.
  - Be honest, and say you think it was pretty bad.
  - Change the conversation, and talk about some other subject.

APPENDIX E

THE TEAM SPORT BACKGROUND OF THE INTERSCHOLASTIC PARTICIPANTS, THE INTRAMURAL PARTICIPANTS, AND THE NONPARTICIPANTS IN THE PILOT STUDY

	Interscholastic Participants		Intramural Participants		Nonparticipants	
	N	% of 15	N	% of 3	N	% of 8
Grade level						
Ninth	-	-	-	-	-	-
Tenth	10	67	-	-	1	12
Eleventh	4	27	1	34	3	38
Twelfth	<u>1</u>	<u>6</u>	<u>2</u>	<u>66</u>	<u>4</u>	<u>50</u>
Total	15	100	3	100	8	100
Activities in Class						
None	-	-	2	27	1	12
Basketball	14	93	1	33	6	75
Football	-	-	-	-	1	12
Softball	8	53	-	-	3	38
Speed-a-way	-	-	-	-	1	12
Volleyball	9	60	1	33	7	87
Participants in intramurals						
Yes	13	87	3	100	-	-
No	2	13	-	-	8	100

## APPENDIX E (continued)

	Interscholastic Participants		Intramural Participants		Nonparticipants	
	N	% of 15	N	% of 3	N	% of 8
Activities and years of participation						
Basketball	-	100	-	-	-	-
one	1	7	-	-	-	-
two	2	13	-	-	-	-
three	7	46	-	-	-	-
four	4	27	-	-	-	-
five	<u>1</u>	<u>7</u>	-	-	-	-
Total	15	100	-	-	-	-
Softball	-	7	-	-	-	-
one	-	-	-	-	-	-
two	1	100	-	-	-	-
three	-	-	-	-	-	-
four	-	-	-	-	-	-
five	<u>-</u>	<u>-</u>	-	-	-	-
Total	1	100	-	-	-	-
Participating in class						
	10	67	-	-	-	-
Not participating in class						
	5	33	-	-	-	-

## APPENDIX E (continued)

	Interscholastic Participants		Intramural Participants		Nonparticipants	
Activities and years of participation	N	% of 15	N	% of 3	N	% of 8
Basketball	-	73	-	100	-	-
one	6	55	-	-	-	-
two	1	9	3	100	-	-
three	<u>4</u>	<u>36</u>	<u>-</u>	<u>-</u>	-	-
Total	15	100	3	100	-	-
Softball	-	53	-	99	-	-
one	4	50	-	-	-	-
two	3	37	-	-	-	-
three	<u>1</u>	<u>13</u>	<u>2</u>	<u>100</u>	-	-
Total	8	100	2	100	-	-
Volleyball	-	67	-	99	-	-
one	5	50	-	-	-	-
two	2	20	-	-	-	-
three	<u>3</u>	<u>30</u>	<u>2</u>	<u>100</u>	-	-
Total	10	100	2	100	-	-
Participants in the interscholastic program						
This year	15	100	-	-	-	-
Past years only	-	-	-	-	-	-

APPENDIX F

THE TEAM SPORTS BACKGROUND OF THE INTERSCHOLASTIC PARTICIPANTS, THE INTRAMURAL PARTICIPANTS, AND THE NONPARTICIPANTS IN THE STUDY

	Interscholastic Participants		Intramural Participants		Nonparticipants	
	N	% of 65	N	% of 20	N	% of 22
Grade level						
Ninth	8	12	-	-	1	5
Tenth	21	33	4	20	6	27
Eleventh	19	29	12	60	9	41
Twelfth	<u>17</u>	<u>26</u>	<u>4</u>	<u>20</u>	<u>6</u>	<u>27</u>
Total	65	100	20	100	22	100
Activities in class						
None	1	2	-	-	3	1
Basketball	57	88	14	70	15	68
Field Hockey	1	5	1	5	-	-
Football	14	22	7	35	4	2
Soccer	50	77	12	60	16	73
Speedball	25	38	9	45	13	59
Softball	54	83	13	65	14	63
Volleyball	60	92	20	100	19	86

## APPENDIX F (continued)

	Interscholastic Participants		Intramural Participants		Nonparticipants	
	N	% of 65	N	% of 20	N	% of 22
<b>Participants in Intramurals</b>						
Yes	23	36	20	100	-	-
No	42	64	-	-	22	100
<b>Activities and years of participation</b>						
Basketball	-	87	-	75	-	-
one	2	10	3	20	-	-
two	14	70	9	60	-	-
three	<u>4</u>	<u>20</u>	<u>3</u>	<u>20</u>	-	-
Total	20	100	15	100	-	-
Soccer	-	6	-	-	-	-
one	-	-	-	-	-	-
two	2	100	-	-	-	-
three	<u>-</u>	<u>-</u>	-	-	-	-
Total	2	100	-	-	-	-
Softball	-	65	-	30	-	-
one	3	20	2	33	-	-
two	10	70	3	50	-	-
three	<u>2</u>	<u>13</u>	<u>1</u>	<u>17</u>	-	-
Total	15	65	6	100	-	-

## APPENDIX F (continued)

	Interscholastic Participants		Intramural Participants		Nonparticipants	
	N	% of 65	N	% of 20	N	% of 22
Volleyball	-	29	-	90	-	-
one	5	27	3	17	-	-
two	9	46	11	61	-	-
three	<u>5</u>	<u>27</u>	<u>4</u>	<u>22</u>	-	-
Total	19	100	18	100	-	-
Participants in the interscholastic program						
This year	51	78	-	-	-	-
Past years only	14	22	-	-	-	-
Activities and years of participation						
Basketball	-	97	-	-	-	-
one	4	6	-	-	-	-
two	10	16	-	-	-	-
three	18	29	-	-	-	-
four	17	27	-	-	-	-
five	7	11	-	-	-	-
six	<u>7</u>	<u>11</u>	-	-	-	-
Total	63	100	-	-	-	-

## APPENDIX F (continued)

	Interscholastic Participants		Intramural Participants		Nonparticipants	
	N	% of 65	N	% of 20	N	% of 22
Softball	-	48	-	-	-	-
one	7	23	-	-	-	-
two	7	23	-	-	-	-
three	5	16	-	-	-	-
four	7	23	-	-	-	-
five	3	9	-	-	-	-
six	<u>2</u>	<u>6</u>	-	-	-	-
Total	31	100	-	-	-	-
Participating in class						
	59	91	-	-	-	-
Not participating in class						
	6	9	-	-	-	-