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A SURVEY OF PARTICIPATION IN ATHLETICS
BY MEXICAN-AMERICAN BOYS

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the Faculty of the Department of Physical Education
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by
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CHAPTER I

THE PROBLEM, DEFINITIONS OF TERMS USED, LIMITATIONS, AND PROCEDURE

The past seven years has found very few Mexican-American boys participating on the athletic teams at Horace Mann Junior High School. In this time only three boys have been on the first team in basketball, and at no time has there been one boy outstanding in track. Although most of the boys seemed to have the ability to become good athletes, they have failed to live up to the potential expected of them from the scores they received on the basketball and track skills tests.

Many books and articles have been written concerning the life, body structure, characteristics, customs, and habits of numerous minority groups in the United States; however, there is very little information available pertaining to the Mexican-American.

This study was made to help others to understand and appreciate the customs and characteristics of the Mexican-American in the United States; the problems faced by this particular minority group, and why their beliefs, customs, and characteristics are as they are.

I. THE PROBLEM

Purpose. The purpose of this investigation was to discover, by the use of pre-determined tests given to parallel groups of Mexican-American and Caucasian boys at Horace Mann Junior High School, Wichita, Kansas, the differences, if any, in leg strength, agility, and reflex action.

Another purpose of this study was to determine if home environment, diet deficiencies, and body structure, were related to lack of participation in organized athletics at the junior high school level by Mexican-American boys.

The hypothesis was that the Mexican-American boy in grades seven, eight, and nine is superior to the Caucasian boy at the same level in leg strength, agility, and reflex action, but because of other factors, is not able to compete successfully against Caucasian boys.

A consideration of the following questions should prove helpful in drawing conclusions made to the points raised in the purposes of the study.

1. What is the philosophy of the Mexican-American home life?
2. How might the home life affect the attitude of the Mexican-American boy?
3. What factors in the physical development of the Mexican-American boy might contribute to his attitudes and beliefs?
4. In what ways might the program of physical education help Mexican-American boys achieve to their fullest potential?

Importance of the study. The investigator believes that even though the Mexican-American boy may be superior to the Caucasian boy in the motor skills tests given at certain grade levels, there may be important factors other than motor skills abilities that explain why the Mexican-American boy does not participate to a great extent in competitive athletics at Horace Mann Junior High School. There is very little pertinent information available from previous studies in this area; therefore, this study will be valuable to physical education instructors in the evaluation of their personnel.

A consideration of the democratic atmosphere that prevails in the home; of freedom of speech, freedom from responsibility, no strict family discipline, complete and sincere family ties, such as concern for parents in need to the extent that the children will work and provide all the necessities for parents who are unable to work. These democratic ideas and customs are traits that have been instilled in the Mexican-American boy from childhood. Upon these traits, with proper care by teachers, a sound, intelligent, responsible citizen can be molded.

Possible values of the study. This study will be important to physical educators in helping them to understand the circumstances which lead to the attitudes and actions of Mexican-American boys in our school environment.

This study will also be helpful in understanding and assisting Mexican-American boys who participate in competitive athletics.

II. LIMITATIONS

This study was made to compare and evaluate performances between Mexican-American and Caucasian boys for the purpose of drawing conclusions as to comparative ability.

The subjects used in the motor skills tests were selected at random from the boys' physical education classes at Horace Mann Junior High School, Wichita, Kansas.

There were two groups for each grade; each group consisted of twenty Mexican-American and twenty Caucasian subjects. One hundred twenty subjects were used in the study.

III. PROCEDURE

Selecting the tests for the study. A battery of three tests was utilized in this study. These tests were used because of their high validity.¹ The test measuring agility was the side step. Reflex action was measured by the wall bounce. Leg strength measurements were taken from the vertical jump test.

¹Leonard A. Larson and Rachel Dunaven Yocum, Measurement and Evaluation in Physical, Health, and Recreation Education (St. Louis: The C. V. Mosby Company, 1951), p. 212.

Methods of collecting data. Students enrolled in physical education classes at Horace Mann Junior High School, Wichita, Kansas, were used as subjects for this study.

The equipment used to administer the tests consisted of a vertical jump board, smooth wall surface, stop watch, and a basketball.

The tests for agility, reflex action, and leg strength were given once; however, the students were informed in advance of the importance of the tests and were encouraged to perform to their maximum ability. Another incentive was the realization that from the performances on these tests, and other factors such as spirit and endurance would determine the boys picked to try out for the varsity teams.

Empirical study was done by personal interviews, observation of Mexican-American social gatherings, fraternizing with Mexican-American citizens, and from discussions with people who have been associated with Mexican-Americans.

Reading of related literature by authors interested in the habits, customs, and beliefs of the Mexican-American were also part of the procedure in accumulating the material for this study.

Statistical procedure. The mean scores and standard deviations of each test were found for each group of subjects. Each Mexican-American group was then compared

with the Caucasian group of the same grade level on each test given. The mean difference and the standard error of mean difference was found for each grade group on each test. The t test was administered to determine whether or not the differences obtained were of statistical significance.

IV. DEFINITIONS OF TERMS USED

Mexican-American. A person of some Spanish but mostly Indian descent, both native and naturalized, whose ancestors came from Mexico.

Caucasian. Of or pertaining to the division of mankind comprising the chief races of Europe, North Africa, and Southwestern Asia.²

Competitive athletics. Competition between interscholastic teams.

Body structure. Height, weight, and muscle structure.

Home environment. The sum total of the conditions and influences which affect the life and development of an individual in the family surroundings.

²"Races of Men," Collier's Encyclopedia, XVI, 531-533.

Nutritional diet. Of or pertaining to the habitual course of eating food with no reference to a particular state of health.

Junior high school. Junior high school boys are those boys enrolled in the seventh, eighth, and ninth grades.

Motor skills. Motor skills are those skills or abilities which are basic to performance in various physical recreation activities.

CHAPTER II

REVIEW OF RELATED LITERATURE

The home environment of the Mexican-American boy is quite different from that of the Caucasian boy, and the writer will attempt to disclose some information which will be valuable to all physical educators.

I. LITERATURE ON HOME ENVIRONMENT OF THE MEXICAN-AMERICAN BOY

The life of the Mexican-American boy is one of strict adherence to discipline in the home until approximately age twelve. At this time in his life there seems to be a sudden change in the attitude of the parents regarding rules to be kept which pertain to such things as homework, permission asked before going out, proper attitude toward others, desire to excel in sports, and a desire in the classroom. The parents suddenly have turned the boys loose to go and come as they desire. This freedom allows the boys to go wherever there might be a basketball court or room to play football, and hours are spent playing with other boys. This situation arises from the fact that most Mexican-American families come from the lower economic level. The money in the family must be budgeted very carefully in order for all the family to have the necessities of life. Generally, the

family is large and here again the boys must make sacrifices. To escape from this situation they leave the home to play ball with the neighborhood crowd, but a few will get into trouble with the law. Money is no problem because there is very little in the home. For this reason they pass the day playing ball in the neighborhood, satisfied but perhaps not very contented. This situation cannot be considered ideal for growing boys, but presently this is the best there is.

Griffith, in her study of the Mexican-American, says that many Mexican-American parents are realizing the importance of decent living conditions for their children and are prepared to do something about it.³

Stowell, in his study of the Mexican-American, says that because of the Caucasian idea that every Mexican-American is a brigand or bandit, and has a gun or knife on his person at all times, has created a bad picture, and one that has been hard to erase. He says that actually the opposite is the case. The Mexican-American is kind, polite, friendly, and thoughtful toward others.⁴

³Beatrice Griffith, American Me (Boston: Houghton Mifflin Company, 1948), p. 143.

⁴Jay S. Stowell, The Near Side of the Mexican Question (New York: George H. Doran Company, 1921), p. 48.

The attitude of most parents toward education probably kills any desire most boys might have about going beyond the high school level. In the home it is practically a foregone conclusion that the boys will work at some menial job because they feel that the Americans will get all the good jobs. Why get an education, when one can work at the meat-packing company, or on the railroad, or for a construction company without it? The great majority of young Mexican-American boys simply lack the parental encouragement and assistance to get a good education. As long as one does not get into trouble at school, and does not fail the courses, then all is well. Clark states that economic problems and the minority-group status contributes greatly to the poor attitude of the Mexican-American toward education. She also says that the language barrier could be influential in a decision to quit school.⁵ This is essentially false in the area where this study was made; however, there are examples of boys who migrated to the United States from Mexico recently and made the adjustment to the American way-of-life very easily in spite of the language barrier.

Griffith continues her study by saying that teachers can be very influential in the life of the Mexican-American

⁵Margaret Clark, Health in the Mexican-American Culture (Berkeley: University of California Press, 1959), p. 68.

if they will take the time to understand the problems these children must face daily.⁶ Physical education teachers, according to Griffith, fail to understand, more than other teachers, the problems of Mexican-American boys. Where rules are numerous Mexican-Americans are much harder to control. If you give the Mexican-American a sense of pride and responsibility, he will make every effort to live up to it.⁷

Because of economic status, boys tend to drop out of school to find a job so they can buy many of the things which were lacking in their home. Even though the parents will attempt to induce them to stay in school, they have no strong points of persuasion because they dropped out of school for the same reasons.

The poor attitude toward education is changing very slowly, but it is changing. It will take some time to convince most Mexican-American boys that there is a better life for them, if they desire it strongly enough. Examples set by older Mexican-Americans, and being able to see teachers, coaches, lawyers, doctors, and others who are Mexican-Americans, will help these boys to realize that with a little effort these things can be theirs.

⁶Griffith, op. cit., p. 157.

⁷Ibid., p. 164.

II. LITERATURE ON NUTRITIONAL STATUS

The diet of the Mexican-American boys is very important in the evaluation of potential athletes. Inasmuch as the boys come from low economic surroundings, their diet is not as well-rounded as perhaps it should be. Most of the diet consists of beans, potatoes, and tortillas, (a pancake-shaped piece of bread.) The lack of meat, to any great degree, in the diet of the Mexican-American boy can immediately explain his lack of endurance. The diet which is available is sufficient to promote healthy growth, but it is not a good diet for athletes. While this condition does not exist in all families, the majority exist on this diet weekly. In a check made by the author of thirty-five families of both boys and girls of Mexican-American heritage at Horace Mann Junior High School, it was discovered that twenty-seven families had beans and tortillas for all meals; five families had this menu for ten to twelve meals a week; and the remainder had this menu nine or more times a week. According to Griffith, very few of the children in poorer Mexican-American homes are well-fed.⁸

⁸Ibid., p. 133.

Stowell observed that in past years, because of a lack of knowledge as to adequate diets, the Mexican-American was lacking in most of the necessary vitamins. His economic status was partly responsible for this condition. Stowell continues by saying that most of the Mexican-Americans are constant consumers of beans. In families of higher economic level, beans are supplemented by chile, meat, coffee, and cheese. Very few dairy products are consumed.⁹ Many Mexican-Americans are very perturbed by statements that they do not understand the necessity of a good diet. They realize that if they were able, they would provide better for their families. Their economic status prevents this. It can readily be seen that the lack of iron, protein, vitamins C, B₁, B₁₂, and dairy and poultry products would be detrimental to a boy's ability to excel to his full potential. It should be said here that not all families live under these conditions, but a majority do subsist on this diet. Those who do not probably have better paying jobs, or come from small families, or both. Griffith relates that the Mexican-American family of today is much more healthy than in years past because of a better diet. She further states that meat in the diet varies with the income in most families.¹⁰

⁹Stowell, op. cit., p. 45.

¹⁰Griffith, op. cit., p. 95.

It is not the intent of the author to make it appear that it would be unwise to consider Mexican-American boys for athletic teams, but physical educators and coaches should consider the things discovered in this study. Consideration should be given both on athletic teams and in physical education classes.

III. LITERATURE ON BODY STRUCTURE

Gamio states that there is no satisfactory anthropometric, physiological, and pathological data on groups of "mestizos," (this word is in reference to the cross between the Spanish and Indian of early American history.) He also says that there is no information available on the physical characteristics.¹¹ The investigator was unable to find any later information pertinent to this subject. Even though there seems to be no information available on the body structure of the Mexican-American, from empirical observations of the investigator it might be said that the following characteristics are typical of the Mexican-American boy.

The average height of the Mexican-American boy in grades seven through nine is approximately sixty inches. In

¹¹Manuel Gamio, Mexican Immigration to the United States (Chicago: The University of Chicago Press, 1930), p. xiv.

many instances even shorter heights are measured. They generally have short stubby legs and very slightly built. This perhaps explains why they are very quick to react, and in short sprints are able to do very well.

At the grade levels referred to in this study, the boys are out-distanced in sprints of over fifty yards, lack of strength and shortness of muscles cannot compete in field events in track, and because of their short stature, are not able to compete well in basketball with the Caucasian and Negro boys. Herein lies one of the principle reasons for their lack of interest and desire in competitive sports.

IV. DEMOCRACY IN THE MEXICAN-AMERICAN HOME

Dewey has said that the society which not only changes but has the ideals to change and improve will necessarily have different ways for providing education from those who wish to perpetuate their own customs.¹²

Herein lies one of the very basic reasons why many Mexican-American boys lack the initiative to be sincere in their efforts to grow educationally in the classroom. Any desire they may have to succeed or to improve their position in our society is not given much impetus in the home.

¹²John Dewey, Democracy and Education (New York: The Macmillan Company, 1963), p. 81.

There is no concern given by the parents toward boys getting good grades in school. Perhaps a word about the bad grades and the admonition to try harder is all that is heard from the parents. Having been allowed to go and come as they please for some time now, the few words about poor grades fall on deaf ears.

The poor parental attitude of being unconcerned about their children's education has been brought from Mexico. Many of the immigrants from Mexico had little or no formal education. In years past, the people in Mexico felt no need for educating their children. The ability to work hard and provide for the family was the only thought of young men. Education was for those who could afford it and felt a need for it.

In a study of the grades achieved by the subjects previously mentioned taking the motor ability skills tests in physical education classes, it was found that at the seventh grade level, the average grade for the Mexican-American boys was 1.45 as compared to 2.20 for the Caucasian boys. In this grading system, 4.0 is A; 3.0 is B; 2.0 is C; and 1.0 is D. At the eighth grade level, the Mexican-American boys averaged 1.75 and the Caucasian boys 2.25. At the ninth grade level, the Mexican-American boys averaged 1.70 and the Caucasian boys averaged 2.05.

At every level the Caucasian boys were averaging higher grades than the Mexican-American boys. These grades included all grades in all subjects.

It can be assumed that the parental prodding and encouragement could have been responsible for the better grade averages attained by the Caucasian boys. It is also possible that the Caucasian boys may have been more mature mentally than the Mexican-American boys. There are many answers that could be assumed on this point, but one thing is certain of the Mexican-American boys, and that is that he does not receive the encouragement and concern from his parents over his grades that is apparent in the Caucasian home. The Mexican-American boy shows no emotional change over a bad grade received or change in study habits from one grading period to another. "So be it," is the attitude of most Mexican-American boys and let life take care of itself.

Again, let it be said that this attitude of Mexican-American boys and their parents toward education and good grades does not include all Mexican-Americans; but certainly a majority of the individuals at Horace Mann Junior High School can be included in the above statements.

When the Mexican-Americans came to this country to settle, they brought with them these ideas which did not fit into the society of the United States. Many Mexican-

Americans travel throughout the United States each year following the harvest. It is of no concern to them where they must go for the harvest just as long as they can take their families with them to help make money during the harvest season. The children are taken out of school in the early spring and they do not re-enter until after the harvest is over in the late fall.

Absenteeism is also quite high among Mexican-American boys, which seems to stem from this poor attitude toward education. No good reason is needed by students to be able to stay home from school if they feel that they do not want to go that particular day. At Horace Mann Junior High School, there is a high rate of absences each day among boys of Mexican-American parents.

Americans speak of their democracy and the society which says that everyone may do as he pleases, but they require attendance at school regularly. What kind of a democracy is this? This question is uppermost in the minds of many Mexican-Americans who believe that education is for those who feel a need for it.

One of the greatest faults of the Mexican-American is his lack of understanding of the society of the United States. Their old customs cannot be accepted in this country and as a result ill-feeling and discontent arises.

To further alienate themselves, they segregated themselves into small areas which they called "colonies". Nothing but Spanish was spoken and this delayed the assimilation of the Mexican-American into the local society.

From this way-of-life grew such things as segregation, jealousy, suspicion, and distrust. A feeling of not being wanted, grew stronger until there was much misunderstanding between the two groups of people. This ill-feeling is still quite strong in some areas. Mexican-Americans have felt for many years that there was a desire on the part of the Caucasian to suppress them; and from this idea has come a disinterest and "I don't care", attitude toward education and economic up-grading. The Mexican-Americans believe that they cannot live where they wish and in most cases cannot afford it anyway because of their economic status. They feel that even with a good education they would be refused in favor of a Caucasian in many job areas.

The ideas offered above are the ideas of most of the first and second generation Mexican-Americans in this country. However, the third and fourth generations are not finding many of these conditions and as a result are becoming better educated and seeking and finding better jobs.

Nevertheless, the ideas and thinking of the older people are still having some influence on the younger boys who are so prone to listen to the wise words of an elder.

This problem will only be eliminated with the passing of the old generations and the progressive and positive thinking of the younger generations.

Housing is also available in the nicer communities of our cities and in most cases there is no prejudice in finding modern new homes. Economic status and job opportunities are now open to the well-educated Mexican-American. With each passing year, improvements are made in all areas in our democratic society insofar as it pertains to the Mexican-American. Understanding on both sides can make this assimilation a reality.

CHAPTER III

ORGANIZATION AND ANALYSIS OF DATA

Three motor ability skills tests were given to Mexican-American and Caucasian boys in grades seven through nine to test agility, reflex action, and leg strength. A comparison of scores was then made to help answer questions relative to the hypothesis.

To measure agility, the side step test was used. The boys were to do as many glides to the side within a six-foot area as they could within thirty seconds.

At the seventh grade level, twenty Mexican-American boys averaged 18.00 repeats, and the Caucasian boys averaged 17.35 repeats. The differences between the averages of the two groups was .65 repeats.

At the eighth grade level, the Mexican-American boys averaged 23.35 repeats and the Caucasian boys averaged 21.65 repeats. The difference between the averages of the two groups was 1.70 repeats in favor of the Mexican-American boys.

At the ninth grade level, the Mexican-American boys averaged 30.45 repeats and the Caucasian boys averaged 21.70 repeats. The difference between the averages of the two groups was 8.75 repeats in favor of the Mexican-American boys. Mexican-American superiority on the test increased noticeably at each successive grade level.

The numbers and averages of subjects tested in performance of agility in grades seven through nine are tabulated in Table I.

TABLE I
NUMBERS AND AVERAGES OF SUBJECTS TESTED
IN PERFORMANCE OF AGILITY IN
GRADES SEVEN THROUGH NINE

Grade	Kind and numbers of group	Side step test averaged repeats
7	20 Mexican-American	18.00
	20 Caucasian	17.35
	Difference	.65
8	20 Mexican-American	23.35
	20 Caucasian	21.65
	Difference	1.70
9	20 Mexican-American	30.45
	20 Caucasian	21.70
	Difference	8.75

To measure reflex action, the wall bounce test was administered. This test involves bouncing a ball against a wall surface and tipping it back against the wall as often as possible within thirty seconds.

At the seventh grade level, the Mexican-American boys averaged 22.65 repeats and the Caucasian boys averaged 21.65 repeats; a difference of 1.00 repeats. In the eighth grade,

the Mexican-American boys averaged 26.00 repeats and the Caucasian boys averaged 24.40 repeats; a difference of 1.60 repeats. In the ninth grade, the Mexican-American boys averaged 38.00 repeats and the Caucasian boys averaged 26.50 repeats; a difference of 11.50 repeats. Mexican-American superiority on the test increased noticeably at each successive grade level.

The numbers and averages of subjects tested in performance of reflex action in grades seven through nine are tabulated in Table II, page 24.

To measure leg strength, the vertical jump test was used. This test is performed by the subject jumping as high as possible from a standing position and making a mark on the wall at the peak of his jump.

At the seventh, eighth, and ninth grade levels, the Mexican-American boys averaged 14.40; 15.45, and 17.35 repeats. The Caucasian boys averaged 12.45 repeats, 14.25 repeats, and 16.55 repeats. The differences at each grade level was 1.95 repeats in the seventh grade; 1.20 repeats in the eighth grade; and .80 repeats in the ninth grade.

Only in the leg strength test did the Caucasian boys reduce the average difference in each successive grade.

In Table III, page 25, are found the numbers and averages of subjects tested in performance of leg strength in grades seven through nine.

TABLE II
 NUMBERS AND AVERAGES OF SUBJECTS TESTED
 IN PERFORMANCE REFLEX ACTION IN
 GRADES SEVEN THROUGH NINE

Grade	Kind and numbers of group	Wall bounce test averaged repeats
7	20 Mexican-American	22.65
	20 Caucasian	21.65
	Difference	1.00
8	20 Mexican-American	26.00
	20 Caucasian	24.40
	Difference	1.60
9	20 Mexican-American	38.00
	20 Caucasian	26.50
	Difference	11.50

TABLE III
 NUMBERS AND AVERAGES OF SUBJECTS TESTED IN
 PERFORMANCE OF LEG STRENGTH IN
 GRADES SEVEN THROUGH NINE

Grade	Kind and numbers of group	Vertical jump test averaged inches
7	20 Mexican-American	14.40
	20 Caucasian	12.45
	Difference	1.95
8	20 Mexican-American	15.45
	20 Caucasian	14.25
	Difference	1.20
9	20 Mexican-American	17.35
	20 Caucasian	16.55
	Difference	.80

According to the data gathered for this study as the result of tests for agility, reflex action, and leg strength, and presented in Figures 1, 2, and 3, pages 27-29 respectively, it can be ascertained that both the Mexican-American and Caucasian boys show improvement in grades seven, eight, and nine; but the Caucasian boy shows very little improvement between the eighth and ninth grades in the side step test.

The scores of the Mexican-American and Caucasian boys for each grade level were tabulated to find the mean score and the standard deviation for each group on each test. The mean scores and standard deviations for all groups on all tests are shown in Table IV, page 30. The Mexican-American groups were able to perform the wall bounce, side step, and vertical jump tests better than the Caucasian groups; consequently, the mean scores for the Mexican-American groups were higher at all grade levels than those for the Caucasian groups on the tests involving reflex action, agility, and leg strength.

The standard deviation indicated the spread of the scores about the mean. A small standard deviation indicated that the scores were closely grouped around the mean; a large standard deviation indicated that the scores were more widely scattered.

To determine whether the difference between the mean scores of the Mexican-American groups and Caucasian groups

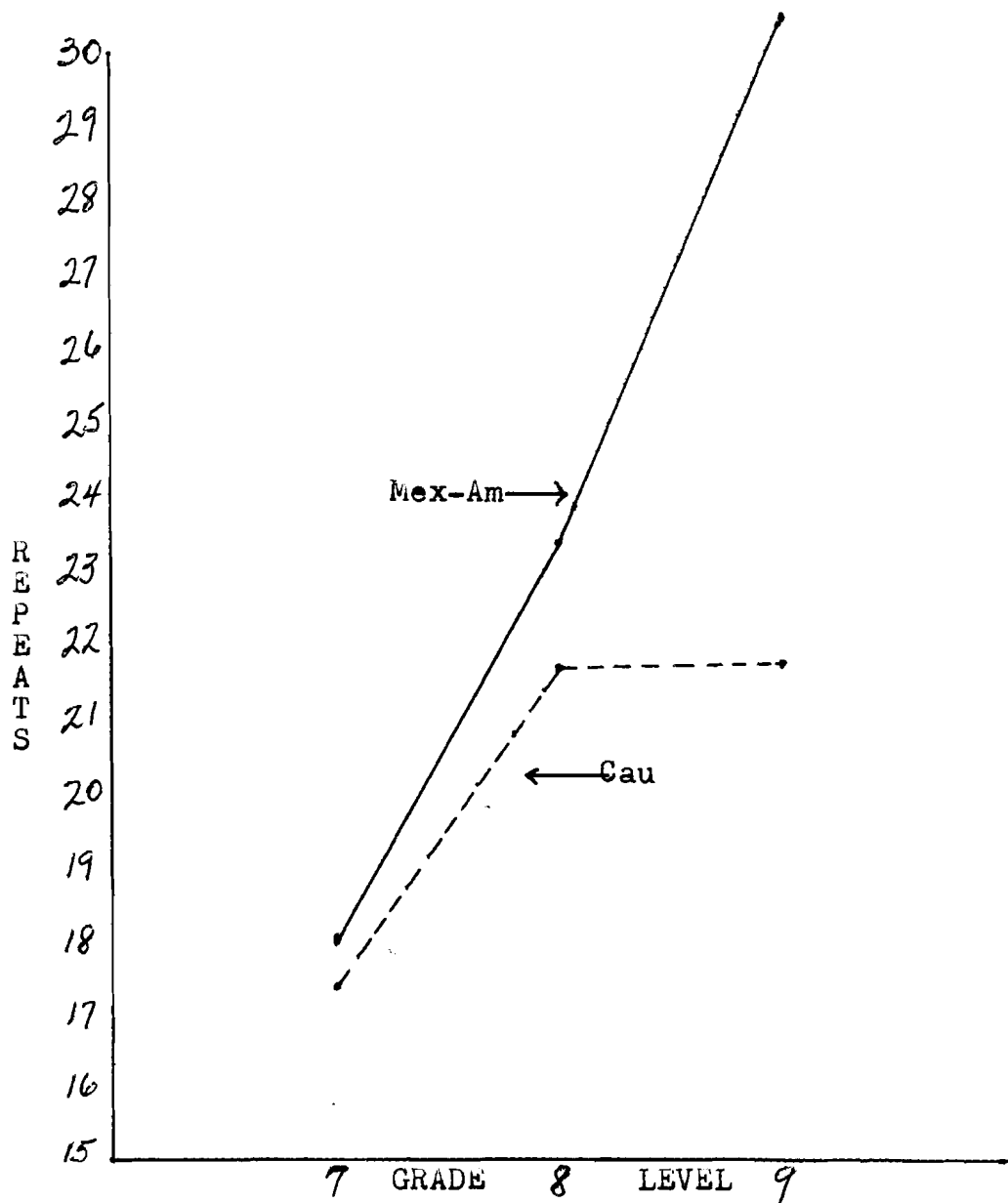


FIGURE 1

COMPARISON OF MEXICAN-AMERICAN AND CAUCASIAN
BOYS GRADES SEVEN THROUGH NINE IN PERFORMANCE
OF THE SIDE STEP TEST

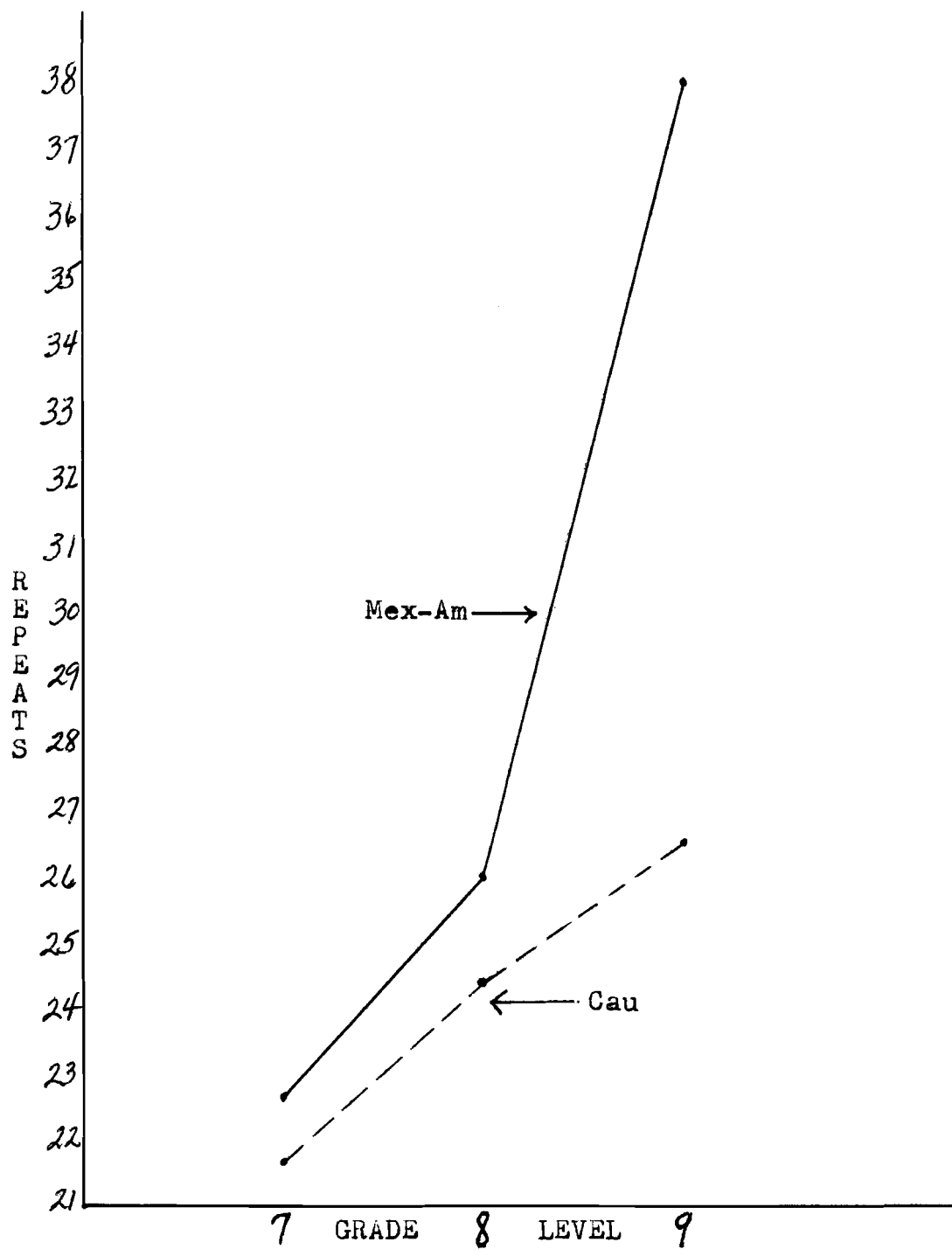


FIGURE 11

COMPARISON OF MEXICAN-AMERICAN AND CAUCASAIN
BOYS GRADES SEVEN THROUGH NINE IN PERFORMANCE
OF THE WALL BOUNCE TEST

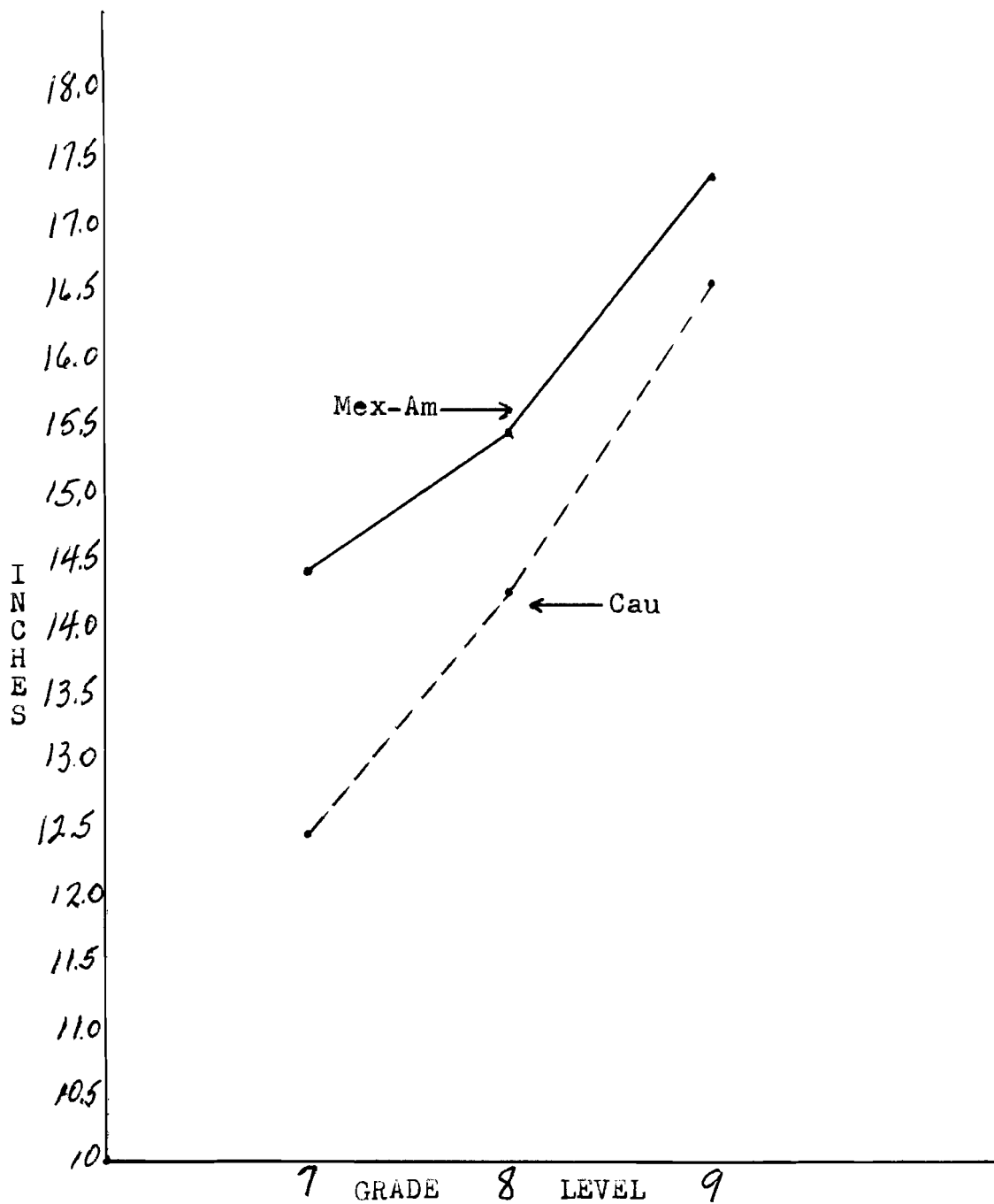


FIGURE 111
COMPARISON OF MEXICAN-AMERICAN AND CAUCASIAN
BOYS GRADES SEVEN THROUGH NINE IN PERFORMANCE
OF THE VERTICAL JUMP TEST

were real or due to chance, the standard error of the mean difference was computed for each grade level on the three tests.

TABLE IV

MEAN SCORES AND STANDARD DEVIATIONS OF THE THREE
GRADE GROUPS ON THREE MOTOR SKILLS TESTS

Test	Grade	Mean		Standard deviation	
		Mex-Am	Cau	Mex-Am	Cau
Wall bounce ^a	7	22.65	21.65	7.81	8.96
	8	26.00	24.40	9.21	8.64
	9	38.00	26.50	8.57	11.72
Side step ^a	7	18.00	17.35	6.27	6.04
	8	23.35	21.65	7.39	9.04
	9	30.45	21.70	12.31	6.30
Vertical jump ^b	7	14.40	12.45	7.73	5.09
	8	15.45	14.25	7.52	6.85
	9	17.35	16.55	8.18	9.82

^aMeasured in repeats

^bMeasured in inches

To determine whether or not the difference was significant, the t-test was administered. The formula suggested by Edwards was used.¹³

The t-ratios necessary for significance were 2.71 for the one per cent level of confidence and 2.02 for the five per cent level of confidence.

¹³ Allen L. Edwards, Statistical Analysis for Students in Psychology and Education (New York: Rinehart and Company, Inc., 1946), p. 182.

The mean scores, the mean differences, the standard error of mean differences, and the t 's for the wall bounce are shown in Table V. The t -test indicated that the ninth grade Mexican-American group was significantly better than the ninth grade Caucasian group at the one per cent level of confidence. The seventh and eighth grade Mexican-American groups were not significantly better than the seventh and eighth grade Caucasian group. The most highly significant difference, $t=3.45$, was found at the ninth grade level.

TABLE V

COMPARISON OF THE MEAN SCORES OF THE THREE
GRADE GROUPS ON THE WALL BOUNCE TEST

Grade group	Mean ^a	Mean difference	Standard error of difference	t^b
7th grade				
Mex-Am	22.65	1.00	2.72	.37
Cau	21.65			
8th grade				
Mex-Am	26.00	1.60	2.89	.55
Cau	24.40			
9th grade				
Mex-Am	38.00	11.50	3.33	3.45
Cau	26.50			

^aScores measured in repeats

^b t values necessary for significance

5 per cent level of confidence--2.02

1 per cent level of confidence--2.71

The mean scores, mean differences, standard error of mean differences, and the t 's for the side step test are

shown in Table VI. The t-test of significance indicated no significant difference in the mean scores of the seventh and eighth grade groups. The t value for the seventh grade group was .33 and for the eighth grade group .69. The differences found indicated that the ninth grade Mexican-American group was significantly better on the side step test than the ninth grade Caucasian group at the one per cent level of confidence. The greatest t was 2.76 for the ninth grade group.

TABLE VI

COMPARISON OF THE MEAN SCORES OF THE THREE
GRADE GROUPS ON THE SIDE STEP TEST

Grade group	Mean ^a	Mean difference	Standard error of difference	t ^b
7th grade				
Mex-Am	18.00	.65	2.00	.33
Cau	17.35			
8th grade				
Mex-Am	23.35	1.70	2.47	.69
Cau	21.65			
9th grade				
Mex-Am	30.45	8.75	3.17	2.76
Cau	21.70			

^aScores measured in repeats

^bt values necessary for significance
 5 per cent level of confidence--2.02
 1 per cent level of confidence--2.71

The mean scores, mean differences, standard error of mean differences, and the t values for the vertical jump

test are shown in Table VII. The t values for each grade group indicated that there was no significant difference in the three grade groups. The t ratios were: .92 for the seventh grade groups, .52 for the eighth grade groups, and .27 for the ninth grade groups.

TABLE VII

COMPARISON OF THE MEAN SCORES OF THE THREE
GRADE GROUPS ON THE VERTICAL JUMP TEST

Grade group	Mean ^a	Mean difference	Standard error of difference	t^b
7th grade				
Mex-Am	14.40	1.95	2.12	.92
Cau	12.45			
8th grade				
Mex-Am	15.45	1.20	2.33	.52
Cau	14.25			
9th grade				
Mex-Am	17.35	.80	2.94	.27
Cau	16.55			

^aScores measured in inches

^b t values necessary for significance
5 per cent level of confidence--2.02
1 per cent level of confidence--2.71

In all the tests given, only at the ninth grade level in the wall bounce test and the side step test was there any significant difference in level of confidence. In both cases, the level of confidence was at the one per cent level.

At the seventh and eighth grade level both groups did not show any significant difference statistically.

CHAPTER IV

SUMMARY AND CONCLUSIONS

I. SUMMARY

Purpose. One purpose of this study was to discover, by the use of pre-determined tests given to parallel groups of Mexican-American and Caucasian boys grades seven through nine at Horace Mann Junior High School, Wichita, Kansas, the differences, if any in leg strength, agility, and reflex action.

The other purpose of this study was to determine if home environment, diet deficiencies, and body structure were related to lack of participation in organized athletics at the junior high school level by Mexican-American boys.

The hypothesis was that the Mexican-American boy in grades seven, eight, and nine is superior to the Caucasian boy at the same grade level in leg strength, agility, and reflex action, but because of other factors is not able to compete successfully against Caucasian boys.

Procedure followed. One hundred twenty boys from Horace Mann Junior High School, Wichita, Kansas, were selected to take part in the investigation. One-half of the boys were Mexican-American boys and the other half were Caucasian boys. There were forty boys from each grade level.

The subjects were given three motor ability skills tests at the beginning of the basketball season. The subjects were encouraged to do their best, because the best scores would qualify those boys to try out for the basketball team at that grade level.

The mean score and standard deviation was computed for each group on each test. Each Mexican-American group was then compared with the Caucasian group of the same grade level. The standard error of difference and the t-test were computed for each grade group of Mexican-American and Caucasian students.

Results. The t-test of significant difference in the mean scores of independent groups indicated no significant difference in the wall bounce test, except at the ninth grade level. At this level the difference was significant at the one per cent level of confidence in favor of the Mexican-American boys.

In the side step test there was no significant difference in the mean scores of the Mexican-American and Caucasian boys at the seventh and eighth grade levels. However, at the ninth grade level the difference was significant at the one per cent level of confidence.

The t-test of significant difference in the mean scores of the vertical jump test indicated no significant difference at any of the grade levels.

II. CONCLUSIONS

The results of this study did not support that part of the hypothesis which said that the Mexican-American boy was superior to the Caucasian boy. Only in two test areas were the Mexican-American boys superior. In the other seven areas, there was no significant difference in the test scores.

Further results of the investigation indicated the following:

1. The philosophy of the Mexican-American home life does influence the attitude of the Mexican-American boys in our society.
2. Because of the home life of the Mexican-American boy he seems to develop a negative attitude toward our society which is hard to overcome.
3. Because of his lack of many of the necessary vitamins for good body development, the Mexican-American boy is not able to compete successfully against Caucasians and others. Because of his drive for recognition, he develops a defensive attitude toward others to prove his ability.
4. Through careful study, understanding, and assistance, the Mexican-American boy can achieve to his full potential. This being dependent upon the physical educator being willing to help the boy.

Recommendations. All Caucasians should be made aware of the great pride of the Mexican-American in their native customs and seek ways to better understand and appreciate them.

Showing interest in their performances can go a long way toward obtaining superior performances from these boys.

Penalizing them because of their short stature and lack of endurance can and will lead to future problems of discipline and control.

An earnest effort and show of interest in the boys and their families by all people will tend to encourage these boys to please everyone in every way. The interest must be genuine and not merely token solicitation.

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APPENDIX

TABLE VIII
THE WALL BOUNCE SCORES OF ALL SUBJECTS^a

Subjects	7th Grade		8th Grade		9th Grade	
	Mex-Am	Cau	Mex-Am	Cau	Mex-Am	Cau
1	27	15	29	25	41	23
2	27	20	29	22	32	26
3	29	26	39	26	40	28
4	33	20	32	26	30	27
5	19	21	29	22	40	33
6	33	24	28	24	37	25
7	26	14	34	30	25	26
8	19	17	31	23	24	29
9	19	20	21	24	29	26
10	9	27	27	29	36	21
11	24	25	17	24	36	30
12	24	20	23	25	33	25
13	23	26	22	28	30	23
14	20	21	24	19	27	27
15	17	25	21	28	25	27
16	23	20	21	19	26	25
17	20	16	29	19	23	33
18	13	24	32	23	26	27
19	25	24	15	20	27	23
20	23	28	17	22	29	26

^aMeasured in repeats

TABLE IX
THE SIDE STEP SCORES OF ALL SUBJECTS^a

Subjects	7th Grade		8th Grade		9th Grade	
	Mex-Am	Cau	Mex-Am	Cau	Mex-Am	Cau
1	24	16	16	23	35	16
2	20	15	30	24	30	17
3	29	16	33	20	27	18
4	18	20	31	24	30	26
5	15	17	31	20	40	26
6	18	21	32	25	35	21
7	26	16	31	24	30	10
8	15	11	28	23	26	25
9	16	10	19	20	25	25
10	13	19	18	21	36	16
11	19	18	20	19	40	21
12	19	18	26	16	30	26
13	18	23	16	28	34	29
14	15	20	15	21	34	24
15	16	17	17	22	27	30
16	21	18	19	22	26	22
17	16	10	25	16	29	19
18	9	19	26	20	23	17
19	16	22	18	20	26	23
20	17	21	17	25	26	23

^aMeasured in repeats

TABLE X
THE VERTICAL JUMP SCORES OF ALL SUBJECTS^a

Subjects	7th Grade		8th Grade		9th Grade	
	Mex-Am	Cau	Mex-Am	Cau	Mex-Am	Cau
1	12	14	17	16	19	16
2	12	9	15	15	17	15
3	15	15	19	14	18	18
4	14	15	17	14	15	18
5	12	0	14	15	19	17
6	17	15	15	15	20	13
7	15	11	17	16	15	15
8	13	11	14	19	13	17
9	17	11	20	13	19	23
10	13	16	17	15	22	12
11	15	12	12	13	23	17
12	15	13	15	12	17	15
13	18	17	14	20	16	18
14	16	12	12	13	17	15
15	12	15	14	14	11	18
16	15	10	14	13	16	17
17	14	10	19	10	19	18
18	10	13	19	13	15	15
19	13	14	12	9	19	15
20	15	16	13	16	17	19

^aMeasured in inches