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TOWARD PHYSICAL ACTIVITY.

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THE IMPLICATIONS OF AN ATTITUDINAL SURVEY OF
ADULT MALE COMMUNITY COLLEGE STUDENTS
TOWARD PHYSICAL ACTIVITY

Ewing Marsh Goodson

A dissertation presented to the
Graduate Faculty of Middle Tennessee State University
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for the degree Doctor of Arts

May, 1975

THE IMPLICATIONS OF AN ATTITUDINAL SURVEY OF
ADULT MALE COMMUNITY COLLEGE STUDENTS
TOWARD PHYSICAL ACTIVITY

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ABSTRACT

THE IMPLICATIONS OF AN ATTITUDINAL SURVEY OF ADULT MALE COMMUNITY COLLEGE STUDENTS TOWARD PHYSICAL ACTIVITY

by Ewing Marsh Goodson

This study was designed to assess the attitudes of adult male community college students toward physical activity and to develop implications for community college physical education programs from an analysis of the results.

The McPherson-Yuhasz Attitude Inventory consisting of fifty statements was administered to 106 adult males ranging in age from forty through sixty-five who were registered for the Fall Quarter of 1974 at Motlow State Community College, Volunteer State Community College, and Columbia State Community College. The inventory consisted of twenty-six negative statements and twenty-four positive statements, which were scored 5-4-3-2-1 and 1-2-3-4-5, respectively. A summation of each subject's score on all items was a measure of the intensity of the subject's attitude toward physical activity.

The findings revealed that adult males did not show a favorable attitude toward physical activity, although the

combined group mean (190.5) was much closer to the score necessary to be favorable (200) than it was to the score required to be unfavorable (100).

Twenty-three of the fifty inventory items received a mean score high enough for favorable agreement (4.0 or above), while none was in the non-favorable category (2.0 or below).

An analysis of variance revealed no significant difference among the three groups of adult males.

Recommendations for improvement of adult physical education programs include the need for individually prescribed activity, individual sports, courses designed to orient the adult to the effect of exercise upon the body, team games, and better rapport with industry.

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Any effort to mention all the people to whom the writer is indebted in this endeavor would be futile, but special recognition should be given to:

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Chapter 1

INTRODUCTION

Physical activity has always been a need of American men. Early Americans received their exercise through their daily tasks associated with the breaking of the frontier and their struggle against the elements;¹ while present-day Americans have become known as a physically soft generation whose daily routine usually does not include enough physical activity. In 1952 a study showed American children to be physically inferior to European children.² The National Adult Physical Fitness Survey in 1972 indicated that the typical American adult was also physically inferior.³ The possibility of a four-day work week, the development of technology, and the trend toward the spectator role has caused the problem of getting enough physical activity to become acute. This is true in spite of the interest in the

¹C. W. Hackensmith, History of Physical Education (New York: Harper & Row, Publishers, 1966), p. 316.

²Hans Kraus and Ruth Hirschland, "Muscular Fitness and Health," Journal of Health, Physical Education, Recreation, XXIV (December, 1953), 17-24.

³Charles A. Bucher, "National Adult Physical Fitness Survey: Some Applications," Journal of Health, Physical Education, Recreation, XXXV (January, 1974), 25-28.

United States in sports clubs, jogging, health clubs, and other similar activities.

In order to help solve the problem, there is a need to know more about the attitudes of adults toward physical activity. Research indicates that attitudes are a strong force in an individual's willingness to learn.⁴ Therefore, an evaluation of adult attitudes toward physical activity should provide useful information.

STATEMENT OF THE PROBLEM

The purposes of this study were: (1) to gain information concerning the attitudes of adult male community college students toward physical activity; and (2) to analyze the results in regard to their implications for community college physical education programs.

SIGNIFICANCE OF THE STUDY

One of the often mentioned goals of education is to make available to the entire population an opportunity to continue their education.⁵ In keeping with this goal an increasing number of adults are attending college. This

⁴Donald E. Campbell, "Student Attitudes Toward Physical Education," Research Quarterly, XXXIX (October, 1968), 457.

⁵William P. Johnson and Richard P. Kleva, "The Community Dimension of College Physical Education," Journal of Health, Physical Education, Recreation, XXXIV (April, 1973), 40.

is particularly true in the community college where a large percentage of the total enrollment is adults.⁶ Therefore, attention should be directed toward meeting their needs as well as the needs of younger students.

Community college physical education programs are not ordinarily designed with older students in mind.⁷ In order to meet the needs of older students, more information must be gained regarding their attitudes toward physical activity. Most all scales for assessing attitudes toward physical activity are designed for secondary students and those students who have matriculated directly from secondary school to college. A search of the literature by the writer substantiates the findings of McPherson and Yuhasz that little has been done in assessing the attitudes of adults toward physical activity.⁸ Since it is generally believed that the acceptance or rejection of physical activity is affected by attitudes, the studying of adult attitudes should be helpful in the evaluation and development

⁶Leonard V. Koos, The Community College Student (Gainesville: University of Florida Press, 1970), pp. 385-388.

⁷Personal interviews, in a study done in Sociology 665, 1973. "A Preliminary Survey to Determine the Status of Tennessee College Health, Physical Education, and Recreation Programs Involving Gerontology."

⁸B. D. McPherson and M. S. Yuhasz, "An Inventory for Assessing Men's Attitudes Toward Exercise and Physical Activity," Research Quarterly, XXXIX (March, 1968), 218.

of adult physical education programs. This would necessitate careful study and analysis of adult attitudes before concrete recommendations regarding the design of adult physical education programs are made.

DELIMITATIONS

1. The study was limited to adult males ranging in age from forty through sixty-five who were enrolled at Motlow State Community College, Volunteer State Community College, and Columbia State Community College during the fall quarter of 1974.

2. The study used only the McPherson-Yuhasz Attitude Inventory to investigate attitudes of adult males toward physical activity.

DEFINITIONS OF TERMS

Adult male. For the purpose of this study, the adult male is defined as the male ranging in age from forty through sixty-five.

Attitude. "The sum total of man's inclinations, and feelings, prejudices or biases; preconceived ideas, fears, threats and convictions about any specific topic."⁹

⁹L. L. Thurstone and E. J. Chave, The Measurement of Attitude (Chicago: University of Chicago Press, 1929), p. 6.

Attitude inventory. A scale constructed of statements regarding attitude which is used to measure attitude intensity.¹⁰

Physical activity. For the purpose of this study, physical activity is defined as that activity above and beyond that activity associated with a daily occupation or normal functioning of the body.

BASIC ASSUMPTIONS

1. The McPherson-Yuhasz Attitude Inventory is a valid and reliable measure of adult attitudes toward physical activity.

2. The adult males enrolled in the three selected middle Tennessee community colleges would be responsive to this evaluation of their attitudes toward physical activity.

HYPOTHESES

For the purposes of this study, the following hypotheses were developed:

1. Adult males would show a favorable attitude toward physical activity.

¹⁰L. L. Thurstone, "Attitudes Can Be Measured," American Journal of Sociology, XXXIII (January, 1928), 529-554.

2. There would be no significant difference among the attitudes of the adult men at the three community colleges.

Chapter 2

REVIEW OF RELATED LITERATURE

Very little research has been done concerning the attitudes of adult men toward physical activity. Since information which relates directly is limited, it seems necessary to investigate the development of attitude assessment in physical education.

ATTITUDE ASSESSMENT IN PHYSICAL EDUCATION

The term attitude has several connotations. Allport related attitude to the individual's response to objects and situations.¹ Thurstone defined it as the sum of man's inclinations and feelings, prejudices, preconceived ideas, fears, threats and convictions about any specific topic.² Wear described attitude as the acceptance or rejection of

¹G. W. Allport, Personality (New York: Henry Holt & Co., 1937), pp. 293-294.

²L. L. Thurstone and E. J. Chave, The Measurement of Attitude (Chicago: University of Chicago Press, 1929), p. 6.

some object or issue.³ McPherson referred to an attitude as the feelings, beliefs, and action tendencies of an individual.⁴

Attempts to measure attitude have been frequent since Thurstone first developed a measurement scale in 1928.⁵ Another method was developed by Likert in 1932 which somewhat simplified the Thurstone method.⁶ During the decade of the 1930's many researchers used the two methods to measure attitude or to develop scales of their own.

Physical educators were among those active in the development of scales and the subsequent measurement of attitude. In 1930, McCloy used a rating scale from 1 to 5 in a study dealing with character building through physical education. The Behavior Rating Scale developed in this study was one of the first scales in physical education

³Carlos L. Wear, "The Construction and Application of an Instrument for the Evaluation of Attitude Toward Physical Education as an Activity Course" (unpublished Doctoral dissertation, State University of Iowa, 1950), p. 6.

⁴B. D. McPherson, "Psychological Effects of an Exercise Program for Post-Cardiac and Normal Adult Men" (unpublished Master of Arts thesis, University of Western Ontario, 1965), p. 42.

⁵L. L. Thurstone, "Attitudes Can Be Measured," American Journal of Sociology, XXXIII (January, 1928), 529-554.

⁶R. A. Likert, "A Technique for the Measurement of Attitudes," Archives of Psychology, No. 140 (1932), 5-43.

which included attitude traits.⁷ One of the earliest studies in assessing the attitudes toward physical education was done by Smith in 1930. His purpose was to determine the attitude toward a new program of physical education at the University of Minnesota.⁸ In 1931 and 1932, Davis surveyed freshmen at Pennsylvania State College to determine their activity interests, and he developed implications and suggestions for policy based upon an analysis of the results.⁹ Bullock and Alden surveyed the attitude of freshmen women toward physical education at the University of Oregon in 1932.¹⁰ Another study was completed by Graybeal in 1932 in which the attitudes of women students at the University of Minnesota toward a required program versus an elective program were surveyed.¹¹ In 1934, Anderson

⁷C. H. McCloy, "Character Building Through Physical Education," Research Quarterly, I (October, 1930), 41-61.

⁸W. R. Smith, "A Questionnaire Study in Regard to the Attitudes of Men Students Toward the Required Physical Education Program," Research Quarterly, IV (March, 1933), 246-249.

⁹E. C. Davis, "A Study of the Interests of the Pennsylvania State College Freshmen in Certain Formal and Natural Physical Activities," Research Quarterly, IV (December, 1933), 49-59.

¹⁰M. Bullock and F. D. Alden, "Some of the Factors Determining Attitude of Freshmen Women at the University of Oregon Toward Required Physical Education," Research Quarterly, IV (December, 1933), 60-70.

¹¹E. Graybeal, "Measurement in Physical Education for Women," Research Quarterly, VII (December, 1936), 60-63.

assessed the attitudes of high school girls toward physical activities by utilizing the interview technique.¹²

Blanchard developed a behavior rating scale in 1936 to measure attitude traits inherent in individual behavior patterns.¹³ A study was done in 1937 by Cowell which dealt with the activities and interests of junior high boys.¹⁴ In the same year Craig surveyed the sports interests and attitudes of students in the required program at the University of Illinois.¹⁵

In 1940, Carr conducted a survey in a secondary school at Harvey, Illinois, to determine the relationship between success in physical education and favorable attitudes toward physical education. Eighty-four statements dealing with attitudes in the areas of social, personal, and

¹²T. W. Anderson, "The Attitudes of High School Girls Toward Physical Activities," Research Quarterly, V (December, 1934), 47-61.

¹³B. E. Blanchard, "A Behavior Frequency Rating Scale for the Measurement of Character and Personality in Physical Education Classroom Situations," Research Quarterly, VII (May, 1936), 46-66.

¹⁴C. C. Cowell, "Diary Analysis: A Suggested Technique for the Study of Children's Activities and Interests," Research Quarterly, VIII (May, 1937), 158-172.

¹⁵H. W. Craig, "Sports Interests and Attitudes of Students Enrolled in the Service Curriculum in Physical Education at the University of Illinois," Research Quarterly, X (May, 1939), 143-149.

activity were included in the scale.¹⁶ In the same year a study of student interests at the University of Michigan by Beise was used to aid in evaluating the women's physical education curriculum.¹⁷

The decade of the fifties was marked by the development of an instrument by Wear in 1950 for the assessing of attitudes of college students toward physical education. His instrument consisted of forty items in the form of statements concerning physical education which were scored using the Likert summation method.¹⁸ In 1954, Wear developed another scale in order to have two equivalent forms of a physical education attitude scale. One or both of his scales were widely used by other researchers in the measurement of physical education attitudes.¹⁹ Bell and Walters used the original Wear instrument in a study of the

¹⁶M. G. Carr, "Relations Between Success in Physical Education and Selected Attitudes Expressed by High School Girls," Research Quarterly, XVI (October, 1945), 176-191.

¹⁷D. Beise, "A Comparative Analysis of the Physical Education Background, Interests, and Desires of College Students as an Evaluation Procedure," Research Quarterly, XI (December, 1940), 120-134.

¹⁸Carlos L. Wear, p. 72.

¹⁹Carlos L. Wear, "Construction of Equivalent Forms of an Attitude Scale," Research Quarterly, XXVI (March, 1955), 113-119.

attitudes of women at the University of Michigan in 1953.²⁰

In 1960, Brumbach and Cross used the Wear Attitude Inventory to test the attitudes of males about to enter the service program at the University of Oregon.²¹ Adams reported on the characteristics of the Thurstone versus the Likert method in 1963.²² Campbell surveyed male students at the University of Texas to determine if variables like the size of the high school attended or the type of high school physical education program experienced affected their attitude toward physical education.²³ Vincent used the Wear Attitude Inventory to predict success in physical education activities from attitude, strength, and efficiency measurements.²⁴ Keogh used the scale to determine general

²⁰M. Bell and E. Walters, "Attitudes of Women at the University of Michigan Toward Physical Education," Research Quarterly, XXIV (December, 1953), 379-391.

²¹W. B. Brumbach and J. A. Cross, "Attitudes Toward Physical Education of Male Students Entering the University of Oregon," Research Quarterly, XXVI (March, 1965), 10.

²²R. S. Adams, "Two Scales for Measuring Attitude Toward Physical Education," Research Quarterly, XXXIV (March, 1963), 91-94.

²³Donald E. Campbell, "Student Attitudes Toward Physical Education," Research Quarterly, XXXIX (October, 1968), 456-462.

²⁴M. F. Vincent, "Prediction of Success in Physical Education Activities from Attitude, Strength, and Efficiency Measurements," Research Quarterly, XXXVIII (October, 1967), 502-505.

attitudes toward benefits and values of physical education.²⁵ Kenyon developed a scale which was divided into six dimensions of physical activity.²⁶ None of these scales were designed or utilized for assessing the attitudes of adult males toward exercise and physical activity. Previous testing had centered around the high school student and the younger college student and usually related to specific physical education programs. This void led McPherson and Yuhasz to construct in 1964 an inventory for assessing the intensities of adult male attitudes.²⁷ The inventory included fifty statements regarding exercise and physical activity written and assembled according to the criteria established by Wang and scored by a five-point Likert type scale.²⁸ After validity and reliability had been established, the inventory was subsequently used in a

²⁵J. Keogh, "Analysis of General Attitudes Toward Physical Education," Research Quarterly, XXXII (May, 1962), 239-244.

²⁶G. S. Kenyon, "Six Scales for Assessing Attitude Toward Physical Activity," Research Quarterly, XXXIX (October, 1968), 567-574.

²⁷B. D. McPherson and M. S. Yuhasz, "An Inventory for Assessing Men's Attitudes Toward Exercise and Physical Activity," Research Quarterly, XXXIX (March, 1968).

²⁸C. K. Wang, "Suggested Criteria for Writing Attitude Statements," Journal of Social Psychology, III (August, 1932), 367-373.

study by McPherson.²⁹ A search of the literature reveals no other scale designed to measure adult male attitudes toward exercise and physical activity.

A related study was the National Adult Physical Fitness Survey sponsored by the President's Council on Physical Fitness and Sports in 1972. The survey indicated that the American adult as well as the younger American was also physically lacking. The study confirmed what many had suspected; that American adults had become too concerned with earning a living and watching others perform to devote enough time to physical activity. A total of 3,875 adults over twenty-two years of age were interviewed. Subjects were randomly selected and were interviewed in their homes. Results of the survey showed that only three percent of American adults participate in physical fitness programs conducted by organizations and health clubs. Only fifty-six percent of the men and fifty-five percent of the women were participating in any of the several activities listed on the questionnaire. Walking was by far the most popular activity. The study also indicated that men and women with the most education were more likely to exercise. The most popular reason given for exercising was for good health.

²⁹B. D. McPherson, "Psychological Effects of an Exercise Program for Post-Cardiac and Normal Adult Men" (unpublished Master of Arts thesis, University of Western Ontario, 1965).

Weight control ranked second for women and enjoyment, pleasure, and relaxation was second for men. The most popular reason listed by both men and women for not exercising was "don't have time" and ranking second was "get enough exercise working."³⁰

³⁰H. Harrison Clarke (ed.), "Physical Fitness Research Digest," Series 4, No. 2, published quarterly by the President's Council on Physical Fitness and Sports, Washington, D.C., April, 1974, pp. 1-25.

Chapter 3

METHODS AND PROCEDURES

An attitudinal inventory was used to assess the attitudes of adult males at three middle Tennessee community colleges toward physical activity. The inventory which was utilized was developed by B. D. McPherson and M. S. Yuhasz at the University of Western Ontario in 1965. The instrument was administered during the Fall Quarter of 1974 by the writer at Columbia State Community College, Volunteer State Community College, and Motlow State Community College.

DESCRIPTION OF SUBJECTS

The subjects were those adult male students ranging in age from forty through sixty-five who were enrolled for the Fall Quarter of 1974 at Columbia State Community College, Volunteer State Community College, and Motlow State Community College. A computer print-out provided the researcher with the names, ages, addresses, phone numbers, and class schedules of the subjects, who numbered 169.

INSTRUMENT

The instrument utilized in this study was the McPherson-Yuhasz Attitude Inventory developed in 1965. The purpose of the inventory is to assess the attitudes of adult men toward physical activity. The inventory consists of fifty statements concerning opinions, beliefs, attitudes, and fallacies about physical activity.¹ These statements were compiled according to the criteria developed by Wang.²

The inventory developed by McPherson and Yuhasz was used in a 1965 study which compared the attitudes of post-cardiac adult men with normal adult men.³ Reliability was determined by the odd-even split-halves assessment with a two- to seven-day interval utilizing the Spearman-Brown formula. Reliability ranged from 0.81 to 0.95.

To establish validity, a comparison was made between a group with presumed favorable attitudes toward physical

¹B. D. McPherson and M. S. Yuhasz, "An Inventory for Assessing Men's Attitudes Toward Exercise and Physical Activity," Research Quarterly, XXXIX (March, 1968), 218-220.

²C. K. Wang, "Suggested Criteria for Writing Attitude Statements," Journal of Social Psychology, III (August, 1932), 367-373.

³B. D. McPherson, "Psychological Effects of an Exercise Program for Post-Cardiac and Normal Adult Men" (unpublished Master of Arts thesis, University of Western Ontario, 1965).

activity and another group with presumed unfavorable attitudes. The group with the favorable attitudes submitted the names of acquaintances who they thought held unfavorable attitudes toward physical activity. From this list the unfavorable group was selected. Validity was determined by the sign test and a t test. The t test revealed a t ratio of 6.697 ($p < .01$). The sign test revealed a statistically significant difference ($p < .01$) between the two groups.⁴

The inventory is scored by utilizing a five-point Likert type scale. The subjects are asked to respond to the fifty statements by choosing one of the following responses: strongly agree, agree, undecided, disagree, and strongly disagree. The most favorable responses toward physical activity receive a score of five. The responses are scored 5-4-3-2-1 for the negatively worded statements and 1-2-3-4-5 for the items worded positively.⁵ There are twenty-six negative statements and twenty-four positive ones. A subject's score represents the summation of the scores of the individual items. The total score is a measure of the intensity of the subject's attitude toward exercise and physical activity.⁶

⁴B. D. McPherson and M. S. Yuhasz, p. 219.

⁵R. S. Adams, "Two Scales for Measuring Attitude Toward Physical Education," Research Quarterly, XXXIV (March, 1963), 93.

⁶B. D. McPherson and M. S. Yuhasz, pp. 218-219.

COLLECTION OF DATA

The McPherson-Yuhasz Attitude Inventory was administered to the subjects during the Fall Quarter of 1974. Permission to administer the inventory was granted by the Presidents and Deans of Instruction at Columbia State Community College, Volunteer State Community College, and Motlow State Community College. A representative from each college was assigned to the writer for purposes of coordination.

Computer print-outs and class locator cards were used in locating the subjects. Lists were tabulated according to classes and days of the week in order to find the most appropriate times for administering the inventory. The writer, through coordination with each school's designated representative, devised a plan which enabled the investigator to administer as many inventories as possible. In those cases where it was not possible for the investigator to administer the inventory, the assistance of the teachers of the classes where the subjects were located was requested. A letter of endorsement from the Dean of Instruction at each college, an information sheet, an answer sheet, and directions as recommended by McPherson and Yuhasz were attached.⁷

⁷B. D. McPherson and M. S. Yuhasz, p. 218.

The writer visited the three colleges during the time period October 9 through October 28 and administered the McPherson-Yuhasz Inventory. Two days were spent initially on each campus with Motlow State being visited on October 9 and 10, Columbia State on October 14 and 15, and Volunteer State on October 23 and 24. These initial visits resulted in the administration of eighty-six inventories with eighty being used in the study. A follow-up visit was made to Volunteer State on October 28 with eight additional inventories obtained, making the total number of usable inventories eighty-eight. Seventy-five of the total were personally administered with thirteen being teacher assisted.

Inventories for those enrolled, but not present at the time of test administration, were mailed to Motlow State subjects on October 12, Columbia State subjects on October 18, and Volunteer State subjects on October 29. Follow-up letters were mailed on November 8. A total of twenty inventories were returned, and eighteen of these were used. The total number of usable inventories was 106.

TREATMENT OF DATA

The information obtained from the responses to the inventory were organized and analyzed to determine implications for adult physical education.

A summation of each subject's score on all items was used to determine the subjects' intensity toward physical activity. The scoring system recommended by McPherson and Yuhasz which awards five points for strongly agree, four points for agree, three points for undecided, two points for disagree, and one point for strongly disagree was used for the statements worded positively. Replies to negatively worded statements received five points for strongly disagree, four points for disagree, three points for undecided, two points for agree, and one point for strongly agree.⁸ An answer of four or five indicated a favorable attitude toward physical activity in regard to that particular statement. Therefore, a total score of 200 or above represented a favorable attitude toward physical activity for the total inventory of fifty statements. Since an answer of one or two indicated an unfavorable attitude toward physical activity for one particular statement, a total score of 100 or below represented an unfavorable attitude toward physical activity for the complete inventory.

An analysis of each test item was made with a mean score of 4.0 or above accepted as favorable agreement and a mean score of 2.0 or below accepted as unfavorable

⁸B. D. McPherson and M. S. Yuhasz, p. 218.

agreement. Appropriate implications for adult physical education were made from the analysis.

From the numerical values assigned to the inventory, an analysis of variance was computed from the mean scores among the three groups of adult males--Columbia State Community College, Motlow State Community College, and Volunteer State Community College. The .05 level of significance was used.

Chapter 4

ANALYSIS OF DATA

The McPherson-Yuhasz Attitude Inventory was used for assessing the attitudes of adult males, ranging in age from forty through sixty-five, enrolled at Motlow State Community College, Volunteer State Community College, and Columbia State Community College. The inventory scores were determined by the scoring system recommended by McPherson and Yuhasz.¹ Utilizing the mean scores of the three groups of adult males, an analysis of variance was computed. Tables were constructed from inventory responses in order to analyze individual inventory items for possible implications for adult physical education.

MEAN AND RANGE OF INVENTORY SCORES

The combined mean inventory score of the three groups was 190.5. The individual college mean inventory scores were: Motlow State--188.31 for thirty-five subjects; Volunteer State--191.36 for thirty-five subjects; and

¹B. D. McPherson and M. S. Yuhasz, "An Inventory for Assessing Men's Attitudes Toward Exercise and Physical Activity," Research Quarterly, XXXIX (March, 1968), 218.

Columbia State--191.89 for thirty-six subjects. Therefore, the hypothesis that adult males would show a favorable attitude toward physical activity was rejected. Based upon the requirements structured into the study, a mean score of 200 or above would represent a favorable attitude toward physical activity and a mean score of 100 or below would represent an unfavorable attitude toward physical activity. The mean inventory scores are presented in Table 1.

The combined mean age of the subjects was 46.5. The seventy-nine subjects under fifty years of age recorded a mean inventory score of 191.2, with the remaining twenty-seven subjects who were fifty years of age or older recording a mean score of 188.5. This information can be found in Table 1.

Inventory scores ranged from 168 to 218. The ranges of scores at the three colleges were: (1) Motlow State--171-211; (2) Volunteer State--168-217; and (3) Columbia State--168-218. Table 1 contains this information.

ANALYSIS OF VARIANCE

An analysis of variance was computed from the mean scores of the adult males at the three colleges to determine if there were a significant difference among the three groups. An F-ratio of 0.938 was computed which was not significant at the .05 level of probability. The F-ratio

Table 1
Mean and Range of Scores

College	No. of Adults	Mean Age	Mean Inventory Score	Mean Inventory Score (Age 40-49)	Mean Inventory Score (Age 50-65)	Range
Motlow State	35	46.4	188.31	188.7	185.6	171-211
Volunteer State	35	45.8	191.36	192.3	190.3	168-217
Columbia State	36	47.4	191.89	193.3	188.7	168-218
Totals	106	46.5	190.5	191.2	188.5	168-218

needed at the .05 level for 3 and 106 degrees of freedom was 3.15. Therefore, the hypothesis that there would be no significant difference among the attitudes of the adult men at the three colleges was accepted. This information is presented in Table 2.

Table 2
Analysis of Variance

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Level of Probability
Between	260.1	2	130.05	0.938	.05
Within	14269.3	103	138.536		
Total	14529.4	105			

Note: F needed for significance: .05 level, 3.15.

ANALYSIS OF INVENTORY ITEMS

One of the purposes of this study was to develop implications for adult physical education. In order to better accomplish this end, the inventory items were organized into categories of items with a mean score of 4.0 or above, items with a mean score between 3.0 and 4.0, and items with a mean score of 3.0 or below. The items were further separated into positive and negative items. A mean score of 4.0 or above was accepted as agreement with a particular item, while 2.0 or below was accepted as disagreement. Of the twenty-six positive inventory items, thirteen had a mean score of 4.0 or above, while ten of the twenty-four negative items recorded 4.0 or above. None of the fifty items had a score of 2.0 or below and only five items were below 3.0. Information regarding mean item responses of the different colleges can be found in Tables 3 and 4, while the combined mean item responses are included in Table 5.

Tables 6 through 55 indicate individual item replies from each college according to the number of subjects who Strongly Agreed (SA), Agreed (A), were Undecided or Neutral (N), Disagreed (D), or Strongly Disagreed (SD).

Table 3
 Mean Item Response by College
 (Positive Items)

Item	Mcclow State		Volunteer State		Columbia State	
	Total Score	Mean	Total Score	Mean	Total Score	Mean
1	163	4.66	166	4.74	164	4.56
2	149	4.26	155	4.43	155	4.31
5	155	4.43	156	4.46	156	4.33
6	138	3.94	145	4.14	150	4.17
8	141	4.03	143	4.09	139	3.86
13	139	3.97	148	4.23	146	4.06
14	144	4.11	144	4.11	154	4.28
17	102	2.91	102	2.91	110	3.06
18	149	4.26	152	4.34	155	4.31
19	120	3.43	126	3.60	136	3.78
20	110	3.14	111	3.17	121	3.36
21	134	3.82	143	4.09	140	3.89
22	125	3.57	134	3.82	136	3.78
24	140	4.0	136	3.89	148	4.11
25	134	3.82	143	4.09	148	4.11
26	129	3.69	139	3.97	136	3.78
29	130	3.71	142	4.06	144	4.0
32	132	3.77	141	4.03	139	3.86
34	136	3.89	140	4.0	124	3.44
36	136	3.89	140	4.0	152	4.22
43	138	3.94	146	4.17	148	4.11
44	137	3.91	145	4.14	144	4.0
46	137	3.91	140	4.0	139	3.86
47	139	3.97	134	3.82	146	4.06
49	139	3.97	146	4.17	148	4.11
50	128	3.66	129	3.69	122	3.39

Table 4
 Mean Item Response by College
 (Negative Items)

Item	Motlow State		Volunteer State		Columbia State	
	Total Score	Mean	Total Score	Mean	Total Score	Mean
3	149	4.26	143	4.09	152	4.22
4	126	3.77	147	4.20	143	3.97
7	155	4.43	161	4.60	152	4.22
9	142	4.06	145	4.14	153	4.25
10	145	4.14	146	4.17	150	4.17
11	125	3.57	125	3.57	156	3.72
12	110	3.14	106	3.03	119	3.31
15	142	4.06	151	4.31	142	3.94
16	122	3.49	116	3.31	114	3.17
23	135	3.86	144	4.11	137	3.81
27	145	4.14	147	4.20	148	4.11
28	147	4.20	151	4.31	149	4.14
30	125	3.57	117	3.34	135	3.75
31	134	3.83	143	4.06	118	3.28
33	138	4.0	148	4.23	154	4.28
35	104	2.97	99	2.83	104	2.89
37	122	3.49	127	3.63	111	3.08
38	97	2.77	106	3.03	105	2.92
39	134	3.83	129	3.69	145	4.03
40	144	4.11	140	4.0	148	4.11
41	87	2.49	75	2.14	88	2.44
42	144	4.11	149	4.26	156	4.33
45	128	3.66	136	3.89	129	3.58
48	78	2.23	78	2.23	105	2.92

Table 5
Total Mean Item Response

Item	Negative Items		Item	Positive Items	
	Total Score	Mean		Total Score	Mean
3	444	4.19	1	493	4.65
4	416	3.98	2	459	4.33
7	468	4.42	5	467	4.41
9	440	4.15	6	433	4.08
10	441	4.16	8	423	3.99
11	406	3.62	13	433	4.08
12	335	3.16	14	442	4.17
15	435	4.10	17	314	2.96
16	352	3.32	18	456	4.30
23	416	3.92	19	382	3.60
27	440	4.15	20	342	3.23
28	447	4.22	21	417	3.93
30	377	3.56	22	395	3.73
31	395	3.73	24	424	4.0
33	440	4.17	25	425	4.01
35	307	2.90	26	404	3.81
37	360	3.40	29	416	3.92
38	308	2.91	32	412	3.89
39	408	3.85	34	400	3.77
40	432	4.08	36	428	4.04
41	250	2.36	36	428	4.04
42	449	4.24	43	432	4.08
45	393	3.71	44	426	4.02
48	261	2.46	46	416	3.92
			47	419	3.95
			49	433	4.08
			50	379	3.58

POSITIVE INVENTORY ITEMS WITH A MEAN
SCORE OF 4.0 OR ABOVE

Table 6

Item 1. Physical Exercise is Beneficial
to the Human Body

College	SD	D	N	A	SA	Mean
Motlow State				12	23	4.66
Volunteer State				9	26	4.74
Columbia State				16	20	4.56

Sixty-nine subjects strongly agreed and thirty-seven agreed with these being the only categories with responses. The combined mean item response was 4.65, with Motlow State having 4.66, Volunteer State recording 4.74, and Columbia State receiving 4.56. This item received the highest mean value of the entire inventory.

Table 7

Item 2. Exercise Helps to Work Off Emotional
Tensions and Anxieties

College	SD	D	N	A	SA	Mean
Motlow State			1	24	10	4.26
Volunteer State		1	1	15	18	4.43
Columbia State				16	20	4.31

Forty-eight subjects strongly agreed, fifty-five agreed, two were undecided, one disagreed, and none strongly

disagreed. The total mean item response was 4.33, with Motlow State recording a mean of 4.26, while Volunteer State and Columbia State had means of 4.43 and 4.31, respectively.

Table 8

Item 5. Regular Physical Activity Makes
One Feel Better

College	SD	D	N	A	SA	Mean
Motlow State				20	15	4.43
Volunteer State				19	16	4.46
Columbia State		1	1	19	15	4.31

The total mean item response was 4.41. The means of the three colleges were: Motlow State--4.43; Volunteer State--4.46; and Columbia State--4.31. Forty-six subjects strongly agreed, fifty-eight agreed, one was undecided, and one disagreed. No subjects strongly disagreed.

Table 9

Item 6. Physical Education Should Be a Required
Subject for Elementary and Secondary
School Children

College	SD	D	N	A	SA	Mean
Motlow State	2	3	1	18	11	3.94
Volunteer State	2	1	1	17	14	4.14
Columbia State		3	1	19	13	4.17

Thirty-eight subjects strongly agreed, fifty-four agreed, three were undecided, seven disagreed, and four

strongly disagreed. The total mean item response was 4.08, with Motlow State having 3.94, while Volunteer State and Columbia State recorded 4.14 and 4.17, respectively.

Table 10

Item 13. Participation in Physical Activity
Aids Mental Relaxation

College	SD	D	N	A	SA	Mean
Motlow State		1	2	29	3	3.97
Volunteer State			1	25	9	4.23
Columbia State	1		1	28	6	4.06

The total response included eighteen subjects who strongly agreed, eighty-two who agreed, four who were undecided, one who disagreed, and one who strongly disagreed. A total mean item response of 4.08 was computed, with Motlow State recording 3.97, Volunteer State receiving 4.23, and Columbia State registering 4.06.

Table 11

Item 14. Exercise is Important in Aiding a Person
to Gain and Maintain All-round Good Health

College	SD	D	N	A	SA	Mean
Motlow State		1		28	6	4.11
Volunteer State	1			27	7	4.11
Columbia State		1		23	12	4.28

Twenty-five subjects strongly agreed, seventy-eight agreed, none was undecided, two disagreed, and one strongly disagreed. The total mean response was 4.17, with Motlow State receiving 4.11, Volunteer State having 4.11, and Columbia State tallying 4.28.

Table 12

Item 18. I Think Exercise is Good for Me

College	SD	D	N	A	SA	Mean
Motlow State				26	9	4.26
Volunteer State		1		20	14	4.34
Columbia State	1			21	14	4.31

The total mean item response was 4.30, with Motlow State having 4.26, Volunteer State recording 4.34, and Columbia State receiving 4.31. Thirty-seven subjects strongly agreed, sixty-seven agreed, one disagreed, and one strongly disagreed. None was undecided.

Table 13

Item 24. A Woman Can Improve Her Poise and Posture
by Regular Participation in Physical Activity

College	SD	D	N	A	SA	Mean
Motlow State	1		1	29	4	4.0
Volunteer State		3	1	28	3	3.89
Columbia State		1	1	27	7	4.11

The mean item response at Motlow State was 4.0, with Volunteer State having 3.89, and Columbia State recording 4.11. The total mean item response was 4.0. Fourteen subjects strongly agreed, eighty-four agreed, three were undecided, four disagreed, and one strongly disagreed.

Table 14

Item 25. Regular Physical Activity Has a Beneficial Effect on an Individual's Ability to Carry Out His Job Responsibilities

College	SD	D	N	A	SA	Mean
Motlow State		1	7	24	3	3.82
Volunteer State			2	28	5	4.09
Columbia State		1	3	23	9	4.11

The total mean item response was 4.01, with Motlow State recording 3.82, Volunteer State compiling 4.09, and Columbia State getting 4.11. Seventeen subjects strongly agreed, seventy-five agreed, twelve were undecided, two disagreed, and none strongly disagreed.

Table 15

Item 36. Exercise is Valuable in Building Up an Adequate Reserve of Strength and Stamina for Everyday Living

College	SD	D	N	A	SA	Mean
Motlow State	1	2		29	3	3.89
Volunteer State		2	1	27	5	4.0
Columbia State			2	24	10	4.22

The total mean item response was 4.04. Motlow State recorded 3.89, Volunteer State compiled 4.0, and Columbia State received 4.22. Eighteen subjects strongly agreed, eighty agreed, three were undecided, four disagreed, and one strongly disagreed.

Table 16

Item 43. Physical Activity in Some Form is an Excellent Remedy for the Tense, Irritable and Anxious Person

College	SD	D	N	A	SA	Mean
Motlow State	1	2		27	5	3.94
Volunteer State			1	27	7	4.17
Columbia State		1	1	27	7	4.11

Nineteen subjects strongly agreed, eighty-one agreed, two were undecided, three disagreed, and one strongly disagreed. The total mean item response was 4.08, with Motlow State recording 3.94, Volunteer State tallying 4.17, and Columbia State compiling 4.11.

Table 17

Item 44. Regular Physical Activity Makes a Man More Alert

College	SD	D	N	A	SA	Mean
Motlow State		2	1	30	2	3.91
Volunteer State			1	28	6	4.14
Columbia State		1	3	27	5	4.0

Thirteen subjects strongly agreed, eighty-five agreed, five were undecided, and three disagreed. No subjects strongly disagreed. The total mean item response was 4.02, with Motlow State having 3.91, Volunteer State amassing 4.14, and Columbia State totaling 4.0.

Table 18

Item 49. When a Person Improves His Physical Condition
He Improves His Work Productivity

College	SD	D	N	A	SA	Mean
Motlow State		2	1	28	4	3.97
Volunteer State			1	27	7	4.17
Columbia State		1	1	27	7	4.11

Eighteen subjects strongly agreed, eighty-two agreed, three were undecided, three disagreed, and none strongly disagreed. The total mean item response was 4.08, with Motlow State having 3.97, Volunteer State registering 4.17, and Columbia State receiving 4.11.

NEGATIVE INVENTORY ITEMS WITH A MEAN
SCORE OF 4.0 OR ABOVE

Table 19

Item 3. Adults Get All the Physical Activity They
Need in Their Daily Work

College	SD	D	N	A	SA	Mean
Motlow State	11	22	2			4.26
Volunteer State	5	28	2			4.09
Columbia State	11	23	1	1		4.22

Twenty-seven subjects strongly disagreed, seventy-three disagreed, five were undecided, one agreed, and none strongly agreed. The mean item response at Motlow State was 4.26, with Volunteer State having 4.09, and Columbia State recording 4.22. The total mean item response was 4.19.

Table 20

Item 7. Exercise Does More Harm Than Good

College	SD	D	N	A	SA	Mean
Motlow State	19	14	1		1	4.43
Volunteer State	21	14				4.60
Columbia State	15	16	3	2		4.22

Fifty-five subjects strongly disagreed, forty-four disagreed, four were undecided, two agreed, and one strongly agreed. The mean item response at Motlow State was 4.43, with Volunteer State recording 4.60, and Columbia State getting 4.22. The total mean item response was 4.42 which was the second highest mean score recorded for the entire inventory.

Table 21

Item 9. An Individual Has All the Strength and Stamina He Needs Without Participating in an Exercise Program

College	SD	D	N	A	SA	Mean
Motlow State	5	27	3			4.06
Volunteer State	8	24	3			4.14
Columbia State	13	20	2	1		4.25

Twenty-six subjects strongly disagreed, seventy-one disagreed, eight were undecided, and one agreed. No subjects strongly agreed. The mean item response at Motlow State was 4.06, with Volunteer State having 4.14, and Columbia State registering 4.25. The total mean item response was 4.15.

Table 22

Item 10. Exercise Does Little to Improve a Person's Sense of Well-being

College	SD	D	N	A	SA	Mean
Motlow State	6	28	1			4.14
Volunteer State	10	22	2	1		4.17
Columbia State	10	22	4			4.17

Twenty-six subjects strongly disagreed, seventy-two disagreed, seven were undecided, and one agreed. No subjects strongly agreed. Motlow State recorded a mean item response of 4.14, Volunteer State showed a mean of 4.17, and Columbia State tallied 4.17. The total mean item response was 4.16.

Table 23

Item 15. The Heart Can Not Be Strengthened by Exercise

College	SD	D	N	A	SA	Mean
Motlow State	8	24	1	1	1	4.06
Volunteer State	12	22	1			4.31
Columbia State	10	20	2	2	2	3.94

Thirty subjects strongly disagreed, sixty-six disagreed, four were undecided, three agreed, and three strongly agreed. The total mean item response was 4.10. Motlow State recorded a mean of 4.06, Volunteer State recorded 4.31, and Columbia State totaled 3.94.

Table 24

Item 27. Those Who Are Physically Healthy Do Not
Need to Engage in Physical Exercises

College	SD	D	N	A	SA	Mean
Motlow State	6	28	1			4.14
Volunteer State	8	26	1			4.20
Columbia State	9	24	1	2		4.11

Twenty-three subjects strongly disagreed, seventy-eight disagreed, three were undecided, and two agreed. None strongly agreed. The total mean item response was 4.15, with Motlow State recording a mean of 4.14, Volunteer State receiving 4.20, and Columbia State registering 4.11.

Table 25

Item 28. Anyone Over 25 Years of Age Should Avoid
Exercise Because He Might Strain His Heart

College	SD	D	N	A	SA	Mean
Motlow State	14	18		2	1	4.20
Volunteer State	14	20			1	4.31
Columbia State	13	18	3	1	1	4.14

Forty-one subjects strongly disagreed, fifty-six disagreed, three were undecided, three agreed, and three strongly agreed. Motlow State had a mean item response of 4.20, while Volunteer State had 4.31, and Columbia State had 4.14. The total mean response was 4.22.

Table 26

Item 33. Exercise is of no Real Value in
Improving One's Health

College	SD	D	N	A	SA	Mean
Motlow State	10	20		5		4.0
Volunteer State	11	22	1	1		4.23
Columbia State	14	20		2		4.28

Thirty-five subjects strongly disagreed, sixty-two disagreed, one was undecided, and eight agreed. No subjects strongly agreed. Motlow State recorded a mean item response of 4.0, Volunteer State had 4.23, and Columbia State compiled 4.28. The total mean response was 4.17.

Table 27

Item 40. Physical Exercise is Less Important Today
Than it Was in My Parent's Time

College	SD	D	N	A	SA	Mean
Motlow State	10	22		3		4.11
Volunteer State	7	25		2	1	4.0
Columbia State	14	15	4	3		4.11

Thirty-one subjects strongly disagreed, sixty-two disagreed, four were undecided, eight agreed, and one strongly agreed. Motlow State had a mean item response of 4.11, with Volunteer State getting a mean of 4.0, and Columbia State amassing 4.11. The total mean item response was 4.08.

Table 28

Item 42. When One Reaches Full Physical Growth
Exercise is no Longer Necessary

College	SD	D	N	A	SA	Mean
Motlow State	7	27			1	4.11
Volunteer State	9	26				4.26
Columbia State	14	21		1		4.33

Thirty subjects strongly disagreed, seventy-four disagreed, one agreed, and one strongly agreed. No subjects were undecided. Motlow State recorded a mean item response of 4.11 as compared with 4.26 for Volunteer State and 4.33 for Columbia State. The total mean item response was 4.24.

POSITIVE INVENTORY ITEMS WITH A MEAN
SCORE BETWEEN 3.0 AND 4.0

Table 29

Item 8. Those Who Are Physically Able Should Take
Part in a Daily Period of Physical Activity

College	SD	D	N	A	SA	Mean
Motlow State		2	1	26	6	4.03
Volunteer State	1	1	1	23	9	4.09
Columbia State		3	5	22	6	3.86

Twenty-one subjects strongly agreed, seventy-one agreed, seven were undecided, six disagreed, and one strongly disagreed. Motlow State had a mean item response of 4.03, Volunteer State had 4.09, and Columbia State had 3.86. The total mean item response was 3.99.

Table 30

Item 19. You Should Seek Help From a Qualified Physical Educator Before You Undertake Strenuous Exercise

College	SD	D	N	A	SA	Mean
Motlow State	1	9	3	18	4	3.43
Volunteer State		8	3	19	5	3.60
Columbia State		5	4	21	6	3.78

Fifteen subjects strongly agreed, fifty-eight agreed, ten were undecided, twenty-two disagreed, and one strongly disagreed. Motlow State recorded a mean item response of 3.43, Volunteer State recorded 3.60, and Columbia State tallied 3.78. The total mean item response was 3.60.

Table 31

Item 20. Regular Exercise Decreases One's Desire to Smoke

College	SD	D	N	A	SA	Mean
Motlow State	1	6	16	11	1	3.40
Volunteer State	1	10	7	16	1	3.17
Columbia State		7	10	18	1	3.36

Three subjects strongly agreed, forty-five agreed, thirty-three were undecided, twenty-three disagreed, and two strongly disagreed. Motlow State had a mean item response of 3.40, with Volunteer State totaling 3.17, and Columbia State registering 3.36. The total mean item response was 3.23.

Table 32

Item 21. A Person in Good Physical Condition is More Able to Endure Nervous Stress

College	SD	D	N	A	SA	Mean
Motlow State		1	5	28	1	3.82
Volunteer State		2	3	20	10	4.09
Columbia State	1	1	3	27	4	3.89

Fifteen subjects strongly agreed, seventy-five agreed, eleven were undecided, four disagreed, and one strongly disagreed. Motlow State recorded a mean item response of 3.82, Volunteer State had 4.09, and Columbia State had 3.89. The total mean item response was 3.93.

Table 33

Item 22. Exercising With a Group Leads to Improved Social Relationships

College	SD	D	N	A	SA	Mean
Motlow State		4	7	24		3.57
Volunteer State		2	3	29	1	3.82
Columbia State		5	3	23	5	3.78

Six subjects strongly agreed, seventy-six agreed, thirteen were undecided, and eleven disagreed. No subjects strongly disagreed. The mean item response at Motlow State was 3.57, while Volunteer State had 3.82, and Columbia State had 3.78. The total mean item response was 3.73.

Table 34

Item 26. Exercise Gets Rid of Harmful Feelings
and Emotions Such as Anger and Hostility

College	SD	D	N	A	SA	Mean
Motlow State		4	6	22	3	3.69
Volunteer State		1	6	21	7	3.97
Columbia State		4	5	22	5	3.78

Fifteen subjects strongly agreed, sixty-five agreed, seventeen were undecided, and nine disagreed. None strongly disagreed. Motlow State had a mean item response of 3.69, Volunteer State compiled 3.97, and Columbia State recorded 3.78. The total mean item response was 3.81.

Table 35

Item 29. Regular Participation in Physical
Activity Makes One Look Better

College	SD	D	N	A	SA	Mean
Motlow State		2	6	27		3.71
Volunteer State			5	23	7	4.06
Columbia State		1	3	27	5	4.0

Twelve subjects strongly agreed, seventy-seven agreed, fourteen were undecided, and three disagreed. No subjects strongly disagreed. Motlow State had a mean item response of 3.71, while Volunteer State had 4.06, and Columbia State received 4.0. The total mean item response was 3.92.

Table 36

Item 32. A Period of Exercise Gives a Feeling of Well-being

College	SD	D	N	A	SA	Mean
Motlow State		4	2	27	2	3.77
Volunteer State			2	30	3	4.03
Columbia State		4	2	25	5	3.86

Ten subjects strongly agreed, eighty-two agreed, six were undecided, and eight disagreed. No subjects strongly disagreed. The mean item response was 3.77 for Motlow State, 4.03 for Volunteer State, and 3.86 for Columbia State. The total mean item response was 3.89.

Table 37

Item 34. Those Who Are Physically Able Should Engage in a Weekly Session of Physical Activity

College	SD	D	N	A	SA	Mean
Motlow State	1	1	1	30	2	3.89
Volunteer State		1	4	24	6	4.0
Columbia State	2	4	2	24	4	3.44

Twelve subjects strongly agreed, seventy-eight agreed, seven were undecided, six disagreed, and three strongly disagreed. Mean item responses for the three colleges were: Motlow State--3.89; Volunteer State--4.0; and Columbia State 3.44. The total mean item response was 3.77.

Table 38

Item 46. A Person in Good Physical Condition is Less Likely to Have Colds

College	SD	D	N	A	SA	Mean
Motlow State		2	4	24	5	3.91
Volunteer State			4	27	4	4.0
Columbia State		4	1	27	4	3.86

Thirteen subjects strongly agreed, seventy-eight agreed, nine were undecided, and six disagreed. None strongly disagreed. Mean item responses for the three colleges were: Motlow State--3.91; Volunteer State--4.0; and Columbia State--3.86. The total mean item response was 3.92.

Table 39

Item 47. Regular Physical Activity Will Help Me Live Longer

College	SD	D	N	A	SA	Mean
Motlow State		2	3	24	6	3.97
Volunteer State		1	4	26	4	3.82
Columbia State		1	1	29	5	4.06

Fifteen subjects strongly agreed, seventy-nine agreed, eight were undecided, and four disagreed. No subjects strongly disagreed. Mean item responses for the three colleges were: Motlow State--3.97; Volunteer State--3.82; and Columbia State--4.06. The total mean item response was 3.95.

Table 40

Item 50. Physical Activity Can Help in
Preventing Major Medical Diseases

College	SD	D	N	A	SA	Mean
Motlow State		5	5	22	3	3.66
Volunteer State		3	8	21	3	3.69
Columbia State	1	9	5	17	4	3.39

Ten subjects strongly agreed, sixty agreed, eighteen were undecided, seventeen disagreed, and one strongly disagreed. Motlow State recorded a mean item response of 3.66, while Volunteer State and Columbia State compiled 3.69 and 3.39, respectively. The total mean item response was 3.58.

NEGATIVE INVENTORY ITEMS WITH A MEAN
SCORE BETWEEN 3.0 AND 4.0

Table 41

Item 4. Exercise is of Little Value in
Maintaining Desirable Body Weight

College	SD	D	N	A	SA	Mean
Motlow State	10	14	5	5	1	3.77
Volunteer State	11	22		2		4.20
Columbia State	10	20	2	3	1	3.97

Thirty-one subjects strongly disagreed, fifty-six disagreed, seven were undecided, ten agreed, and two strongly agreed. Mean item responses for the three colleges were: Motlow State--3.77; Volunteer State--4.20; and Columbia State--3.97. The total mean item response was 3.98.

Table 42

Item 11. Heavy Physical Exercise Makes an
Individual Muscle Bound

College	SD	D	N	A	SA	Mean
Motlow State	1	22	5	6	1	3.57
Volunteer State	4	21	2	7	1	3.57
Columbia State	4	24	2	6		3.72

Nine subjects strongly disagreed, sixty-seven disagreed, nine were undecided, nineteen agreed, and two strongly agreed. Mean item responses for the three colleges

were: Motlow State--3.57; Volunteer State--3.57; and Columbia State--3.72. The total mean item response was 3.62.

Table 43

Item 12. When Recovering from a Cold it is Best if One Does Not Engage in Physical Activity

College	SD	D	N	A	SA	Mean
Motlow State		17	6	12		3.14
Volunteer State		16	6	11	2	3.03
Columbia State	1	19	6	10		3.31

One subject strongly disagreed, fifty-two disagreed, eighteen were uncertain, thirty-three agreed, and two strongly agreed. Mean item responses for the three colleges were: Motlow State--3.14; Volunteer State--3.03; and Columbia State--3.31. The total mean item response was 3.16.

Table 44

Item 16. A Person's Leisure Time Should Be Spent in Rest and Relaxation

College	SD	D	N	A	SA	Mean
Motlow State		21	10	4		3.49
Volunteer State		19	9	6	1	3.31
Columbia State	2	16	5	12	1	3.17

Two subjects strongly disagreed, fifty-six disagreed, twenty-four were undecided, twenty-two agreed,

and two strongly agreed. Motlow State received a mean item response of 3.49, while Volunteer State and Columbia State recorded 3.31 and 3.17, respectively. The total mean item response was 3.32.

Table 45

Item 23. Exercise Becomes Less Necessary
As One Advances in Age

College	SD	D	N	A	SA	Mean
Motlow State	7	22	1	4	1	3.86
Volunteer State	9	23	2		1	4.11
Columbia State	7	22	1	5	1	3.81

Twenty-three subjects strongly disagreed, sixty-seven disagreed, four were undecided, nine agreed, and three strongly agreed. Mean item responses for the three colleges were: Motlow State--3.86; Volunteer State--4.11; and Columbia State--3.81. The total mean item response was 3.92.

Table 46

Item 30. It is Better to Have Never Exercised at All
Than to Have Exercised and Stopped Completely

College	SD	D	N	A	SA	Mean
Motlow State	1	23	6	5		3.57
Volunteer State		21	6	7	1	3.34
Columbia State	3	26	3	3	1	3.75

Four subjects strongly disagreed, seventy disagreed, fifteen were undecided, fifteen agreed, and two strongly agreed. Mean item responses for the three colleges were: Motlow State--3.57; Volunteer State--3.34; and Columbia State--3.75. The total mean item response was 3.56.

Table 47

Item 31. It is Annoying That We Have to
Waste Our Time Exercising

College	SD	D	N	A	SA	Mean
Motlow State	3	27	1	4		3.83
Volunteer State	7	25	2	1		4.06
Columbia State	8	21	4	3		3.28

Eighteen subjects strongly disagreed, seventy-three disagreed, seven were undecided, and eight agreed. No subjects strongly agreed. Mean item responses for the three colleges were: Motlow State--3.83; Volunteer State--4.06; and Columbia State--3.28. The total mean item response was 3.73.

Table 48

Item 37. Regular Exercise Does Not
Relieve Constipation

College	SD	D	N	A	SA	Mean
Motlow State	2	16	14	3		3.49
Volunteer State	2	20	11	2		3.63
Columbia State	2	12	11	9	2	3.08

Six subjects strongly disagreed, forty-eight disagreed, thirty-six were undecided, fourteen agreed, and two strongly agreed. The mean item response at Motlow State was 3.49, with Volunteer State recording 3.63, and Columbia State registering 3.08. The total mean item response was 3.40.

Table 49

Item 39. Girls Should Not Exercise Strenuously
Because They Will Become Muscular

College	SD	D	N	A	SA	Mean
Motlow State	1	28	5	1		3.83
Volunteer State	2	26	1	6		3.69
Columbia State	5	28	2	1		4.03

Eight subjects strongly disagreed, eighty-two disagreed, eight were undecided, and eight agreed. No subjects strongly agreed. Mean item responses for the three colleges were: Motlow State--3.83; Volunteer State--3.69; and Columbia State--4.03. The total mean item response was 3.85.

Table 50

Item 45. Regular Physical Activity Has Little
Effect on One's Personality

College	SD	D	N	A	SA	Mean
Motlow State	2	23	6	4		3.66
Volunteer State	4	25	4	2		3.89
Columbia State	4	21	4	6	1	3.58

Ten subjects strongly disagreed, sixty-nine disagreed, fourteen were undecided, twelve agreed, and one strongly agreed. Mean item responses for the three colleges were: Motlow State--3.66; Volunteer State--3.89; and Columbia State--3.58. The total mean item response was 3.71.

POSITIVE INVENTORY ITEMS WITH A MEAN
SCORE OF 3.0 OR BELOW

Table 51

Item 17. Individual Sports Such As Tennis Are More
Satisfying to Play Than Team Games

College	SD	D	N	A	SA	Mean
Motlow State	2	11	11	10	1	2.91
Volunteer State	1	14	8	11	1	2.91
Columbia State	2	14	3	14	3	3.06

Five subjects strongly agreed, thirty-five agreed, twenty-two were undecided, thirty-nine disagreed, and five strongly disagreed. Mean item responses for the three colleges were: Motlow State--2.91; Volunteer State--2.91; and Columbia State--3.06. The total mean item response was 2.96.

NEGATIVE INVENTORY ITEMS WITH A MEAN
SCORE OF 3.0 OR BELOW

Table 52

Item 35. Muscles, When Not Used, Turn to Fat

College	SD	D	N	A	SA	Mean
Motlow State	2	12	5	15	1	2.97
Volunteer State	1	12	6	12	4	2.83
Columbia State	4	8	5	18	1	2.89

Seven subjects strongly disagreed, thirty-two disagreed, sixteen were undecided, forty-five agreed, and six strongly agreed. Mean item responses for the three colleges were: Motlow State--2.97; Volunteer State--2.83; and Columbia State--2.89. The total mean item response was 2.90.

Table 53

Item 38. If I Exercised I Would Rather
Do it by Myself

College	SD	D	N	A	SA	Mean
Motlow State	1	7	10	17		2.77
Volunteer State	1	13	8	12	1	3.03
Columbia State		14	5	17		2.92

Two subjects strongly disagreed, thirty-four disagreed, twenty-three were undecided, forty-six agreed, and one strongly agreed. Mean item responses for the three

colleges were: Motlow State--2.77; Volunteer State--3.03; and Columbia State--2.92. The total mean item response was 2.91.

Table 54

Item 41. Exercise Increases One's Appetite

College	SD	D	N	A	SA	Mean
Motlow State	2	6	2	22	3	2.49
Volunteer State		3	1	29	2	2.14
Columbia State	1	6	1	28		2.44

Three subjects strongly disagreed, fifteen disagreed, four were undecided, seventy-nine agreed, and five strongly agreed. Mean item responses for the three colleges were: Motlow State--2.49; Volunteer State--2.14; and Columbia State--2.44. The total mean item response was 2.36 which represents the lowest value of the entire inventory.

Table 55

Item 48. Working Up a Good Sweat Helps to Get Rid of Body Poisons

College	SD	D	N	A	SA	Mean
Motlow State		3	4	26	2	2.23
Volunteer State	1	1	6	24	3	2.23
Columbia State		5	8	18	5	2.92

One subject strongly disagreed, nine disagreed, eighteen were undecided, sixty-eight agreed, and ten strongly agreed. Mean item responses for the three colleges were: Motlow State--2.23; Volunteer State--2.23; and Columbia State--2.92. The total mean item response was 2.61.

Summaries of positive item replies, negative item replies, and combined totals of the three colleges are listed in Appendix G, Tables 56, 57, and 58, respectively.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purposes of this study were to assess the attitudes of adult male community college students toward physical activity and to develop implications for community college physical education programs from an analysis of the results.

The study consisted of 106 adult males ranging in age from forty through sixty-five who were registered for the Fall Quarter at Motlow State Community College, Volunteer State Community College, and Columbia State Community College. The subjects were administered the McPherson-Yuhasz Attitude Inventory consisting of fifty statements designed to assess the attitude of the adult male toward physical activity.

Individual inventory scores were recorded and group mean scores were computed along with combined group mean scores. An analysis of variance was computed to determine if there were a significant difference among the three

colleges. Mean scores were also tabulated for each individual inventory item.

The combined group mean inventory score indicated neither a favorable nor unfavorable attitude toward physical activity, although the mean score of 190.5 was much closer to the score needed to be favorable (200) than it was to the score required to be unfavorable (100). Twenty-three of the fifty inventory items received a mean score high enough for favorable agreement, while none was in the non-favorable category.

The results of the analysis of variance revealed no significant difference among the attitudes of the adult males at the three colleges.

CONCLUSIONS

Implications of Inventory Items With Mean Scores of 4.0 or Above

The results of the twenty-three inventory items with a mean score of 4.0 or above appear to warrant five implications regarding exercise for male adults. The results imply that male adults:

1. Generally agree with the benefits and objectives of exercise. The subjects' responses to items 1, 2, 5, 7, 9, 10, 13, 14, 15, 33, 36, 43, and 44

support the objectives of physical education as propounded by physical educators.

1. Physical exercise is beneficial to the human body.
 2. Exercise helps to work off emotional tensions and anxieties.
 5. Regular physical activity makes one feel better.
 7. Exercise does more harm than good.
 9. An individual has all the strength and stamina he needs without participating in an exercise program.
 10. Exercise does little to improve a person's sense of well-being.
 13. Participation in physical activity aids mental relaxation.
 14. Exercise is important in aiding a person to gain and maintain all-round good health.
 15. The heart can not be strengthened by exercise.
 33. Exercise is of no real value in improving one's health.
 36. Exercise is valuable in building up an adequate reserve of strength and stamina for everyday living.
 43. Physical activity in some form is an excellent remedy for the tense, irritable, and anxious person.
 44. Regular physical activity makes a man more alert.
2. Support required physical education for elementary and secondary school children as agreement with item 6 indicates.
6. Physical education should be a required subject for elementary and secondary school children.

3. Believe exercise aids the female as well as the male by their agreement with item 24.
 24. A woman can improve her poise and posture by regular participation in physical activity.
4. Recognize that exercise has certain values for them in their adult years. Responses to items 3, 18, 27, 28, 40, and 42 attest to this fact.
 3. Adults get all the physical activity they need in their daily work.
 18. I think exercise is good for me.
 27. Those who are physically healthy do not need to engage in physical exercises.
 28. Anyone over 25 years of age should avoid exercise because he might strain his heart.
 40. Physical exercise is less important today than it was in my parents' time.
 42. When one reaches full physical growth exercise is no longer necessary.
5. Believe there is a relationship between exercise and job responsibility and work productivity as indicated by their responses to items 25 and 49.
 25. Regular physical activity has a beneficial effect on an individual's ability to carry out his job responsibilities.
 49. When a person improves his physical condition he improves his work productivity.

Implications of Inventory Items
With a Mean Score Between
3.0 and 4.0

The twenty-two items which fell into this category did not have the required mean score for favorable

agreement. A study of the items reveals that the reason, in most cases, for the failure to meet the favorable agreement criteria appears to be due to misconceptions of the subjects. The results tend to support the study by Synovitz which found that the highest percentage of harmful health misconceptions was in the exercise subject matter area.¹

The results imply that male adults:

1. Have misinformation concerning exercise and its effect on the "cold" as their responses to items 12 and 46 indicate.
 12. When recovering from a cold it is best if one does not engage in physical activity.
 46. A person in good physical condition is less likely to have colds.
2. Misunderstand the relationship between exercise and the aiding in prevention of major medical diseases as responses to item 50 indicate.
 50. Physical activity can help in preventing major medical diseases.
3. Fail to understand the value of exercise in controlling body weight as their responses to item 4 reveal.
 4. Exercise is of little value in maintaining desirable body weight.

¹Robert J. Synovitz, "Use of Harmful Health Misconceptions as a Basis for the Selection of Subject-Matter Areas and Course Content in College Health Classes," Research Quarterly, XXXI (December, 1960), 650-657.

4. Indicate a preference of daily exercise over weekly exercise although the responses to neither item 8 (3.99) nor 34 (3.77) were favorable.
 8. Those who are physically able should take part in a daily period of physical activity.
 34. Those who are physically able should engage in a weekly session of physical activity.
5. Are not certain if regular physical activity aids longevity of life as their responses to item 47 indicate.
 47. Regular physical activity will help me live longer.
6. Fail to understand the potential contribution of qualified physical educators as replies to item 19 indicate.
 19. You should seek help from a qualified physical educator before you undertake strenuous exercise.
7. Have misconceptions concerning exercise and smoking as responses to item 20 imply.
 20. Regular exercise decreases one's desire to smoke.
8. Indicate by their replies to items 11 and 39 that they misunderstand the effect of exercise upon muscles.
 11. Heavy physical exercise makes an individual muscle bound.
 39. Girls should not exercise strenuously because they will become muscular.

9. Are not knowledgeable concerning the relationship between exercise and body functions as their responses to item 37 imply.
 37. Regular exercise does not relieve constipation.
10. Are not knowledgeable in all aspects of the values and objectives of exercise as the results of items 16, 21, 22, 23, 26, 29, 30, 31, 32, and 45 imply.
 16. A person's leisure time should be spent in rest and relaxation.
 21. A person in good physical condition is more able to endure nervous stress.
 22. Exercising with a group leads to improved social relationships.
 23. Exercise becomes less necessary as one advances in age.
 26. Exercise gets rid of harmful feelings and emotions such as anger and hostility.
 29. Regular participation in physical activity makes one look better.
 30. It is better to have never exercised at all than to have exercised and stopped completely.
 31. It is annoying that we have to waste our time exercising.
 32. A period of exercise gives a feeling of well-being.
 45. Regular physical activity has little effect on one's personality.

Implications of Inventory Items
With a Mean Score of 3.0 or
Below

No items received the score needed for classification as unfavorable. Three of the five items with a mean score of 3.0 or below deal with misconceptions regarding exercise while two are concerned with individual versus group or team participation. The results imply that male adults:

1. Show in their responses to item 35 a considerable lack of knowledge concerning the effect of exercise upon muscles.

35. Muscles, when not used, turn to fat.

2. Do not understand the effect of exercise upon appetite as their replies to item 41 indicate.

41. Exercise increases one's appetite.

3. Have misinformation regarding perspiration and body poisons as their responses to item 48 signify.

48. Working up a good sweat helps to get rid of body poisons.

4. Intimate by their failure to agree with item 17 a preference of team games over individual sports.

17. Individual sports such as tennis are more satisfying to play than team games.

5. Indicate by their replies of 2.91 to item 38 an uncertainty regarding exercising alone versus

exercising with companionship but lean toward exercising alone.

38. If I exercised I would rather do it by myself.

RECOMMENDATIONS

Based upon the results of this study and in the interest of improving physical education programs for the adult, particularly the adult male, the following recommendations are made:

1. Community colleges should consider offering programs (physical education and health) for the adult male which orient the participant to the effects of physical activity and exercise upon the body.

2. Community colleges should emphasize programs that include opportunities for team games and the inherent social values.

3. Community colleges should also offer individual sports geared for the adult male.

4. Community colleges should offer programs which include opportunities for exercise on an individually prescribed basis.

5. Community colleges should offer programs which provide opportunities for exercise more often than once a week.

6. Community colleges should establish rapport with industry regarding the effects of exercise upon job responsibility and productivity.

In order to enhance the implementation of the foregoing recommendations, and in order to aid the development of a balanced adult physical education program, the following suggestions are made:

1. Community colleges should utilize a follow-up survey of the adult male to determine specific activity interests.

2. Community colleges should appoint a member of their staff to act as liaison between industry and the college.

3. Community colleges should examine their present physical education programs in terms of courses which might satisfy the recommendations of this study.

4. Community colleges should initiate a similar survey to determine the attitude of the adult female toward physical activity with a follow-up survey to determine specific activity interests.

APPENDICES

APPENDIX A

THE McPHERSON-YUHASZ INVENTORY AND KEY

INVENTORY FOR ASSESSING THE ATTITUDE OF ADULT
MEN TOWARD EXERCISE AND PHYSICAL ACTIVITY

Directions:

In order to assess your attitudes toward exercise and physical activity, we would like you to express your true feelings, beliefs and actions with respect to the following statements.

There are no right or wrong answers, it is strictly a matter of personal beliefs and attitudes toward exercise. Therefore, please express how you feel, not how you think you should feel.

You have been provided with a separate answer sheet for recording your reaction to each statement. (a) Read each statement carefully, (b) go to the answer sheet, and (c) opposite the number of the statement place an "x" in the square which is under the word (or words) which best expresses your feeling about the statement. After reading a statement you will know at once, in most cases, whether you agree or disagree with the statement. If you agree, then decide whether to place an "x" under "agree" or "strongly agree." If you disagree, then decide whether to place the "x" under "disagree" or "strongly disagree." In case you are undecided (or neutral) concerning your feelings about the statement, then place an "x" under "undecided." Try to avoid placing an "x" under "undecided" in very many instances.

Example: All children should exercise to help them reach full growth.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. () () () () ()				

Source: B. D. McPherson, "Psychological Effects of an Exercise Program for Post-Cardiac and Normal Adult Men" (unpublished Master of Arts thesis, University of Western Ontario, 1965), pp. 183-185.

ATTITUDE TOWARD EXERCISE AND PHYSICAL ACTIVITY
SCORING KEY

1.	(1)	(2)	(3)	(4)	(5)	26.	(1)	(2)	(3)	(4)	(5)
2.	(1)	(2)	(3)	(4)	(5)	27.	(5)	(4)	(3)	(2)	(1)
3.	(5)	(4)	(3)	(2)	(1)	28.	(5)	(4)	(3)	(2)	(1)
4.	(5)	(4)	(3)	(2)	(1)	29.	(1)	(2)	(3)	(4)	(5)
5.	(1)	(2)	(3)	(4)	(5)	30.	(5)	(4)	(3)	(2)	(1)
6.	(1)	(2)	(3)	(4)	(5)	31.	(5)	(4)	(3)	(2)	(1)
7.	(5)	(4)	(3)	(2)	(1)	32.	(1)	(2)	(3)	(4)	(5)
8.	(1)	(2)	(3)	(4)	(5)	33.	(5)	(4)	(3)	(2)	(1)
9.	(5)	(4)	(3)	(2)	(1)	34.	(1)	(2)	(3)	(4)	(5)
10.	(5)	(4)	(3)	(2)	(1)	35.	(5)	(4)	(3)	(2)	(1)
11.	(5)	(4)	(3)	(2)	(1)	36.	(1)	(2)	(3)	(4)	(5)
12.	(5)	(4)	(3)	(2)	(1)	37.	(5)	(4)	(3)	(2)	(1)
13.	(1)	(2)	(3)	(4)	(5)	38.	(5)	(4)	(3)	(2)	(1)
14.	(1)	(2)	(3)	(4)	(5)	39.	(5)	(4)	(3)	(2)	(1)
15.	(5)	(4)	(3)	(2)	(1)	40.	(5)	(4)	(3)	(2)	(1)
16.	(5)	(4)	(3)	(2)	(1)	41.	(5)	(4)	(3)	(2)	(1)
17.	(1)	(2)	(3)	(4)	(5)	42.	(5)	(4)	(3)	(2)	(1)
18.	(1)	(2)	(3)	(4)	(5)	43.	(1)	(2)	(3)	(4)	(5)
19.	(1)	(2)	(3)	(4)	(5)	44.	(1)	(2)	(3)	(4)	(5)
20.	(1)	(2)	(3)	(4)	(5)	45.	(5)	(4)	(3)	(2)	(1)
21.	(1)	(2)	(3)	(4)	(5)	46.	(1)	(2)	(3)	(4)	(5)
22.	(1)	(2)	(3)	(4)	(5)	47.	(1)	(2)	(3)	(4)	(5)
23.	(5)	(4)	(3)	(2)	(1)	48.	(5)	(4)	(3)	(2)	(1)
24.	(1)	(2)	(3)	(4)	(5)	49.	(1)	(2)	(3)	(4)	(5)
25.	(1)	(2)	(3)	(4)	(5)	50.	(1)	(2)	(3)	(4)	(5)

1. Physical exercise is beneficial to the human body.
2. Exercise helps to work off emotional tensions and anxieties.
3. Adults get all the physical activity they need in their daily work.
4. Exercise is of little value in maintaining desirable body weight.
5. Regular physical activity makes one feel better.
6. Physical education should be a required subject for elementary and secondary school children.
7. Exercise does more harm than good.
8. Those who are physically able should take part in a daily period of physical activity.
9. An individual has all the strength and stamina he needs without participating in an exercise program.
10. Exercise does little to improve a person's sense of well-being.
11. Heavy physical exercise makes an individual muscle bound.
12. When recovering from a cold it is best if one does not engage in physical activity.
13. Participation in physical activity aids mental relaxation.
14. Exercise is important in aiding a person to gain and maintain all-round good health.
15. The heart can not be strengthened by exercise.
16. A person's leisure time should be spent in rest and relaxation.
17. Individual sports such as tennis are more satisfying to play than team games.

18. I think exercise is good for me.
19. You should seek help from a qualified physical educator before you undertake strenuous exercise.
20. Regular exercise decreases one's desire to smoke.
21. A person in good physical condition is more able to endure nervous stress.
22. Exercising with a group leads to improved social relationships.
23. Exercise becomes less necessary as one advances in age.
24. A woman can improve her poise and posture by regular participation in physical activity.
25. Regular physical activity has a beneficial effect on an individual's ability to carry out his job responsibilities.
26. Exercise gets rid of harmful feelings and emotions such as anger and hostility.
27. Those who are physically healthy do not need to engage in physical exercises.
28. Anyone over 25 years of age should avoid exercise because he might strain his heart.
29. Regular participation in physical activity makes one look better.
30. It is better to have never exercised at all than to have exercised and stopped completely.
31. It is annoying that we have to waste our time exercising.
32. A period of exercise gives a feeling of well-being.
33. Exercise is of no real value in improving one's health.
34. Those who are physically able should engage in a weekly session of physical activity.

35. Muscles, when not used, turn to fat.
36. Exercise is valuable in building up an adequate reserve of strength and stamina for everyday living.
37. Regular exercise does not relieve constipation.
38. If I exercised I would rather do it by myself.
39. Girls should not exercise strenuously because they will become muscular.
40. Physical exercise is less important today than it was in my parent's time.
41. Exercise increases one's appetite.
42. When one reaches full physical growth exercise is no longer necessary.
43. Physical activity in some form is an excellent remedy for the tense, irritable and anxious person.
44. Regular physical activity makes a man more alert.
45. Regular physical activity has little effect on one's personality.
46. A person in good physical condition is less likely to have colds.
47. Regular physical activity will help me live longer.
48. Working up a good sweat helps to get rid of body poisons.
49. When a person improves his physical condition he improves his work productivity.
50. Physical activity can help in preventing major medical diseases.

APPENDIX B

ANSWER SHEET

ATTITUDE TOWARD EXERCISE AND PHYSICAL ACTIVITY
ANSWER SHEET

NAME: _____ CLASSIFICATION (Degree or Non-Degree) _____
 AGE: _____ IF DEGREE STUDENT, WHAT KIND OF DEGREE _____
 MARITAL STATUS: _____ AREA OF INTEREST _____
 OCCUPATION _____

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	()	()	()	()	()	26.	()	()	()	()	()
2.	()	()	()	()	()	27.	()	()	()	()	()
3.	()	()	()	()	()	28.	()	()	()	()	()
4.	()	()	()	()	()	29.	()	()	()	()	()
5.	()	()	()	()	()	30.	()	()	()	()	()
6.	()	()	()	()	()	31.	()	()	()	()	()
7.	()	()	()	()	()	32.	()	()	()	()	()
8.	()	()	()	()	()	33.	()	()	()	()	()
9.	()	()	()	()	()	34.	()	()	()	()	()
10.	()	()	()	()	()	35.	()	()	()	()	()
11.	()	()	()	()	()	36.	()	()	()	()	()
12.	()	()	()	()	()	37.	()	()	()	()	()
13.	()	()	()	()	()	38.	()	()	()	()	()
14.	()	()	()	()	()	39.	()	()	()	()	()
15.	()	()	()	()	()	40.	()	()	()	()	()
16.	()	()	()	()	()	41.	()	()	()	()	()
17.	()	()	()	()	()	42.	()	()	()	()	()
18.	()	()	()	()	()	43.	()	()	()	()	()
19.	()	()	()	()	()	44.	()	()	()	()	()
20.	()	()	()	()	()	45.	()	()	()	()	()
21.	()	()	()	()	()	46.	()	()	()	()	()
22.	()	()	()	()	()	47.	()	()	()	()	()
23.	()	()	()	()	()	48.	()	()	()	()	()
24.	()	()	()	()	()	49.	()	()	()	()	()
25.	()	()	()	()	()	50.	()	()	()	()	()

APPENDIX C

CORRESPONDENCE WITH DR. B. D. McPHERSON

Box 6346
MTSU
Murfreesboro, TN 37130

June 19, 1974

Dr. B. D. McPherson
University of Windsor
Ontario, Canada
N9B 3P4

Dear Dr. McPherson:

I have in hand the article from The Research Quarterly, Vol. 39, No. 1, in which the instrument for assessing the attitudes of adult men was described. There is the possibility that my dissertation topic at Middle Tennessee State University will involve the assessment of adult male attitudes toward exercise and physical activity at selected Tennessee community colleges.

I am interested in obtaining a copy of the attitude inventory developed by yourself and Dr. Yuhasz. Also, I request permission to use the instrument in my study.

Please advise me of the charges for the distribution of the instrument and I will forward the fee to you.

Your assistance will be greatly appreciated as I am now in the process of developing my proposal.

Sincerely,

Marsh Goodson



Waterloo, Ontario, Canada
N2L 3G1

Faculty of Human Kinetics and Leisure Studies
Department of Kinesiology
519-885-1211

June 28, 1974

Mr. M. Goodson
Box 6346
Middle Tennessee State University
MURFREESBORO, Tennessee
37130

Dear Mr. Goodson:

I am happy to send you a copy of the Attitude Scale along with a Scoring Key. There is no charge for this but I would appreciate receiving a copy of the results when you have completed the study.

Best wishes for successful completion of your dissertation.

Sincerely yours,

A handwritten signature in cursive script that reads "B. D. McPherson".

B. D. McPherson, Ph.D.
Associate Professor

BDM/dt
Encl.

Box 6346
MTSU
Murfreesboro, TN 37130

Dr. B. D. McPherson
University of Waterloo
Waterloo, Ontario, Canada
N 2L 3G1

Dear Dr. McPherson:

In regard to my study utilizing your Attitude Scale, I need to know the names and addresses of any persons who have written to you requesting permission to use the Attitude Scale. This information will be helpful in the completion of my study.

Thanks for your assistance.

Sincerely yours,

Marsh Goodson

I do not have this information. You should search Research Quarterly, U. of Oregon Microcard Bulletin for theses & dissertations which may have used it.

/s/ B. McPherson

APPENDIX D

CORRESPONDENCE WITH MOTLOW STATE, COLUMBIA
STATE, AND VOLUNTEER STATE

Box 6346
Middle Tennessee State University
Murfreesboro, Tennessee 37130
August 14, 1974

Dr. Nolen E. Bradley
Dean of Instruction
Volunteer State Community College
Gallatin, Tennessee

Dear Dr. Bradley:

As I indicated in our recent telephone conversation, I would like to come to your campus and administer a short questionnaire to the adult males between the ages of forty and sixty-five who register for the fall quarter. The purpose is to assess the attitudes of adult males toward physical activity.

A computer print-out will be needed to aid in the location of the subjects. Once the subjects are located, the completion of the inventory will require only about fifteen minutes. It consists of fifty statements in which the subject simply marks a check as to his agreement or disagreement.

I request permission to visit your campus and distribute the inventory described above. Your assistance will be greatly appreciated.

Sincerely,

Marsh Goodson

kg

Box 6346
Middle Tennessee State University
Murfreesboro, Tennessee 37130
August 14, 1974

Dr. Harold Pryor
President
Columbia State Community College
Columbia, Tennessee 38401

Dear Dr. Pryor:

In a recent telephone conversation with Dr. Sands I requested permission to administer a short questionnaire to the adult males between the ages of forty and sixty-five who register for the fall quarter at Columbia State. The questionnaire is an attitude inventory to be used to gather information for my doctoral dissertation at Middle Tennessee State University. My purpose is to assess the attitudes of adult males toward physical activity.

Dr. Sands stated his willingness to cooperate but requested that I submit an official request through your office.

I would need a computer print-out to aid in the location of the subjects. Once the subjects are located, the completion of the inventory will require only about fifteen minutes. It consists of fifty statements in which the subject simply marks a check as to his agreement or disagreement. I would like to come to your campus early in the fall quarter and personally distribute the questionnaires.

I request permission to follow the plan which I have described. Your assistance will be greatly appreciated.

Sincerely,

Marsh Goodson

kg

cc: Dr. Paul Sands

Box 6346
Middle Tennessee State University
Murfreesboro, Tennessee 37130
August 14, 1974

Dr. Sam Ingram
President
Motlow State Community College
Tullahoma, Tennessee 37388

Dear Dr. Ingram:

In a recent telephone conversation with Dr. England I requested permission to administer a short questionnaire to the adult males between the ages of forty and sixty-five who register for the fall quarter at Motlow State. The questionnaire is an attitude inventory to be used to gather information for my doctoral dissertation at Middle Tennessee State University. My purpose is to assess the attitudes of adult males toward physical activity.

Dr. England stated his willingness to cooperate but requested that I submit an official request through your office.

I would need a computer print-out to aid in the location of the subjects. Once the subjects are located, the completion of the inventory will require only about fifteen minutes. It consists of fifty statements in which the subject simply marks a check as to his agreement or disagreement. I would like to come to your campus early in the fall quarter and personally distribute the questionnaire.

I request permission to follow the plan which I have described. Your assistance will be greatly appreciated.

Sincerely,

Marsh Goodson

kg

cc: Dr. Don England

COLUMBIA STATE COMMUNITY COLLEGE
COLUMBIA, TENNESSEE 38401



Office of the President

August 16, 1974

Mr. Marsh Goodson
Box 6346
Middle Tennessee State University
Murfreesboro, Tennessee 37130

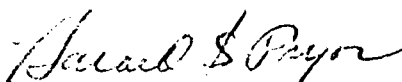
Dear Marsh:

This acknowledges receipt of your letter dated August 14 relative to the administration of a questionnaire at Columbia State Community College.

We will be happy to assist you in any way that we can in your project. I suggest Dr. Sands as your contact person here at Columbia State and he will make arrangements for you to get whatever help is needed.

Best wishes.

Yours sincerely,


Harold S. Pryor
President

HSP:fmw

cc: Dr. Sands

MOTLOW STATE COMMUNITY COLLEGE
TULLAHOMA, TENNESSEE 37388

September 4, 1974



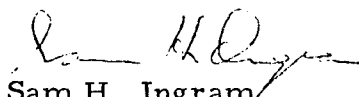
OFFICE OF PRESIDENT

Mr. Marsh Goodson
Box 6346
Middle Tennessee State University
Murfreesboro, Tennessee 37130

Dear Marsh:

We will be glad to make available the names of subjects needed in your study from Motlow State Community College and to cooperate in whatever way possible. I am not certain that there will be a computer print-out giving you the information you need, but the information would be available if you spend the time necessary to obtain it. At any rate, we will be happy to work with you.

Sincerely yours,


Sam H. Ingram
President

SHI/kk

cc: Dr. Don England
Dr. Joe Johnson



Volunteer State Community College

87

Nashville Pike

Gallatin, Tennessee 37066

Phone (615) 452-8600

September 6, 1974

Mr. Marsh Goodson
P. O. Box 6346
Middle Tennessee State University
Murfreesboro, Tennessee 37130

Dear Mr. Goodson:

Dr. Bradley has transmitted your correspondence with him to me for action. I have checked with our Registrar to see if it is possible to identify those male students over the age of forty for your study. We have no publication through which we could lift out this data. On or around October 10, we have available a print-out of all our students which indicates, among other things, their birthday. We will be glad to make this print-out available to you so that you may identify those subjects. Another print-out listing the classes in which these people are enrolled, and other pertinent information, will also be made available to you.

Please contact me and let me know the date you expect to be on campus. If I can be of further assistance, please do not hesitate to let me know.

Sincerely yours,

James R. Woods
Administrative Assistant for Planning,
Federal Programs, and Institutional
Research

JRW/bjg

APPENDIX E

LETTERS OF ENDORSEMENT FROM MOTLOW STATE,
COLUMBIA STATE, AND VOLUNTEER STATE

MOTLOW STATE COMMUNITY COLLEGE

TULLAHOMA, TENNESSEE 37388

89

October 9, 1974



DEAN OF INSTRUCTION

MEMORANDUM:

TO: Faculty of Motlow State Community College

FROM: Dr. Don C. England, ^{WJL}Dean

SUBJECT: Introduction of Marsh Goodson, Doctoral Candidate, MTSU

Some weeks ago, officials of Motlow State Community College promised Mr. Goodson cooperation in gathering data for his doctoral research at Middle Tennessee State University. This is with the understanding that it does not interfere with ongoing classwork or scheduled activities which cannot be altered with a minimum of disruption. We do actively solicit your support and cooperation in aiding Mr. Goodson to contact male subjects which comprise the principle part of his study.

Any consideration which you show Mr. Goodson in this worthwhile undertaking will be greatly appreciated by me.

COLUMBIA STATE COMMUNITY COLLEGE

Columbia, Tennessee 38401



Office of the Dean of Instruction

Dear

Marsh Goodson, Athletic Director and Head of the Physical Education Department at Jackson State Community College, is completing requirements for the Doctor of Arts program at Middle Tennessee State University. One of his major requirements is to write a dissertation.

Mr. Goodson needs your assistance in collecting data for his dissertation. He will collect opinions on physical education needs from students between the ages of forty and sixty-five who are enrolled in one or more classes at Columbia State.

It will only take about twenty minutes to complete the questionnaire and your help will be very much appreciated.

Mr. Goodson has been a friend of mine for eight years and is worthy of all the help you can give him.

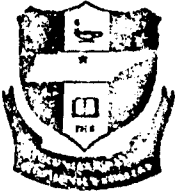
Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Paul Sands".

Paul Sands
Dean of Instruction

PS:fmw



Volunteer State Community College

91

Nashville Pike

Gallatin, Tennessee 37066

Phone (615) 452-8600

Dear

Marsh Goodson, Athletic Director and Head of the Physical Education Department at Jackson State Community College, is completing requirements for the Doctor of Arts program at Middle Tennessee State University. One of his major requirements is to write a dissertation.

Mr. Goodson needs your assistance in collecting data for his dissertation. He will collect opinions on physical education needs from male students between the ages of forty and sixty-five who are enrolled in one or more classes at Columbia State.

It will only take about twenty minutes to complete the questionnaire and your help will be very much appreciated.

Thank you.

Sincerely,

James R. Woods
Administrative Assistant for Planning,
Federal Programs, and Institutional
Research

JRW/bjg

APPENDIX F

INITIAL AND FOLLOW-UP LETTERS TO SUBJECTS

Box 6346
MTSU
Murfreesboro, TN 37130

October, 1974

Dear Sir:

Recently I was granted permission by the college which you attend to administer an attitudinal inventory regarding physical activity to adult males registered at the college.

During my visit to the campus I was unable to contact you. Therefore, I request that you react to the enclosed inventory and place your answers on the answer sheet. No more than twenty minutes should be needed to complete the inventory.

Upon completion please place the answer sheet along with the inventory in the self-addressed, stamped envelope and return to me. Your cooperation will enable the successful completion of the study and will be greatly appreciated.

I am thanking you in advance for your assistance.

Sincerely yours,

MARSH GOODSON

October 28, 1974

Dear Sir:

Several days ago you were mailed an inventory for assessing the attitudes of the adult male toward exercise and physical activity. Possibly you have not had the time to complete the inventory or it could have been overlooked. At any rate, if you could find the time to complete the inventory and return to me it will be greatly appreciated.

Thank you for your time and assistance.

Sincerely,

Marsh Goodson
MTSU Box 6346
Murfreesboro, TN 37130

APPENDIX G

ITEM RESPONSE SUMMARY TABLES

Table 56
 Summary of Item Response by College
 (Positive Items)

Item	Motlow State					Volunteer State					Columbia State				
	SD	D	N	A	SA	SD	D	N	A	SA	SD	D	N	A	SA
1				12	23				9	26				16	20
2			1	24	10		1	1	15	18		1	1	20	14
5				20	15				19	16		1	1	19	15
6	2	3	1	18	11	2	1	1	17	14		3	1	19	13
8		2	1	26	6	1	1	1	23	9		3	5	22	6
13		1	2	29	3			1	25	9	1		1	28	6
14		1		28	6	1			27	7		1		23	12
17	2	11	11	10	1	1	14	8	11	1	2	14	3	14	3
18				26	9		1		20	14	1			21	14
19	1	9	3	18	4		8	3	19	5		5	4	21	6
20	1	6	16	11	1	1	10	7	16	1		7	10	18	1
21		1	5	28	1		2	3	20	10	1	1	3	27	4
22		4	7	24			2	3	29	1		5	3	23	5
24	1		1	29	4		3	1	28	3		1	1	27	7
25		1	7	24	3			2	28	5		1	3	23	9
26		4	6	22	3		1	6	21	7		4	5	22	5
29		2	6	27				5	23	7		1	3	27	5
32		4	2	27	2			2	30	3		4	2	25	5
34	1	1	1	30	2		1	4	24	6	2	4	2	24	4
36	1	2		29	3		2	1	27	5			2	24	10
43	1	2		27	5			1	27	7		1	1	27	7
44		2	1	30	2			1	28	6		1	3	27	5
46		2	4	24	5			4	27	4		4	1	27	4
47		2	3	24	6		1	4	26	4		1	1	29	5
49		2	1	28	4			1	27	7		1	1	27	7
50		5	5	22	3		3	8	21	3	1	9	5	17	4

Table 57

Summary of Item Response by College
(Negative Items)

Item	Motlow State					Volunteer State					Columbia State				
	SD	D	N	A	SA	SD	D	N	A	SA	SD	D	N	A	SA
3	11	22	2			5	28	2			11	23	1	1	
4	10	14	5	5	1	11	22		2		10	20	2	3	1
7	19	14	1		1	21	14				15	16	3	2	
9	5	27	3			8	24	3			13	20	2	1	
10	6	28	1			10	22	2	1		10	22	4		
11	1	22	5	6	1	4	21	2	7	1	4	24	2	6	
12		17	6	12			16	6	11	2	1	19	6	10	
15	8	24	1	1	1	12	22	1			10	20	2	2	2
16		21	10	4			19	9	6	1	2	16	5	12	1
23	7	22	1	4	1	9	23	2		1	7	22	1	5	1
27	6	28	1			8	26	1			9	24	1	2	
28	14	18		2	1	14	20			1	13	18	3	1	1
30	1	23	6	5			21	6	7	1	3	26	3	3	1
31	3	27	1	4		7	25	2	1		8	21	4	3	
33	10	20		5		11	22	1	1		14	20		2	
35	2	12	5	15	1	1	12	6	12	4	4	8	5	18	1
37	2	16	14	3		2	20	11	2		2	12	11	9	2
38	1	7	10	17		1	13	8	12	1		14	5	17	
39	1	28	5	1		2	26	1	6		5	28	2	1	
40	10	22		3		7	25		2	1	14	15	4	3	
41	2	6	2	22	3		3	1	29	2	1	6	1	28	
42	7	27			1	9	26				14	21		1	
45	2	23	6	4		4	25	4	2		4	21	4	6	1
48		3	4	26	2	1	1	6	24	3		5	8	18	5

Table 58
Summary of Total Item Response

Positive Items					Negative Items						
	SD	D	N	A	SA		SD	D	N	A	SA
1				37	69	3	27	73	5	1	
2		3	2	59	42	4	31	56	7	10	2
5		1	1	58	46	7	55	44	4	2	1
6	4	7	3	54	38	9	26	71	8	1	
8	1	6	7	71	21	10	26	72	7	1	
13	1	1	4	82	18	11	9	65	9	19	2
14	1	2		78	25	12	1	52	18	33	2
17	5	39	22	35	5	15	30	66	4	3	3
18	1	1		67	37	16	2	56	24	22	2
19	1	22	10	58	15	23	23	67	4	9	3
20	2	23	33	45	3	27	23	78	3	2	
21	1	4	11	75	15	28	41	56	3	3	3
22		11	13	76	6	30	4	70	15	15	2
24	1	4	3	84	14	31	18	73	7	8	
25		2	12	75	17	33	35	62	1	8	
26		9	17	65	15	35	7	32	16	45	6
29		3	14	77	12	37	6	48	36	14	2
32		8	6	82	10	38	2	34	23	46	1
34	3	6	7	78	12	39	8	82	8	8	
36	1	4	3	80	18	40	31	62	4	8	1
43	1	3	2	81	19	41	3	15	4	79	5
44		3	5	85	13	42	30	74		1	1
46		6	9	78	13	45	10	69	14	12	1
47		4	8	79	15	48	1	9	18	68	10
49		3	3	82	18						
50	1	17	18	60	10						

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