

A STUDY OF THE RELIGIOUS ATTITUDES AND THE MENTAL HEALTH
OF GIRLS ENROLLED IN HEALTH AND PHYSICAL EDUCATION
AT ROBERT E. LEE HIGH SCHOOL, TYLER, TEXAS

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We hereby recommend that the thesis prepared under
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CHAPTER I

INTRODUCTION

Lack of religious faith is one of the primary causes of poor mental health resulting from the inability of the individual to make the personal and social adjustments necessary to a well balanced life.¹ In recent years, studies have indicated that religion and psychiatry can and do compliment one another in the prevention and treatment of both major and minor mental disturbances as psychiatry provides the techniques and religion the values by which men must live and grow.² As a result of the use of the techniques of psychiatry in helping the mentally disturbed to understand and utilize the values of religion, many psychiatrists have come to believe that religion is the only effective basis for building an integrated personality.³ Jung, a prominent psychiatrist, stated:

Among all my patients over thirty-five there has not been one whose problem in the last resort was not that of finding a religious outlook on life. It is safe to say that every one of them fell ill because

¹Basil King, The Conquest of Fear (New York: Garden City Publishing Company, Inc., 1921), p. 167.

²Joshua Loth Liebman (ed.), Psychiatry and Religion (Boston: The Beacon Press, 1948), pp. xvii-xix.

³Dora P. Chaplin, Children and Religion (New York: Charles Scribner's Sons, 1948), p. 9.

he had lost that which the living religions of every age have given to their followers, and none of them has been really healed who did not regain his religious outlook.¹

Another psychiatrist found that the problems of his patients were reached only when their attitudes toward God were discussed and interpreted.²

Credit is given by Liebman to Doctor Karl A. Menninger as being one of the first prominent psychiatrists to employ chaplains on his staff for training student psychiatrists in the importance and value of the working-aid clergyman in helping his patients.³ Men studying for the ministry are now instructed in the principles of psychiatry and in the emotional problems which confront people in the process of daily living. To further cooperation between religious and psychiatric personnel, closer working relationships and programs in which religious leaders participate were scheduled by the American Psychiatric Association.⁴

From this brief discussion it is evident that mental health and religion are components in developing an integrated personality; therefore the problem is understanding the processes for establishing these components of mental health and religion.

¹C. G. Jung, Modern Man in Search of a Soul (New York: Harcourt, Brace and Company, 1933). p. 229.

²Liebman, op. cit., p. 13.

³Ibid., p. 7.

⁴Ibid., p. vi.

The foundation for securing good mental and spiritual health throughout life must be started during the formative years of early childhood, since it is during this period of life that emotional habits and attitudes are formed.¹

The formation of emotional habits by the infant develop through his emotional responses toward the experiences associated with his mother and the attention he receives from other members of his family. The mother can make the eating response a social as well as a physical response and one of pleasure, by holding the infant while feeding him. Likewise, the infant more readily acquires the feeling of emotional security if the mother uses breast feeding. By playing with the infant and by satisfying his physical needs of cleanliness and comfort, the parents convey to the child a sense of love and strengthen his feeling of emotional security.²

Later, the young child's formation of emotional habits develop through experiences associated with his home environment and his first year in school. When the young child is included in family activities and shown the same attention as his brothers and sisters, his emotional needs of acceptance and approval are fulfilled. Experiences providing a chance for accomplishment and inner thought establish a feeling of

¹Laurence S. McLeod, Mental Health in the Home (New York: Bookman Association, 1954), p. 21.

²Herbert A. Carroll, Mental Hygiene (New Jersey: Prentice-Hall Inc., 1957), pp. 66-70.

self-adequacy for the young child.¹ Play and work experiences are natural, wholesome experiences in themselves and are real means of preparing the young child for later activity and of developing a sound personality. Through these play and work experiences with other children social competence is begun.²

Although the emotional habits of the eight to nine year old child are still influenced by the home, experiences related to his school and his peers become increasingly important. Experiences providing a chance for more independence, for success in tasks, for creative thinking and expression, and for the building of behavior control are essential for this age since independence, success, creativity, and behavior controls are his basic emotional needs. Creative thinking and expression may be attained through the child's experiences with music and art. In the process of building behavior controls, experiences in which a balance between the individual's own important desires and the kind of behavior that makes for comfortable group living and acceptance by others are essential for good mental health.³

In the years preceding adolescence, the foundation for emotional well-being is laid, but it is of great

¹Katherine E. D'Evelyn, Meeting Children's Emotional Needs (New Jersey: Prentice-Hall Inc., 1957), pp. 7-9.

²McLeod, op. cit., pp. 23-24; 35.

³D'Evelyn, op. cit., pp. 22-26.

importance that adolescent experiences provide opportunities for the fulfillment of his needs. Experiences permitting the adolescent freedom in establishing plans and conduct enable him to practice the inner behavior control he has developed. Since the adolescent is almost at the stage of accepting the responsibility for his own acts, he needs and wants adult control and derives great benefit from adult correction if it is properly given. The adolescent must also have experiences through which he can succeed in relation to his abilities. During this period the importance of competition, which provides the adolescent with a sense of loyalty and determination, makes its entrance.¹

Because general attitudes grow out of childhood and adolescent experiences, these attitudes may establish the basis for many pleasant experiences if the experiences conform to the direction of the attitudes, or unpleasant experiences if the experiences tend in the opposite direction.² Emotional habits and attitudes established through experiences during the years of early childhood and adolescence are the basis for good mental health. Since children grow into healthy or unhealthy minded adults largely on the basis

¹Ibid., pp. 30-34.

²Daniel Alfred Prescott, Emotion and the Educative Process, A Report to the Committee on the Relation of Emotion to the Educative Process (Washington, D. C.: American Council on Education, 1938), p. 37.

of their earlier experiences, it is evident that providing experiences conducive to the formation of good emotional habits and attitudes is important. Good mental health enables the individual to live a useful, richer, more joyous life by adjusting to the simple and complex situations which confront him.¹

Religion in human affairs also enriches the individual's living by presenting him with the moral goals of life and helping him to fashion a character of strength and integrity.² The foundation and development of religious attitudes are begun during childhood. Chaplain states, "A truly religious attitude is natural to the child because he possesses those instincts which in their combination make the adult man religious."³ Hence, the development of the child's religious attitudes is determined by the guidance of his parents and is the influence of his home environment.⁴ Since the child's innate concepts of religion are often mental impressions of a particular church where God lives or a particular denomination composed of Christians who worship God,⁵ it is essential that in the guidance of the child's

¹McLeod, op. cit., pp. 18-19.

²Liebman, op. cit., pp. xi; 34.

³Chaplin, op. cit., p. 24.

⁴McLeod, op. cit., pp. 187-188.

⁵King, op. cit., p. 53.

religious development that he is given something definite in which to believe in terms which he understands.¹ The teaching of religious beliefs is a grave responsibility for the parent because the child is ready to believe on bare statement alone. Also, in giving the child religious beliefs, the parent must be careful to do this in such a way that the child's beliefs may remain flexible and subject to suitable expression and modification as he grows. If the parent wishes to influence his child favorably toward religion, the parent must live his religion in the home and in all of his relationships with the child. Religion taken seriously in the home affects most favorably the child's moral behavior, since moral behavior is a part of religious living.²

Once the religious foundation and early stages of development are laid, the child's spiritual growth will commence.³ Questions in his conversation such as who is God, where does He live, what does God look like, indicate his spiritual growth and awareness. It is essential that these signs of spiritual awareness and readiness in the child be recognized and that the experience be adapted to the child's stages of development.⁴

¹McLeod, op. cit., pp. 188.

²Ibid., pp. 187-188.

³Ibid., p. 190.

⁴Marian S. Breckenridge and Margaret N. Murphy. Growth and Development of the Young Child (Philadelphia: W. B. Saunders Company, 1958), pp. 444-445.

In the stage of adolescence, the adolescent's emotional feeling and intellectual faculties develop, he seeks to understand his attitudes, and he strives for a place in the adult world.¹ By now the adolescent's experiences have developed through reading and social contacts. Although these experiences are necessary, they lead to ideas which conflict with his religious concepts.² Therefore, it is of great importance that an intellectual understanding of religious beliefs based upon historic facts be established before the age of adolescence in order to avoid a breakdown of faith and a rejection of religion.³ The adolescent has enough adjustments to make without religion becoming a burden by demanding obedience to Divine Law and conduct in accordance with high ethical and religious standards which he does not understand.⁴ Using his early religious beliefs as a basis for resolving these conflicts, he is now ready to seek new truths and to find good reasons for all he believes.⁵ In this way he will gain an intelligent understanding of his religion and of the part it can play in adjustments throughout life.

Every situation warrants an adjustment between the biological and social forces, and the ability to make these

¹Chaplin, op. cit., p. 41.

²McLeod, op. cit., p. 191.

³Chaplin, op. cit., pp. 17-18.

⁴Liebman, op. cit., p. 34.

⁵McLeod, op. cit., p. 191.

adjustments easily results in good mental health. Religion presents man with the moral goals of life; it portrays the spiritual ends of his existence; and, it provides the values by which man must live and grow.¹ Therefore, it plays a vital role in adjustment and good mental health. It may be said that good mental health is a dynamic and continual growth process based primarily on man's ability to work out the best possible bargain between himself as a biological unit and himself as a social unit in accordance with his religious concepts.²

Since religious attitudes have a definite bearing on the development and attainment of good mental health throughout life, the purpose of this study was to determine the relationship of religious attitudes and mental health of the adolescent girls enrolled in health and physical education at Robert E. Lee High School, Tyler, Texas.

Statement of the Problem

The investigator made an analytical study of the relationship between religious attitudes and mental health of the 240 girls enrolled in health and physical education classes in the Robert E. Lee High School, Tyler, Texas, during the academic year of 1959-1960.

¹Liebman, op. cit., p. 34; p. xix.

²Ibid., p. 70.

Purposes of the Study

The purposes of this study were

1. To determine the religious attitudes of the girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas.
2. To determine certain aspects of the mental health of the girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas.
3. To determine the relationship between the religious attitudes and certain aspects of the mental health of the girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas.

Definition of Terms

To promote a clear understanding of the problem, the following terms were adapted for this study.

Religious attitudes.--Religious attitudes concern the state of mind, fundamental habits of thought and feeling developed through experience which direct the responses of the spiritual nature of man toward a supernatural being throughout man's daily routine of life.

Mental health.--Mental health is the result of adjustment of man to himself and the world in which he lives with a maximum of effectiveness, satisfaction, cheerfulness, and socially considerate behavior essential to facing and accepting the realities of life.¹

¹White House Conference, 1930 (New York: Appleton-Century-Crofts, Inc., 1931), p. 465.

Limitations of the Study

This study was limited to

1. Two hundred-forty girls enrolled in health and physical education in the Robert E. Lee High School, Tyler, Texas, during the academic year of 1959-1960.
2. The determination of the religious attitudes of the students under study by use of the Attitude Inventory by Kraeft, Graebner, Pflieger, and Yunghans.
3. The determination of certain aspects of the mental health of the students under study by use of the Thorpe, Clark, and Tiegs Mental Health Analysis Test.
4. A comparison of the religious attitudes and the mental health of the students under study.

Survey of Related Studies

As far as the investigator has been able to determine, no previous studies have been conducted which parallel the present study. Several studies have been conducted to determine the relationship between mental health and the various physical abilities of students; but none of these is specifically related to the present study. The investigator surveyed the following studies which proved beneficial in the development of the present study.

Gragg reported a study undertaken to ascertain the religious attitudes of students enrolled in three small, protestant colleges of the southwestern part of the Bible Belt

which are referred to as colleges A, B, and C.¹ The purposes of the study were to compare the religious attitudes of the students from the three southwestern denominational colleges with each other and with the religious attitudes of the students from denominational colleges of the middle west and east which were determined in a previous study, and to study certain factors in religious attitudes among students at the southwestern colleges.² A total of 438 students served as subjects in this study: 250 students from college A, 160 students from college B, and twenty-eight students from college C. The students from colleges B and C were chosen because of their presence in classes which were available to the investigator. Two groups of students served from college A, one group of fifty freshmen women and fifty freshmen men selected according to scores made on the Psychological Examination of the American Council on Education, and a group of twenty-five men and twenty-five women from each of the sophomore, junior, and senior classes were selected by drawing every second name from an alphabetical list.

Gragg used three of Thurstone's Attitude Scales to determine the participants' religious attitudes and, in addition, a questionnaire for obtaining items of general information.

¹Donald B. Gragg, "Religious Attitudes of Denominational College Students," Journal of Social Psychology, XV (March, 1942), pp. 245-254.

²Ibid., p. 246.

The three scales used were the God-Reality Scale, the Conduct Scale, and the Church Scale.

Gragg found that the students enrolled in the three southwestern denominational colleges when compared with the attitudes of the students enrolled in the denominational colleges of the middle west and east possessed more favorable attitudes as tested by the selected three Attitude Scales of Thurstone. The findings indicated that the number of years spent in school had no effect on religious attitudes. These findings were based on the simultaneous testings of the students enrolled in the four levels of educational classification at each of the southwestern colleges. Gragg also found that the religious attitudes of the women tested were more favorable than the religious attitudes of the men on all three of the scales of the Thurstone Attitude Test.

The present study is similar to the study by Gragg in that the investigator studied the religious attitudes of the high school students. The two studies differ in that Gragg used three of the Thurstone Attitude Scales whereas the present investigator used the Attitude Inventory by Kraeft, Graebner, Pflieger, and Yungbans. This study differed from Gragg's in that he gathered data by use of questionnaires concerned with items of general information. The present study differs further from that of Gragg in that the present investigator compared the relationship of religious attitudes

with certain aspects of the mental health of the high school girls. In the present study, 240 girls enrolled in one high school participated as subjects whereas Cragg had 438 students including men and women, enrolled in three colleges, as participants.

Horne and Stender conducted a study of the attitudes of students toward religious practices.¹ The purpose of the study was to determine student attitudes toward religious practices as found in four institutions of higher education. Horne and Stender compared the attitudes toward religious practices of 157 freshmen with 108 seniors enrolled in two nondenominational colleges in South Carolina, and 117 freshmen and forty-six seniors enrolled in two denominational colleges affiliated with the Lutheran church and situated in the midwest and in South Carolina, respectively. Horne and Stender used five common practices of the members of large religious denominations as a basis for a survey of student's attitudes toward religious practices. The five practices surveyed were attending church, giving to the church, observing daily prayer, receiving holy communion, and baptism.

Horne and Stender found that seniors when compared with freshmen possessed slightly better attitudes toward religious practices in denominational colleges. The freshmen in

¹E. P. Horne and William H. Stender, "Student Attitudes Toward Religious Practices," Journal of Social Psychology, XXII (November, 1945), pp. 215-217.

denominational colleges possessed better attitudes toward religious practices than did the freshmen in nondenominational colleges in four of the above areas, the one exception being in that of the observance of daily prayer. The seniors in denominational colleges possessed better attitudes toward religious practices when compared with the freshmen enrolled in nondenominational colleges.

The present study is similar to the study by Horne and Stender in that the investigator studied the religious attitudes of students and Horne and Stender studied attitudes toward religious practices. The two studies differ in that Horne's and Stender's method of studying attitudes was by use of a survey of five practices common to the large religious denominations whereas in the present study a religious attitude inventory was used. The present study also differs from that of Horne and Stender in that the investigator compared the relationship of religious attitudes with the mental health of high school girls. In the present study 240 high school girls were tested, while Horne and Stender surveyed 419 college students.

Edwards made a comparative study of the mental health and motor educability of 190 high school girls.¹ The purpose of this study was ". . . to discover the relationship, if any,

¹Nona Ruth Edwards, "Comparison of Mental Health and Motor Educability of Girls in Graham High School" (unpublished Master's thesis, Department of Health and Physical Education, Texas Woman's University, 1957), pp. 10-12; 81.

between mental health and motor educability, and on the basis of the findings make recommendations for the improvement of the conduct of physical education classes. . .¹ Edwards administered the Thorpe, Clark, and Tiegs Mental Health Analysis test to determine the mental health of her students and the Iowa Revision of Brace's Motor Ability test to measure the inherent aptitude for learning new skills quickly and effectively.² These tests were administered to thirty-three senior, thirty-eight junior, fifty-seven sophomore, and sixty-two freshmen girls enrolled in physical education classes.

Edwards found a statistically reliable difference between the means when comparing the total mental health analysis with the total motor educability of the 190 girls in favor of the mental health. Edwards also found a reliable difference between the means when comparing the total mental health liabilities with the motor educability and the total mental health assets with the motor educability, both in favor of the mental health categories.

The present study is similar to the study by Edwards in that the same instrument was used to measure the mental health and that the students tested were high school girls enrolled in health and physical education classes. The two studies differ in that, in the present study 240 high school

¹Ibid., p. 10.

²Ibid., p. 15.

girls were tested, whereas Edwards used the results obtained from testing 190 high school girls. The present study was concerned with determining the relationship between the religious attitudes and certain aspects of the mental health of high school girls, and Edwards compared the mental health and the motor educability of high school girls.

Summary

In this chapter the writer has given an introduction to the study, statement of the problem, purposes of the study, definition of terms, limitations of the study, and a survey of previous studies related to this problem.

Chapter II is devoted to the explanation of various procedures involved in the development of the study.

CHAPTER II

PROCEDURES

The present study was developed as a result of the investigator's interest in the religious attitudes and mental health of the 240 girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas.

Sources of Data

The data utilized in this study were gathered from both human and documentary sources. The human sources were 240 girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas.

The documentary sources were procured through books, periodicals, theses, reports, bulletins, and pamphlets pertinent to the various aspects of the problem.

Selection of Students

Permission was obtained from the school administrators for the girls enrolled in health and physical education classes to serve as subjects. The classifications of students participating in the study were sophomores, juniors, and seniors. Prior to the administration of the tests, the purposes of the study were explained to the girls and their cooperation was solicited. The students were assured that the scores made on

the tests would have no bearing on their health and physical education grades. Before administering the Attitude Inventory, the students were reminded that completing the inventory was voluntary since the inventory pertained to religion and since the study was conducted in a public school. The Mental Health Analysis was administered during the period scheduled for health education. The Attitude Inventory was administered during the regular class period of physical education.

Criteria for Selection of Tests

The criteria established by the investigator for the selection of the tests used in collecting data for the present study were validity, reliability, objectivity, standardized procedures, and simplicity. The definitions of the criteria used are

1. Validity.--A test is said to be valid when it measures accurately what it purports to measure.¹
2. Reliability.--The reliability of a test is the extent to which a test measures consistently whatever it is supposed to measure.²
3. Objectivity.--A test is said to be objective when an acceptable degree of uniformity is maintained by several

¹Henry E. Garrett, Statistics in Psychology and Education (New York: Longman, Green and Co., 1951), p. 394.

²Board of Examinations, Manual of Examination Methods. A Manual prepared by the Technical Staff (Chicago: The University of Chicago Bookstore, 1933), pp. 11-12.

individuals who score the same test. In order to have a high degree of objectivity, a test must have a high degree of reliability.¹

4. Standardized procedure.--The procedure for administering a test should be rigidly standardized in order that results may be both reliable and objective.²

5. Simplicity.--The simplicity of a test takes into account the factors of the required time for administration, the ease of administration, the cost of administration, and the equipment required.³

Selection of the Tests

The Attitude Inventory

The Attitude Inventory is a testing instrument designed to measure Christian attitudes toward certain ideas and practices. The purpose of the Attitude Inventory is to determine how people think and feel about specific aspects of religious life. The instrument used in this study to determine religious attitudes was entitled Attitude Inventory developed by Kraeft, Grabner, Pflieger, and Yunghans. Since it was constructed primarily for determining religious attitudes, the investigator will refer to the Attitude Inventory

¹H. Harrison Clarke, Application of Measurement to Health and Physical Education (New York: Prentice-Hall, Inc., 1945), p. 37.

²Charles Harold McCloy, Tests and Measurements in Health and Physical Education (New York: Appleton-Century-Crofts, Inc., 1942), p. 9.

³Ibid.

as the Religious Attitude Inventory for purposes of clarity. The categories in this test are God, The Christian Philosophy of Life, Death and Eternity, Citizenship, The Church and God's Word, The Feeling Toward Self, The Conscience, Faith, and Trust.

Attitudes must be evaluated if the religious status of a person is to be measured. The Religious Attitude Inventory by Kraeft, Graebner, Pflieger, and Yungmans was the only instrument available for determining religious attitudes of elementary and secondary students and which was limited to those of the Christian faith.¹

The validity of the Religious Attitude Inventory was dependent upon the construction of the items and their validation by two groups of competent experts. The authors of the Religious Attitude Inventory sought to devise an instrument to cover various aspects of Christian life which would normally come under the influence of formal Christian training during the upper elementary and high school years, and which would supply an appraisal of a person's thinking and feeling in his religious life. An original set of 260 items was constructed to meet these specifications and submitted to a group of 100 men which included pastors, professors, and teachers of religion, for study, rating, and comment. The

¹Walter O. Kraeft, Oliver Graebner, Elmer F. Pflieger, and Ernest E. Yungmans, Manual of Directions Attitude Inventory (St. Louis: Concordia Publishing House, 1954), pp. 4-5.

ratings and comments returned by this group of experts were given critical study by the authors. The items which were questioned or which were regarded by the experts as the result of knowing "the right answer" rather than an indication of growth in Christian behavior were deleted, and items suggested by the experts that were approved by the four authors were used.

From the revision of the first set of items a second set was developed numbering 261 items which were submitted to a second group of ninety-seven experts. The experts were instructed to rate each of the 261 items according to the degree to which, in their opinion, it was a measure of Christian growth by use of an eleven-point scale which ranged from a minus five to a plus five, with zero as the neutral figure. They were asked also to check any items that indicated only knowledge rather than attitude, and to point out any ambiguities and irrelevancies.

The same list of 261 items that was evaluated by the ninety-seven experts by use of the eleven point scale was administered to approximately 500 high school students and 500 elementary school pupils enrolled in grades five through eight to test the practicability of the instrument.

Two equivalent forms X and Y were developed from the results of the evaluation of the 261 items by the second group of ninety-seven experts. No items were included in the final

forms on which more than 10 per cent of the experts had made criticisms and comments which reduced the number of acceptable items to 132. Eight items which the experts had judged to be neutral with respect to Christian attitudes were carefully chosen to bring the number of items for the two forms to 140. These items were then statistically divided into the two equivalent forms, X and Y. Form X was used in the present study.

The reliability coefficients of the Religious Attitude Inventory were obtained by the split-half technique using the odd-even method obtained from samplings of 2,647 cases. The distribution of the number of cases according to grade levels and reliability coefficients is given in Table I.

TABLE I

GRADES, NUMBERS OF CASES, AND RELIABILITY COEFFICIENTS OF
THE RELIGIOUS ATTITUDE INVENTORY

Grades	Number of Cases	Reliability Coefficients
5-6	887	.84
7-8	450	.39
9-10	635	.35
11-12	675	.60
Total number of cases in grades 5-12.	2647	

Coefficients of reliability of attitudes and personality tests tend to be lower than those of other measuring devices.¹ It should be further pointed out that the split-half coefficient of reliability is lower than the coefficient obtained by determining the correlation for the whole test. By applying the Spearman-Brown formula to determine the reliability of the whole Religious Attitude Inventory administered to 675 eleventh and twelfth grade students, the reliability coefficient of .60 was raised to .75. Reliability coefficients from .75 to .85 are considered adequate for many purposes.² A correlation coefficient of .66 was obtained by determining the correlation between the scores made on the two forms of the Religious Attitude Inventory.³

The objectivity of the Religious Attitude Inventory was based on the uniformity of the results obtained from administering the Religious Attitude Inventory to more than 2,000 boys and girls in grades five through twelve in various urban and rural schools throughout the United States.⁴

The criterion of standardized procedures was met by the Manual of Directions for the Religious Attitude Inventory

¹Ibid., p. 5.

²M. Gladys Scott and Esther French, Evaluation in Physical Education (St. Louis: The C. V. Mosby Company, 1950), p. 41.

³Kraeft, Graebner, Pflieger, and Yunghans, op. cit., p. 5.

⁴Ibid.

in which definite instructions are given for the administration of the test.

The administration of the Religious Attitude Inventory possessed simplicity in that the inventory could be completed in thirty to forty minutes, the scoring was recorded on the Religious Attitude Inventory Booklet, and the administration of the test required no special equipment.

Mental Health Analysis

The Mental Health Analysis is designed to determine mental health liabilities which should be minimized or eliminated as much as possible by the individual, and the mental health assets which should be recognized and amplified as far as possible by the individual.

Both sections of this analysis may reveal evidences of mental health difficulties, and unlike a satisfactory financial statement in which a balance between liabilities and assets must exist, a high score on both parts of the Analysis indicates a normal, effective person.¹

Validity of the Mental Health Analysis was based upon four factors including selection of items, test item disguise, reading ability and the mental health catagories.

The items included in the Mental Health Analysis were selected through a careful study of literature and researches

¹Louis P. Thorpe, Willis W. Clark, and Ernest W. Tiegs, Manual of Directions for Mental Health Analysis (Los Angeles: California Test Bureau, 1946), p. 2.

in the field of mental health. The authors in the construction of the items attempted to disguise the meaning of the items which might conflict with the individual's tendency to protect himself and by providing outside checking devices. Checking devices were used when apparent discrepancies occurred between the responses made by individuals to the items in the Mental Health Analysis and the mental health observed by the examiner or others who were familiar with the individual. Examples of the checking devices included:

The individual may be requested to repeat his performance at another time.

A few individuals who know each other well may be asked to complete analysis for each other, including the individual under examination.¹

The language of the items used in the Mental Health Analysis was evaluated by means of the Lewerenz Vocabulary Grade Placement Formula. In order to minimize discrepancies in understanding, the language difficulties were kept below the reading abilities of the educational levels to whom the Mental Health Analysis was to be administered.²

The ten mental health categories . . . represent functionally related groups of crucial, specific evidences of mental health assets or liabilities; their names correspond to some of the most important present-day mental health concepts which are used in describing mental health growth and development. The items of each category represent fundamental adjustment patterns.³

¹Ibid., p. 13.

²Ibid., p. 4.

³Ibid.

The five categories indicating possession of Mental Health Assets to be sought or amplified include: Close Personal Relationships, Inter-Personal Skills, Social Participation, Satisfying Work and Recreation, and Adequate Outlook and Goals.

The five categories indicating Mental Health Liabilities to be minimized or corrected include: Behavioral Immaturity, Emotional Instability, Feelings of Inadequacy, Physical Defects, and Nervous Manifestations.

The reliability coefficients were obtained for the Mental Health Analysis by determining the correlations for the total Mental Health Analysis, the Mental Liabilities, and the Mental Assets by use of the Richardson-Kuder formula for 2075 cases and are given in Table II.¹

TABLE II

RELIABILITY COEFFICIENTS FOR TOTAL TEST, LIABILITIES,
AND ASSETS FOR THE MENTAL HEALTH ANALYSIS

Mental Health Analysis	Reliability Coefficients
Total Test	.926
Liabilities	.917
Assets	.890

Although the statistical reliability of instruments of this type will sometimes appear to be somewhat lower than that of

¹Ibid.

good tests of ability and achievement, the Mental Health Analysis does not suffer by comparison with many widely used tests of mental ability and school achievement as indicated by reliability coefficients ranging from .890 to .926.

The objectivity of the Mental Health Analysis was based on the results obtained from administering the test to a sampling of 2,175 cases. Since satisfactory results were obtained, it was believed that this instrument met the criterion of objectivity.

The criterion of simplicity was met in that the administration of the Mental Health Analysis could be completed in one class period, the scoring was recorded on special answer sheets which lowered the number of test booklets needed for the study considerably, and the administration of the test required no special equipment.

Administration of the Tests

The Attitude Inventory was administered to the 240 girls during one of the regular class periods of physical education. On the day scheduled for the administration of the Attitude Inventory, the students reported to the health education classroom. Before distributing the Attitude Inventory leaflets, the administrator followed the instructions given in the Manual of Directions for administering the Attitude Inventory by saying to the students: "Today I

am going to give each of you a copy of what is known as the Attitude Inventory. Please do not write on it until I tell you to do so."¹ Having distributed the Attitude Inventory to the students, the administrator continued:

This is called an Attitude Inventory. It will give you an opportunity to tell how you think and feel about different ideas and questions. Be sure to mark each item according to how YOU think and feel about it. Now fill in the information asked for in the blanks on the first page.²

After the students filled in the requested information, the administrator read aloud the directions on the Inventory leaflets while the students read to themselves. The sample questions were then read aloud and the students marked their responses accordingly. The students were then instructed to answer all of the items in the same way and to close their leaflets when they finished marking the Attitude Inventory. A time limit is not required for the test, however most groups finished in thirty to forty minutes.

The Mental Health Analysis was administered during the class periods scheduled for health education. Each student was instructed to bring a pencil and an eraser to class. A Mental Health Analysis Booklet and an answer sheet were furnished for each of the students by the investigator.

Instructions for filling out the identifying data at the top of the answer sheets were explained followed by

¹Kraeft, Graebner, Pflieger, Yunghans, op. cit., p. 5.

²Ibid.

instructions in the use of the Mental Health Analysis Booklets and the answer sheets. The students were again reminded not to write on the test booklets. The sample questions were read aloud and the students marked their responses accordingly.

The administrator read aloud the directions stated in the Manual of Directions while the students read silently:

This booklet contains a number of questions concerning how you feel or think about a number of things. The answers are not right or wrong but show your beliefs or ideas about the questions. Continue right through the booklet answering all of the questions with a "Yes" or "No."¹

The students were instructed to answer all of the 200 items included in the Mental Health Analysis Booklet. Although no time limit was set, most groups finished in forty to fifty minutes.

Treatment of Data

The raw scores obtained from the administration of the Religious Attitude Inventory and the total Mental Health Analysis, Mental Assets, and Mental Liabilities were converted into T-scores by use of the method published by Scott and French.²

The means, standard errors of the means, standard deviations, differences between the means, standard errors

¹Thorpe, Clark, and Tiegs. op. cit., p. 5.

²Scott and French. op. cit., pp. 320-322.

of the differences between the means, and probability levels of significance were computed in order to estimate the differences between the uncorrelated means of

1. Mental Assets with Mental Liabilities
2. Religious Attitude Inventory with Mental Assets
3. Religious Attitude Inventory with Mental Liabilities
4. Religious Attitude Inventory with total mental health

The standard errors of the differences between uncorrelated means was determined by use of the following formula:

$$\sqrt{\sigma^2_{M_1} + \sigma^2_{M_2}}$$

The means, standard errors of the means, standard deviations, differences between the means, standard errors of the differences between the means, critical ratios, and probability levels of significance were computed in order to estimate the differences between the correlated means of

1. Mental Assets with total mental health
2. Mental Liabilities with total mental health

The standard errors of the differences between correlated means was determined by use of the following formula:

$$\sqrt{\sigma^2_{M_1} + \sigma^2_{M_2} - 2r_{12}\sigma_{M_1}\sigma_{M_2}}$$

The means, standard errors of the means, standard deviations, differences between the means, standard errors of the differences between the means, critical ratios, and probability levels of significance were computed in order to make comparisons of the Mental Health Analysis scores for the seniors with the juniors, seniors with the sophomores, and juniors with the sophomores, and in order to make comparisons of the Religious Attitude Inventory scores for the seniors with the juniors, seniors with the sophomores, and juniors with the sophomores.

Summary

In this chapter, the procedures used in the present study, including the sources of data, selection of participants, establishment of criteria for selection of tests, descriptions of the tests, administration of the tests, and treatment of the data have been presented.

The findings and interpretations of this study are presented in Chapter III.

CHAPTER III

FINDINGS AND INTERPRETATION

Introduction

A study was made of the relationship between the religious attitudes and the mental health of the 240 girls enrolled in health and physical education during the academic year of 1959-1960 at Robert E. Lee High School, Tyler, Texas.

The data obtained from the administration of the Kraeft, Graebner, Pflieger, and Yunghans Attitude Inventory were compared with the data obtained from the administration of the Thorpe, Clark and Tiegs Mental Health Analysis. The raw scores were converted into T-scores and treated statistically as described in the preceding chapter.

To further the understanding of these findings, it should be noted that the one hundred questions composing the Mental Liability section of the total Mental Health Analysis Test were so constructed that high scores indicated fewer Mental Liabilities, and low scores indicated greater mental liabilities.

Coefficient of Correlation Between Religious Attitude Inventory and Mental Health Analysis

One of the purposes of this study was to determine the relationship between the religious attitudes and the mental

health as measured by the Religious Attitude Inventory and the Mental Health Analysis.

The coefficient of correlation and the standard error of coefficient correlation were determined from the scores of the Religious Attitude Inventory and the total Mental Health Analysis administered to the 240 girls enrolled in health and physical education at Robert E. Lee High School, Tyler, Texas. A coefficient correlation of $.43 \pm .05$ was obtained between the scores from the administration of the Religious Attitude Inventory and the Mental Health Analysis. Garrett states that correlations ranging from $\pm .40$ to $\pm .70$ denote substantial or marked relationship.¹ Therefore, it can be assumed that religious attitudes as determined by the Religious Attitude Inventory and mental health as determined by the Mental Health Analysis in this study are substantially related.

Mental Assets, Mental Liabilities, and
Total Mental Health

The means, standard errors of the means, standard deviations, differences between the means, standard errors of the differences between the means, critical ratios, and probability levels of significance from the administration of the total Mental Health Analysis for comparison of the

¹Garrett, op. cit., p. 333.

T-scores of Mental Assets, Mental Liabilities, and total mental health of the 240 girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas, are presented in Table III.

TABLE III

MEANS, STANDARD ERRORS OF THE MEANS, STANDARD DEVIATIONS, DIFFERENCES BETWEEN THE MEANS, STANDARD ERRORS OF THE DIFFERENCE BETWEEN THE MEANS, CRITICAL RATIOS, AND PROBABILITY LEVELS OF SIGNIFICANCE FOR THE MENTAL ASSETS, MENTAL LIABILITIES AND TOTAL MENTAL HEALTH OBTAINED FROM THE ADMINISTRATION OF THE MENTAL HEALTH ANALYSIS TO THE 240 GIRLS ENROLLED IN HEALTH AND PHYSICAL EDUCATION AT THE ROBERT E. LEE HIGH SCHOOL, TYLER, TEXAS

Tests	M _n	σ_m	S.D.	$D_{m_1-m_2}$	σ_d	CR	P
Mental Assets	51.23	.62	9.51	.32	.86	.04	.97
Mental Liabilities	50.91	.63	9.69				
Mental Assets	51.23	.62	9.51	.41	.44	.93	.35
Total Mental Health	50.82	.64	9.87				
Mental Liabilities	50.91	.63	9.69	.09	.33	.27	.79
Total Mental Health	50.82	.64	9.87				

Means, Standard Errors of the Means,
and Standard Deviations

From the Mental Health Analysis a mean T-score of 51.23 \pm .62 and a standard deviation of 9.51 for the Mental

Assets, a mean T-score of $50.91 \pm .63$ and a standard deviation of 9.69 for the Mental Liabilities, and a mean T-score of $50.82 \pm .64$ and a standard deviation of 9.87 for the total mental health were obtained. The mean T-scores were slightly above the average T-score of fifty which is considered the mean of a T-scale.¹

The standard errors of the means ranged from .62 to .64 for the Mental Assets, Mental Liabilities and total mental health which indicated that the obtained means were highly reliable in as much as 68 times in 100 the true mean would vary less than one T-score from the means obtained.

The standard deviations ranged from 9.51 to 9.87 for the Mental Assets, Mental Liabilities and total mental health. Standard deviations these sizes indicated very little difference in the variability of the three groups.

Differences Between Means

Differences between the means of Mental Assets and Mental Liabilities of .32, between Mental Assets and total Mental Health of .41, and between Mental Liabilities and total mental health of .09 were obtained. Critical ratios were calculated to determine the significance of the differences between means. That is, to determine whether the obtained differences were true differences or the result of

¹Thorpe, Clark, and Tiegs, op. cit., p. 2.

chance. The critical ratios of .04, .93, and .27 were too small to indicate significant differences between the means. This would mean that the differences which were obtained were not true differences and may have been the result of chance.

Religious Attitude Inventory

A mean T-score of $50.84 \pm .67$ and a standard deviation of 10.35 was obtained for the Religious Attitude Inventory. The mean T-score of 50.84 was slightly above the average T-score of fifty which is considered the mean of a T-scale. The standard error of the mean T-score of .67 for the Religious Attitude Inventory indicated that the obtained mean was highly reliable in as much as 68 times in 100 the true mean would vary less than one T-score from the obtained means.

Religious Attitude Inventory, Mental Assets, Mental Liabilities, and Total Mental Health

The means, standard errors of the means, standard deviations, differences between the means, standard errors of the differences between the means, critical ratios, and probability levels of significance from the administration of the Religious Attitude Inventory and the Mental Health Analysis for comparison of the T-scores of the Religious Attitude Inventory with the Mental Assets, Mental Liabilities, and total

mental health of the 240 girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas, are presented in Table IV.

TABLE IV

MEANS, STANDARD ERRORS OF THE MEANS, STANDARD DEVIATIONS, DIFFERENCES BETWEEN THE MEANS, STANDARD ERRORS OF THE DIFFERENCES BETWEEN THE MEANS, CRITICAL RATIOS, AND PROBABILITY LEVELS OF SIGNIFICANCE FOR THE RELIGIOUS ATTITUDE INVENTORY, MENTAL ASSETS, MENTAL LIABILITIES, AND TOTAL MENTAL HEALTH OBTAINED FROM THE ADMINISTRATION OF THE RELIGIOUS ATTITUDE INVENTORY AND THE MENTAL HEALTH ANALYSIS TO THE 240 GIRLS ENROLLED IN HEALTH AND PHYSICAL EDUCATION AT THE ROBERT E. LEE HIGH SCHOOL, TYLER, TEXAS

Tests	M _n	σ_m	S.D.	Dm_1-m_2	σ_d	CR	P
Religious Attitude Inventory	50.84	.67	10.35	.38	.91	.42	.67
Mental Assets	51.22	.61	9.45				
Religious Attitude Inventory	50.84	.67	10.35	.16	.94	.17	.87
Mental Liabilities	51.00	.63	9.72				
Religious Attitude Inventory	50.84	.67	10.35	.25	.93	.27	.79
Total Mental Health	51.09	.64	9.87				

It should be noted that the means, standard errors of the means, and standard deviations for the Mental Assets, Mental Liabilities, and total mental health have been discussed on pages 34 and 35. Also, the means, standard errors of the means, and standard deviations for the Religious Attitude Inventory have been discussed on page 37.

Differences Between the Means of
Religious Attitude Inventory and
Mental Health Analysis

Differences between the means of the Religious Attitude Inventory and the Mental Assets of .38, between the Religious Attitude Inventory and the Mental Liabilities of .16, and between the Religious Attitude Inventory and the total mental health of .25 were obtained. The critical ratios of .42, .17, and .27 indicated that the differences between the means were not large enough to be considered statistically significant. That is, the differences between the mean T-scores would indicate that there is very little, if any, difference between the Religious Attitudes and the total mental health of the 240 girls taking part in this study.

Total Mental Health Analysis Test
According to Classifications

The number, means, standard errors of the means, standard deviations, differences between the means, standard

errors of the differences between the means, critical ratios, and probability levels of significance from the administration of the total Mental Health Analysis Test for comparison of the sophomore, junior, and senior girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas, are presented in Table V.

TABLE V

NUMBERS, MEANS, STANDARD ERRORS OF THE MEANS, STANDARD DEVIATIONS, DIFFERENCES BETWEEN THE MEANS, STANDARD ERRORS OF THE DIFFERENCES BETWEEN THE MEANS, CRITICAL RATIOS, AND PROBABILITY LEVELS OF SIGNIFICANCE FROM THE ADMINISTRATION OF THE TOTAL MENTAL HEALTH ANALYSIS TEST TO THE SOPHOMORE, JUNIOR, AND SENIOR GIRLS ENROLLED IN HEALTH AND PHYSICAL EDUCATION AT THE ROBERT E. LEE HIGH SCHOOL, TYLER, TEXAS

Total Mental Health Analysis Test	N	M _n	σ_m	S.D.	Dm_1-m_2	σ_d	CR	P
Seniors	29	51.06	1.62	8.73	.24	1.64	.15	.88
Juniors	100	51.30	1.03	10.32				
Seniors	29	51.06	1.62	8.73	2.79	1.91	1.46	.14
Sophomores	111	48.27	1.02	10.80				
Juniors	100	51.30	1.03	10.32	3.03	1.45	2.09	.04
Sophomores	111	48.27	1.02	10.80				

Means, Standard Errors of the Means, and Standard Deviations

From the administration of the total Mental Health Analysis test a mean T-score of 51.06 ± 1.62 and a standard

deviation of 8.73 for the seniors, a mean T-score of 51.30 \pm 1.03 and a standard deviation of 10.32 for the juniors, and a mean T-score of 48.27 \pm 1.02 and a standard deviation of 10.80 for the sophomores were obtained. The mean T-scores were slightly above and below the average T-score of fifty which is considered the mean of a T-scale. The standard errors of the means ranged from 1.02 to 1.62 for the sophomores, juniors, and seniors which indicated that the obtained means were sufficiently reliable in as much as 68 times in 100 the true mean would not vary more than two T-scores from the means obtained.

The standard deviations of the total Mental Health Analysis Test ranged from 8.73 to 10.80 for the sophomores, juniors, and seniors. Standard deviations these sizes indicated very little difference in the variability of the three groups.

It is to be noted that the sophomores had the lowest standard error of the mean and the largest standard deviation and the seniors had the largest standard error of the mean and the lowest standard deviation. This would indicate that the sophomore group, which had the lowest mean and the largest sampling, had a mean score which was more reliable than the means of the other two groups and that the group possessed greater variability than the other two groups, and the seniors had the smallest sampling and a mean score which was less

reliable than the means of the other two groups, and the seniors possessed less variability than the other two groups.

Differences Between the Means

Differences between the means of the seniors and juniors of .24, between the means of the seniors and sophomores of 2.79, and between the means of the juniors and sophomores of 3.03 were obtained. The differences yielded critical ratios of .15, 1.46, and 2.09. The critical ratios of .15 and 1.46 were not large enough to be considered statistically significant and would indicate very little, if any, difference between the seniors and the juniors, and the seniors and the sophomores. The critical ratio of 2.09 obtained for the juniors and sophomores was large enough to be considered statistically significant. A critical ratio of this size would indicate that a difference as large as the one obtained would occur 96 times in 100.

Religious Attitude Inventory According to Classifications

The numbers, means, standard errors of the means, standard deviations, differences between the means, standard errors of the differences between the means, critical ratios, and probability levels of significance from the administration of the Religious Attitude Inventory for comparison of the sophomore, junior, and senior girls enrolled in health

and physical education classes in Robert E. Lee High School, Tyler, Texas, are presented in Table VI.

TABLE VI

NUMBERS, MEANS, STANDARD ERRORS OF THE MEANS, STANDARD DEVIATIONS, DIFFERENCES BETWEEN THE MEANS, STANDARD ERRORS OF THE DIFFERENCES BETWEEN THE MEANS, CRITICAL RATIOS, AND PROBABILITY LEVELS OF SIGNIFICANCE FROM THE ADMINISTRATION OF THE RELIGIOUS ATTITUDE INVENTORY TO THE SOPHOMORE, JUNIOR, AND SENIOR GIRLS ENROLLED IN HEALTH AND PHYSICAL EDUCATION AT THE ROBERT E. LEE HIGH SCHOOL, TYLER, TEXAS

Religious Attitude Inventory	N	M _n	σ_m	S.D.	Dm_1-m_2	σ_d	CR	P
Seniors	29	51.71	1.68	9.09	.51	1.95	.26	.89
Juniors	100	51.20	1.00	10.02				
Seniors	29	51.71	1.68	9.09	1.11	1.94	.57	.57
Sophomores	111	52.82	.97	10.32				
Juniors	100	51.20	1.00	10.02	1.62	1.39	1.17	.24
Sophomores	111	52.82	.97	10.32				

Means. Standard Errors of the
Means. and Standard Deviations

From the administration of the Religious Attitude Inventory a mean T-score of 51.71 ± 1.68 and a standard deviation of 9.09 for the seniors, a mean T-score of 51.20 ± 1.00 and a standard deviation of 10.02 for the juniors, and a mean T-score of $52.82 \pm .97$ and a standard deviation of 10.32

for the sophomores were obtained. The mean T-scores were slightly above the average T-score of fifty which is considered the mean of a T-scale. The standard errors of the means ranged from .97 to 1.68 for the sophomores, juniors, and seniors which indicated that the obtained means were reliable in as much as 68 times in 100 the true mean would not vary more than approximately 1.5 T-scores from the obtained means.

The standard deviations of the Religious Attitude Inventory ranged from 9.09 to 10.32 for the sophomores, juniors, and seniors. Standard deviations these sizes indicated very little differences in the variability of the three groups.

It is to be noted that the sophomores had the lowest standard error of the mean and the largest standard deviation and the seniors had the largest standard error of the mean and the lowest standard deviation. This would indicate that the sophomore group, which had the lowest mean and the largest sampling, had a mean score which was more reliable than the means of the other two groups and that the group possessed greater variability than the other two groups, and the seniors had the smallest sampling and a mean score which was less reliable than the means of the other two groups, and the seniors possessed less variability than the other two groups.

Differences Between Means

Differences between the means of the seniors and juniors of .51, between the seniors and sophomores of 1.11, and between the juniors and sophomores of 1.62 were obtained. The critical ratios of .26, .57, and 1.17 indicated that the differences between the means were not large enough to be considered statistically significant.

It should be noted that the sophomores had the lowest scores on total mental health and the highest on the Religious Attitude Inventory.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The present study was undertaken to determine the relationship of religious attitudes and mental health of the 240 girls enrolled in health and physical education classes at Robert E. Lee High School, Tyler, Texas, during the academic year 1959-1960 through the administration of the Religious Attitude Inventory and the Mental Health Analysis.

In this study, the investigator attempted to fulfil the following purposes:

1. To determine the religious attitudes of the girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas.
2. To determine certain aspects of the mental health of the girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas.
3. To determine the relationship between the religious attitudes and the mental health of the girls enrolled in health and physical education classes in Robert E. Lee High School, Tyler, Texas.

A survey of literature concerning mental health and religious attitudes revealed no investigation identical to the present study.

Tests were selected according to the criteria established and included the Religious Attitude Inventory by Kraeft, Graebner, Pflieger, and Yungmans to determine the religious attitudes, and the Mental Health Analysis by Thorpe, Clark, and Tiegs to determine certain aspects of the mental health of the 240 girls enrolled in health and physical education classes at Robert E. Lee High School, Tyler, Texas, during the academic year 1959-1960.

The Religious Attitude Inventory was administered during the physical education classes and the Mental Health Analysis was administered during the health education classes to the 240 girls participating in the study.

The raw scores obtained from the administration of the Religious Attitude Inventory and the total Mental Health Analysis, Mental Assets, and Mental Liabilities were converted into T-scores for statistical treatment.

The T-scores obtained from the administration of the tests were tabulated and the relationship between the religious attitudes and the mental health of the 240 participants was determined.

Coefficient of correlation and standard error of the coefficient of correlation were determined between the scores obtained from the administrations of the Religious Attitude Inventory and the Mental Health Analysis.

The means, standard errors of the means, standard deviations, differences between the means, standard errors of

the differences between the means, critical ratios, and probability levels of significance were computed in order to estimate the differences between the uncorrelated means of

1. Mental Assets with Mental Liabilities
2. Religious Attitude Inventory with Mental Assets
3. Religious Attitude Inventory with Mental

Liabilities

4. Religious Attitude Inventory with total mental health.

The means, standard errors of the means, standard deviations, differences between the means, standard errors of the differences between the means, critical ratios, and the probability levels of significance were computed in order to estimate the differences between the correlated means of

1. Mental Assets with total mental health
2. Mental Liabilities with total mental health.

The means, standard errors of the means, standard deviations, differences between the means, standard errors of the differences between the means, critical ratios, and probability levels of significance were computed in order to make comparisons of the Mental Health Analysis scores for the seniors with the juniors, seniors with the sophomores, and juniors with the sophomores and in order to make comparisons of the Religious Attitude Inventory scores for the seniors

with the juniors, seniors with the sophomores, and juniors with the sophomores.

The findings are reported in two sections; those that were statistically significant and those that were not statistically significant.

Findings Statistically Significant

From the administration of the Religious Attitude Inventory and the Mental Health Analysis test to the 240 participants in this study, a correlation coefficient of $.43 \pm .05$ was obtained. A correlation coefficient of .43 indicated that the religious attitudes and the mental health of this group of 240 girls were substantially related.

When comparisons were made for the total Mental Health Analysis of the juniors with the sophomores, a critical ratio of 2.09 indicated that the difference of 3.03 between the means with a probability level of .04 was large enough to be considered statistically significant.

Findings Not Statistically Significant

When comparisons were made for the Mental Assets with the Mental Liabilities, Mental Assets with the total mental health, and the Mental Liabilities with the total mental health, critical ratios of .04, .93, and .27 indicated that the differences between the means of .32, .41, and .04 with probability levels of .97, .35, and .79 respectively,

were not large enough to be considered statistically significant.

When comparisons were made for the Religious Attitude Inventory with Mental Assets, Religious Attitude Inventory with Mental Liabilities, and Religious Attitude Inventory with total mental health, critical ratios of .42, .17, and .27 indicated that the differences between the means of .38, .16, and .25 with probability levels of .67, 1.87, and 1.79 respectively, were not large enough to be considered statistically significant.

When comparisons were made for the total Mental Health Analysis of the seniors with the juniors and the seniors with the sophomores, critical ratios of .15, and 1.46 indicated that the differences between the means of .24, and 2.79 with probability levels of .88 and .14 respectively, were not large enough to be considered statistically significant.

When comparisons were made for the Religious Attitude Inventory of the seniors with the juniors, the seniors with the sophomores, and the juniors with the sophomores, critical ratios of .26, .57, and 1.17 indicated that the differences between the means of .51, 1.11 and 1.62 with probability levels of .89, .57, and .24 respectively, were not large enough to be considered statistically significant.

Conclusions

From the findings presented in this study, the following conclusions were drawn:

1. Religious attitudes and mental health of the 240 girls participating in this study are substantially related as determined by the Religious Attitude Inventory and the total Mental Health Analysis test. This is substantiated by the fact that a coefficient correlation of $.43 \pm .05$ obtained from the administration of the Religious Attitude Inventory and the Mental Health Analysis test denotes substantial relationship.

2. As a group, the 240 girls participating in this study possessed similar Mental Assets and Mental Liabilities. This is substantiated by the fact that the mean T-scores for the Mental Assets and the Mental Liabilities were similar and were slightly above the average T-score of fifty which is considered the mean of a T-scale.

3. The group of 240 girls participating in this study possessed similar religious attitudes and mental health. This is substantiated by the fact that the differences between the means of the Religious Attitude Inventory and Mental Assets, Religious Attitude Inventory and Mental Liabilities, and Religious Attitude Inventory and total mental health were not large enough to be considered statistically significant.

4. The seniors and the juniors, and the seniors and the sophomores possessed similar mental health. This is

substantiated by the fact that the differences between the means of the total Mental Health Analysis were not large enough to be considered statistically significant.

5. The juniors possessed better mental health than the sophomores. This is substantiated by the fact that the differences between the means of the total Mental Health Analysis were large enough to be considered statistically significant in favor of the juniors.

6. The sophomores, juniors, and seniors possessed similar religious attitudes. This is substantiated by the fact that the differences between the means of the Religious Attitude Inventory were not large enough to be considered statistically significant.

Recommendations for Further Study

Upon the basis of the present study, the following recommendations are made for further study.

1. A comparison of religious attitudes and mental health of girls of the Catholic faith with girls of the Protestant faiths.

2. A comparison of religious attitudes and personality adjustment of high school girls.

3. A comparison of the Religious attitudes and the mental health of girls before and after participating in a planned guidance program.

4. A comparative study of the Religious attitudes and mental health before and after participating in a planned mental hygiene class.

5. A comparative study of the mental health of high school girls enrolled in a mental hygiene course with high school girls not enrolled in a mental hygiene course.

6. The construction of a religious attitude inventory or instrument for secondary students of both Christian and non-Christian faiths enrolled in the secondary schools.

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