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A Study Of The Food Habits Of Boys And Girls Of The Vocational Department Of The Dunbar Junior-Senior High School Lufkin, Texas

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A STUDY OF THE FOOD HABITS OF BOYS AND GIRLS OF
THE VOCATIONAL DEPARTMENT OF THE DUNBAR
JUNIOR-SENIOR HIGH SCHOOL

LUFKIN, TEXAS

WASHINGTON

1955

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VOCATIONAL DEPARTMENT OF THE DUNBAR
JUNIOR-SENIOR HIGH SCHOOL
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1955

By
Ruth Spencer Washington

Thesis in Home Economics Education Submitted in Partial
Fulfillment of the Requirements for the
Degree

of
Master of Science
In The
Graduate Division
of

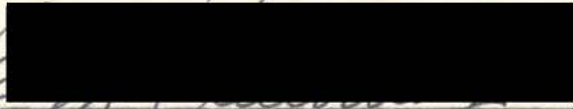
Prairie View Agricultural and Mechanical College
Prairie View, Texas

August, 1955

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ACKNOWLEDGMENT

The writer wishes to express her gratitude to Mrs. E. M. Galloway, Dean of the School of Home Economics, under whose direction the study was made; to Mr. E. E. Cleaver, Principal of Dunbar High School, for permitting the survey to be made in classes; and to the one hundred twenty-five vocational pupils whose cooperation made it possible to carry on the study.

R. S. W.

DEDICATION

To my husband, Mr. Jordan T. Washington, Senior, children, and families (specially to Jo Boy and neice) whose devotion and encouragement made it possible for me to complete this thesis.

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BIOGRAPHY

The writer was born in Crockett, Houston County, Texas on October 20, 1904, the fifth child of the Reverend and Mrs. Enoch Spencer.

Her elementary education was at Post Oak Elementary School where she completed the seventh grade. She entered Conroe Normal and Industrial College, Conroe, Texas, in 1920, where she finished high school, May 25, 1925.

In September, 1925, she enrolled in the Division of Education at Prairie View College, Prairie View, Texas. After remaining there for one year she dropped out for one year and returned the summer of 1927. The same fall she began teaching primary grades in a two-teacher school in Normangee, Leon County, Texas, where she worked one year. She was married during that school year to Mr. Jordan Thomas Washington (who was principal of Conroe College). A son was born to the couple in 1928.

In 1929 the writer moved to Bessmay, Jasper County, Texas to start teaching in a junior high school. During her stay, three children were born, George, Ruth, and Phillis. The children are graduates of Prairie View Agricultural and Mechanical College except George who is deceased.

The writer received a B. S. degree in Education in the

summer of 1936, and enrolled in graduate school in the summer of 1941. Since she was not working in her field of interest, she enrolled in undergraduate work in the school of Home Economics and continued studying each summer until 1947, when she completed her work for the Bachelor of Science degree.

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CHAPTER I

INTRODUCTION

Never before has the relationship of food to the control of health been so strongly appreciated as it is today. Many human studies have demonstrated, the importance of certain nutrients in the maintenance of health, general well being, resistance to infection, more rapid recovery from illness, and better growth in pupils. As Sherman (29) said:

The benefit which we may clearly and confidentially anticipate is much more than merely biological. It relates not only to health but through health to social evaluation and to even higher levels of intellectual and spiritual achievement by the individual who will do so to develop their innate capacities.

If the right food is not eaten, the man, the woman, or the child will not have energy or vigor to carry on a full day of activity without feeling tired and exhausted. In the program of eating, if wrong food is continued long enough, deficiency symptoms may lead to susceptibility to respiratory disease, constant fatigue, inability to sleep, inability to see in the dark, horny or rough skin, constipation, frequent headaches and many other conditions.

It has been said that 75 per cent of all illness is connected in some way with faulty food habits (18),

yet few people realize that they can eat themselves in to health or out of it. Since food is so important it shall repay every pupil to develop the best possible habits for using food for health.

At all times during the life cycle, the body's need for nutrients is met by the foods eaten. This need for nutrients is especially high for an adolescents when there is rapid building of new body tissues, and energy needs are high because of a temporary rise in a basic metabolic rate accompanied by heavy energy expenditure for voluntary activities (16). For these reasons special attention should be given to the food intake to see that enough foods supplying body building proteins, adequate minerals and vitamin as well as calories are included in the diet.

The intake of food and, therefore, of nutrients is regulated in a large measure by food habits. Food habits of adolescents should be examined closely to see if they are all that they should be. Since surveys reveal that about one-half of the total American population has poor food habits, it has been assumed that people in general do not know the relationship which exists between diet and health (18). Relatively few persons in the total population, regardless of age, give positive attention to the fact that food habits can make the difference between health and physical inefficiency.

However, food habits are not the only factors which affect nutritional status, for exercise, adequate rest and sleep, proper elimination, good posture, proper functioning of all body organs, good mental attitude, and a stable emotional condition are all essential to good utilization of food.

Recent experiments encourage the belief that the brain cells can be so strengthened by food elements that they will develop a natural resistance to domination by induced illnesses (29). As miraculous as it seems, it is reasonably certain that the brain capacity can be increased through nutrition. In an experimental test by Kordel (16) two elements have proved their power to raise the intelligence level. If high school pupils could raise their intelligence level, their mental and emotional troubles would be reduced to an absolute minimum. This would accomplish more lasting good for the mental health of the nation than psychiatry can ever hope to achieve. The brain cells are the sum total of what one eats or does not eat. Science has proved almost conclusively, that two nutritional elements act directly upon the human power and emotional stability. The two brain-conditioning elements are glutamic acid, one of the amino acids which, in turn, makes up all food protein; and thiamin known as vitamin B₁, the element necessary for a healthy central nervous system.

change to good food habits might bring about a difference in this specific health condition which is merely another food habit. Undereating may be practiced because of a desire of an adolescent girl and boy to be thin. The greatly reduced intake may cause an unhealthy condition in the body. The caloric intake of the fat conscious adolescent is usually too low to meet any of the needs and does not include enough of the protective food such as protein, minerals and vitamins. The eating habits of the high school boys and girls are more difficult to influence than are those of younger children. Young children may eat a regular meal at meal time, while the adolescent may take a pop to substitute for the regular school lunch. The reason is often given that the food served is disliked (15).

The soundness of food habits is judged by an evaluation of the adequacy of the food intake. One widely used measuring stick is the vital eleven food group (See Appendix, Exhibit A). The vital eleven group is an arrangement of foods according to the chief nutrients which each group supplies to the diet. The vital eleven and the nutrients which they supply are: milk and cheese, meat, poultry, fish, eggs, dried beans, peas, nuts, peanut butter, leafy greens and yellow vegetables, citrus fruits and tomatoes, potatoes, other fruits and vegetables, cereals including flour, bread and pastry, fats and cooking fats, margarine,

The adolescent is going through a period of rapid psychological, physiological and social changes, and these changes, as well as food habits, exert their influences on the physical condition of the individual (31). Many of the food habits of adolescents have been established in childhood and tend to be patterned after those of their parents. Most of the habits whether good or bad, are carried over into adult life. Often these attitudes toward foods, as to their likes and dislikes, are formed as a result of the individual experiences with people rather than as a result of an intellectual understanding of the nutritive value of the given food.

Rountree (26) in her study said, "Most food refusals, food dislikes, on the part of children as well as adults are expressions of resentment against somebody or some things or indicate an unconscious desire to 'get even' or to establish personal status."

It is believed that between meal eating may produce undesirable food habits, particularly when it lessens the desire for wholesome foods or when the person is overweight. A consideration of the adolescent who practices poor food habits is in order. Cookies or candy for breakfast, a mid-morning drink of pop, maybe with potato chips, and another pop at noon and at the evening meal, instead of wholesome foods, may product painful results in the digestive system. It is difficult to convince an adolescent that a

change to good food habits might bring about a difference in this specific health condition which is merely another food habit. Undereating may be practiced because of a desire of an adolescent girl and boy to be thin. The greatly reduced intake may cause an unhealthy condition in the body. The calorie intake of the fat conscious adolescent is usually too low to meet any of the needs and does not include enough of the protective food such as protein, minerals and vitamins. The eating habits of the high school boys and girls are more difficult to influence than are those of younger children. Young children may eat a regular meal at meal time, while the adolescent may take a pop to substitute for the regular school lunch. The reason is often given that the food served is disliked (15).

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and butter, and finally sugar.

Foods, as listed under each group, provide about the same nutrients, however, some of the foods listed provide a better quality or more of the nutrients than do others. It is necessary, therefore, for one to know enough nutritions to be acquainted with the values of the various foods. It is generally agreed that this guide, if followed may be expected to increase vitality and general well being, protect the body against deficiency diseases, as well as promote normal growth (18).

This study has been concerned with the food habits of a group of adolescent boys and girls who were enrolled in vocational agriculture and home economics in Dunbar High School, Lufkin, Texas. At the time that the study was made the school had a total enrollment of 368 from the seventh through the twelfth grades. Approximately 12 per cent of these were transported to and from school by two buses. The school located about a mile from State Highway 59, is the only AA high school for Negroes in Angelina County. The one other high school has an A rating.

One of the prime concerns of the nation today is nutrition, since the health of the people depends to a large extent upon their food. One of the purposes of this study, therefore, was to find how nearly these boys and girls were eating the required foods and amounts each day.

Any information received and conclusions reached through this study might aid the instructor in supplying information to families, which in turn might help them to meet their food needs and influence certain food production at home. Some of the faulty eating habits might be improved if people understood the importance of eating three meals daily. If the teachers knew what the food habits of the pupils were, it might be possible to include something in their instruction material that deals with the foods to be eaten in order to gain and maintain good mental and physical health.

It is hoped that the findings of this study may be of value to all persons who work with youth. If any information included here shall help them in formulating plans for improving food habits of the youth the study shall not have been in vain.

CHAPTER II

REVIEW OF LITERATURE

It was the aim of the writer to learn of the experiences, thinking, and findings of other persons who had made similar studies and these studies have been reviewed.

Durham (6) made a study of the dietary habits and nutritional status of five hundred (500) Negro children at Pennsylvania State College to see if they were meeting the recommendation of the moderate cost dietary plan. The subjects in the study failed to meet the recommendation of their respective sexes and ages for most of the major food groups given in the moderate cost dietary plan of the United States Department of Agriculture. The majority of the children showed evidence of extremely grave under nutrition. Approximately one-half displayed nervous habits.

Grant (9) studied the effect on eating habits of nutrition education in the fifth and sixth grades, at the University of Chicago to determine (1) what the private school child eats and (2) his response to nutrition education. Before the period of instruction, many of the lunches were considered inadequate because only 15 per cent contained a vegetable other than potatoes and 30 per cent a fruit. Five

weeks after the completion of the study, 49 per cent of the meals contained vegetables and 39 per cent contained fruit. Though the study was less effective in terms of changes in food than had been hoped, it seemed evident that learning had taken place. All of the children responded favorably to the activities and topics which were a part of the unit.

Hudson (14) made a study of the food habits of ninety-one vocational pupils in the Turner High School, Carthage, Texas, to learn of the regularity of their meals; the foods they preferred and the foods they included in the diet almost daily. It was assumed that pupils who had good appetites would have regular and desirable eating habits. It was found that thirteen pupils omitted eating breakfast daily, lunch was missed more than any other meal, and that thirteen pupils had formed irregular habits of eating dinner. Five pupils missed dinner everyday. There seemed to have been a need for stressing the importance of eating all meals even if an adjustment must be made in the home. Many pupils listed certain foods as disliked, vegetables being the food most often listed. It is probably that the improvement in the preparation of vegetables would encourage the pupils to eat more of these foods.

The study by Ward (34) entitled Nutritional Status of Children X Feeding Practice in Child Care Agencies:

Communal Feeding of Adolescent Boys, was made in Detroit, Michigan. The study emphasized that neither age nor weight alone can be used to standards for dietary accuracy; food requirements during adolescence vary over an extremely wide range; food likes and dislikes may result in inadequate nourishment; failure to eat a single food may result in an undesirable low intake of nutrients. The data indicated that if institutions are to meet the nutritional needs of children, they must recognize any unusual characteristics of the child, also emphasize the great need for further investigation of feeding practices and food needs during adolescence with recognition of changing food habits.

Homemakers in 75 homes in a rural southeastern Louisiana community were interviewed in order to identify some of the inadequacies of their food practices and to explore possible causes for the faulty food practices.

Tucker and Loree (33) made a study by the hurdle method of families' community living practices. For the most part, they communicated in an informal way, between friends and relatives. This suggested that an approach to a nutrition program that utilized existing channels of communication might profitably be explored in the community. The attitudes of the homemakers toward foods were found to be highly correlated with the quality of the diet provided

by the homemaker. If this high relationship holds true in other communities, then the success of nutritional programs will depend largely on the development of effective methods of changing food attitudes.

Botto (2) made a study to determine the differences in the eating habits of girls who had studied home economics and those who had not. The study was made of seven vocational schools of Kentucky, from which the records of four hundred eighty (480) girls were selected. Factors considered in making the comparisons of the groups were adequacy of the diet, and the regularity of good food and health habits. No striking differences were observed when the comparisons were made of the two groups regarding the adequacy of their diets.

Payne (22) made an evaluative study of the eating of the youth in six Texas counties, to determine the present diet status of rural and urban youth. The survey consisted of two forms: a parent record form and a pupil record form which were kept for four days. The approximate amount of food in the household was the basic information solicited by the parents. Seven hundred ninety-eight (798) children were given forms upon which to record data, of which seven hundred ninety-two (792) returned forms filled out. Data were analyzed to evaluate diets. The findings revealed that the consumption of milk was extremely low for two hundred forty-seven (247) pupils or 31 per cent. Less than one-

seventh of the group used the recommended amount of eggs. The consumption of fruit was extremely low, only one child out of every twenty reported having eaten fruit. Five hundred (500) ate no fruit at all during the survey period. One hundred (100) pupils reported no breakfast, two-thirds of the group did not eat vegetables. The study revealed that the children who ate no vegetables were greatly affected, because approximately 60 per cent of the needed vitamins come from leafy vegetables and fruits. Three hundred and twenty-four (324) pupils or 40 per cent consumed potatoes, one hundred forty-two (142) pupils or 17 per cent ate prunes and raisins. Milk was used by sixty (60) pupils or 8 per cent in the recommended amount. Seven (7) out of ten (10) used eggs. Then ninety (90) per cent of the group ate meat. Seven hundred and forty-nine (749) listed meat daily, while bread and cereal were extremely low; seven hundred nineteen (719) listed bread for at least one meal a day. Of the seven hundred ninety-two (792) studied two hundred sixty-five (265) reported that they ate no butter or margarine at all during three (3) day period.

The study revealed as a result of information from parents' and children's record forms, that 8 per cent of the diets would be classified as good; 22 per cent, fair; and 70 per cent, poor; which probably meant that there was a need

for nutrition education, that could provide a basis for improvement of the diets of these children.

Fletcher and Schuck (7) studied dietary practices and nutritional status of two groups of the Virginia school children to obtain information on the food habits and nutritional status of these children of Hanover County, Virginia and to observe the effectiveness of nutritional education on improvement food habits and the nutritional status. The findings indicated that there was a need for improvement in dietary practices as well as the nutrition of the children studied.

A study of the children's eating habits made by the local Red Cross Nutritional Committee in five elementary schools in Willimantic, Connecticut, in grades four through eight was reported by Potgieter and Everitt (23). The report presented the findings of two schools involving three hundred eighty-five (385) children. The study showed all but one of the diets was medium or poor in nutritional adequacy. The greater degree of deficiency was found to be in whole grain or enriched cereal produce, green and yellow vegetables, foods rich in vitamin C, and milk.

The school records of the physical, scholastic, and emotional rating of the children who were getting "poor" diets, as compared with the rating of those in the "better diets" group, which shows the latter to be slightly better in physical status, in days absent because of illness, and

in social adjustment.

Powell (24) made a study of the food habits of the pupils of the Nash County Training School. The study was undertaken to gather objective information concerning the pupils in the school.

Food likes and dislikes were obtained by having pupils to check a list of vegetables and fruits. For the food intake, daily dietary record forms were kept for seven consecutive days. The daily dietary record as judged for adequacy by the basic seven standards showed that leafy greens and yellow vegetables, most fruits, milk, and milk products and foods made from whole grain cereals were eaten in inadequate amounts. The results of this study showed that the food intake of all persons studied was inadequate and that there was definite need to improve the eating habits of all pupils studied.

In 1948 Hoover and Coggs (12) made a study of the food intake of 50 college women to determine the calorie, protein, minerals and vitamin intake. Fifty senior women between the ages of 19 and 20 who in 1945-46 were enrolled in advanced nutrition classes of Home Economics participated in the study. The classes were divided so that, one group represented the dormitory group, while the others represented family group. Heights, weights, surface areas, basic metabolism and energy requirements were determined for

each woman. Individual records were kept of food consumed for two, two day periods, October 15 and 16 and November 7 and 8. There was a three weeks interval between the two periods. Size of food portion was estimated by recommended standards. The intake of calories, proteins, and calcium, iron, vitamin A, thiamin, riboflavin and ascorbic acid was calculated according to the procedures outlined by Sherman (23). The study showed a normal range for the age group. The caloric intake was lower than the recommended amount for active and sedentary women. For both groups caloric intake was greater for the first period, than it was for the second period. The intake for the off-campus exceeded the intake for the dormitory group, possibly due to the fact that meals served at home were more appetizing than those served in a dormitory cafeteria. The protein intake was greater than the usual amount recommended by the National Research Council. The average intake of vitamin A, and ascorbic acid was greater than recommended allowance; however, the calcium, iron, thiamin and riboflavin compared favorably with recommended allowance.

In an effort to find out whether education in nutrition resulted in better dietary practices, Lamb and McPherson (17) made a survey on food consumption in 1948 to find out if nutritional practice came up to recommended standards. Data on food were collected as purchased for 1940

to 1944. The quantity of food consumed was determined by taking an inventory of foods on hand at the beginning of the survey week, adding all purchases and subtracting from the total inventory at the end of the week. Amounts of food consumed per person per week were classified in to three groups.

The nutritive value of each food was calculated and expressed as the average nutrient consumption per person per day. The average caloric intake showed a negligible deviation from the standards given in "Family Food Plan" for good nutrition (USDA, AWI-78, 1945). The average weekly consumption of potatoes was below the standard; however, the consumption of citrus fruits, tomatoes, and green and yellow vegetables were higher than recommended standards. The consumption of meat was low. Data revealed that the diet was accuated in nutrients, even though low in meat intake. At least one-half of the cereal foods eaten was whole grain. The consumption of eggs was high.

CHAPTER III

PROCEDURE

The pupils who were members of classes in homemaking and agriculture were selected as subjects for the study because it was assumed that they were somewhat typical of the pupils in the school. The investigator thought that the agriculture and homemaking classes could be used easily since only two instructors would have to guide them in filling out of the blanks and time would have to be taken from those two classes only, yet the experience would be in keeping with the related subject matter. The classes were used with the hope that the findings concerning food habits could be used to guide the nutrition teaching in these classes to effective ends.

The data for this study were collected by means of questionnaires which were filled out by 76 homemaking girls and 49 agriculture boys, which made a total of 125 pupils. Ideas for construction of the questionnaires (See Appendix, Exhibit D) were gained by the writer from having read Brown (3) on the methods of collecting data. On the basis of the ideas, the questionnaire was constructed.

The questionnaires were distributed at the beginning of each class period for a period of seven days, by the investigator, who personally gave out the questionnaires and asked

the pupils to fill them out completely and return them to the writer at the end of the work period. The pupils were asked to record the liquids which they consumed and foods which they ate between meals, the sizes of serving, which they had at meal time, the meals which they failed to eat, with reasons for not eating, any likes and dislikes for certain foods, and foods eaten almost daily. Terms such as 'have eaten,' 'have not eaten,' and 'do not like' were to be checked for some items on the forms, and blanks were to be filled in for other portions.

No discussions or comments were given during the time the questionnaires were being filled. Therefore, the participants had no standard from the investigator as to what was a good or what was a poor diet. This does not mean that the pupils had no ideas as to what was a good or poor diet, but the investigator refrained from comment in order that no clues might be given to the pupils about answering the forms.

The agriculture teacher was instructed by the investigator how to direct the checking of the forms in his classes. After the expiration of the time each day the forms were collected and filed until the test was completed at the end of seven days. The data were tabulated by grouping the materials taken from the questionnaires, and tables were set up to cover the various discussion points.

The terms throughout this study have been defined as follows: nutrition education refers to the training of

individuals, particularly children, in the knowledge and use of sound nutrition practices. It does not, therefore, refer to the study of complex sciences.

A diet survey is a record of the daily food intake of an individual.

Malnutrition is inadequacy produced by failure to provide all of the requirements for good nutrition, that is, adequate foods in sufficient amounts at the proper time.

Diets were classified throughout the study by referring to the degree to which they conformed to the dietary standard "The Vital Eleven," which consists of eleven essential food groups, of which certain amounts should be included in the diet daily.

A diet was considered "good" if it contained eighty (80) per cent or more of the food groups, "poor" if it contained sixty (60) per cent or less, and "fair" if it fell between the good and poor levels.

The food groups and daily servings were taken from MacLeod (18) and the Texas Food Standard (32).

In order to give a clearer picture of the findings, simple tabulations were constructed from the data collected from the questionnaires. Other information was gained through reading periodicals, books and studies. The writer consulted the College Library guides and the School of Home Economics Reading Room.

The purpose of the study was explained to the pupils

and their cooperation was solicited in putting down accurate answers, in their checking. The information was tabulated, findings discussed, a summary, conclusions, and recommendations were made.

CHAPTER IV

FINDINGS AND DISCUSSION

The increased recognition of the importance of adequate nutrition throughout the nation led the writer to make a study of the food habits of the pupils used in the study, which resulted in the findings that pupils need to be able to select adequate diet according to the standard set up by the agency (18). No attempt at improving health can eliminate the basic consideration which must be given to food habits and nutrition education. It is generally believed that teachers need to know more about the pupils whom they teach if they are to be of assistance in helping them to develop satisfactory eating habits. In order to meet the needs of pupils, teachers must know their needs and this information must be turned into action through a well organized program.

The unit of society is the family, and there is much that can be learned about pupils, by studying the family (20). The one hundred twenty-five pupils used in this study represented sixty-seven families, which means that more than one pupil came from some of the families. In studying the occupations of the parents, it was found that most of the parents in the families studied by these pupils were day laborers. A few farmers and professional workers

were included.

The kinds of food which a growing child eats vitally affects his growth and development and have an important bearing on his health throughout the remaining years of his life. The brain cells are the sum total of what one eats or does not eat (29). As previously stated, there are two nutritional elements which act directly upon the human brain, thereby increasing its efficiency, power, and emotional stability and an adequate diet can supply these nutritional elements. The two brain conditioning elements glutamic acid, one of the amino acids, which is important in protein composition and thiamin known as vitamin B₁, are the elements necessary for a healthy nervous system.

This study was based on some information secured from pupil's food record form, which were voluntarily accepted and filled out by one hundred twenty-five (125) high school pupils of whom seventy-six (76) were girls and forty-nine (49) were boys. Table 1 shows that 70 per cent of the pupils lived in the urban and 30 per cent lived in rural areas. The pupils who lived in the rural areas were obliged to leave home early enough to catch the school bus, in which instances breakfast was often omitted and this encouraged the formation of the habit of eating between meals for those pupils.

Table 1

Pupils Living in Urban and Rural Areas

Areas	Number	Per Cent
Urban	88	70
Rural	37	30
Total	125	100

The writer believed that if breakfast could be prepared in the school lunch room for pupils from the rural areas who must leave home without eating, some progress might be made in helping such pupils to attain one of the valuable eating habits. The purpose of the school lunch program is to provide a large portion of the day's food requirement. The lunches are planned according to Federal specification, and therefore, the pupils who eat in the lunch room receive meals that conform to the recommendations (18) and (31). The school lunch program not only contributes an important part of the child's daily food intake, but it also provides an enhanced laboratory for worthwhile experiences with food and also places emphasis on the improvement of eating as a major expected outcome.

The lunch served at school was the main meal of the day for many of the pupils, and in some instances it may have been the only meal the child could depend upon since the questionnaire form revealed that some pupils had neither morning nor evening meal. It was further revealed that some

pupils would use their lunch money to buy between meal snacks and pop. It may have been that the right attitudes toward food had not been established, because of this habit.

Pupils must be taught to choose foods intelligently since this is probably one way of bringing about desirable changes in food habits. According to the standard of daily food needs of high school pupils, important contributions may be made by these foods toward the satisfying of the body's need (18).

Table 2

Meals Eaten During Week By Pupils

Days in the Week	Number Eating Meals		
	Morning	Noon	Evening
0	42	20	15
1	20		
2	6	5	
3		3	6
4		9	4
5			7
6			22
7	57	88	71
Total	125	125	125

One may see in Table 2 the number of pupils who ate the daily meals and the number of times of the week that they ate them. Twenty-six (26) pupils neglected to eat breakfast regularly since most of them ate only one day of the week. Forty-two (42) failed to eat breakfast any day of the week in

which the study was made, while breakfast was eaten daily by nearly one-half of all the participants in the study. This was compared with the 68 (more than half) who ate breakfast irregularly or not at all.

Further study of the tabulations showed that seventeen (17) pupils had formed irregular habits regarding the noon meal. Twenty pupils never ate the noon meal, whereas, it was eaten by eighty-eight (88) pupils daily. The evening meal was the most undisturbed meal of the day, in that thirty-nine (39) pupils failed to eat several days of the week and fifteen (15) failed to eat the evening meal any day during the period of study, while seventy-one (71) ate the evening meal each day. It may be assumed from Table 2 that a large percentage of the pupils perhaps were not receiving the proper amount of nutrient required to keep the body functioning satisfactorily.

It was disclosed that the meals on Sunday were eaten in larger number than were those on any other day and in turn the meals on Saturday were eaten less regularly than those of the other days. It appears that in many instances parents were working during the week and had less time for planning and preparing meals; therefore, it is not unusual that the Sunday's meals were eaten by larger numbers than were the other meals during the week of study. It was noted that a few of the between meal snacks contained a small amount of fresh fruits, milk, and sandwiches which are

recommended.

There were no distinct differences between urban and rural pupils with respect to proportions reporting good and poor breakfast. The 57 pupils eating breakfast showed good and poor in both rural and urban areas. It was further revealed that the pupils from rural areas ate eggs and cereal for breakfast more consistently than did the pupils from the urban, whereas more of the urban pupils reported having eaten fruit for breakfast more consistently than did the pupils from the rural. The urban pupils reported having eaten fewer green and yellow vegetables than did rural pupils, while on the other hand rural pupils consumed more potatoes and beans than did the urban pupils.

It may be well to note that authorities who have made studies in nutrition have concluded that iron and calcium assist in the coagulation of blood and help in maintenance of neutrality and irritability of the nerves. Individuals are able to remain strong, healthy and active who eat food everyday. which contains adequate amounts of these nutrients. The number of times that one eats each day is not the only important factor in receiving an adequate diet, for it is equally essential that one eats the necessary food (31) in order that there exist the correct balance of all the elements which the body needs to carry on its daily activities.

Growing boys and girls need proportionally more food than do adults, because their bodies are in process of

developing. Questions were asked as to the size of serving which the pupils placed on their plates. Sixty-two (62) pupils checked that the serving was average in size, forty-eight (48) pupils stated that they ate larger than average size servings of food each meal, while fifteen (15) pupils replied that they usually ate servings which were smaller than average. Table 3 shows the number and percentage who put on their plates the various sizes of servings.

Table 3
Size of Serving

Serving	Number	Per Cent
Average	62	50
Larger than average	48	38
Smaller than average	15	12
Total	125	100

The recommended standards (30) advocated at least sixteen (16) servings of food per person per day carefully selected from the vital seven for an adequate daily supply. The writer found that the pupils who took larger than average servings when they did eat had skipped other meals, and the pupils who took average servings had eaten two or three meals a day, while the pupils who took smaller than average servings had eaten between meals, and stated that

they disliked the food which had been served.

During these days there is a tendency to skip meals, and to eat only the best-liked foods. As a safeguard against poor nutrition, it is well to eat first, the foods that are needed and then the extra foods may be from those that are best-liked (18). Table 4 shows food eaten between meals by the pupils.

Table 4

Foods Eaten Between Meals

Foods	Number	Per Cent
Apple	6	5
Cake	5	4
Candy	22	18
Cokes	33	26
Cookies	35	28
Milk	15	12
Oranges	20	16
Pie	1	1
Sandwich	14	11
Soda Pops	21	17
Other Foods	24	19

The habit of eating between meals is undesirable because it tends to destroy the appetite, thereby causing one to eat insufficient food at meal time. That food is one of the necessities of life and should be consumed in the correct amount and at regular times is one of the facts to guide one in giving instruction to pupils. Many persons form undesirable food habits because they do not understand

the importance of food and what constitutes an adequate diet. According to Stanley and Cline (30) such information can be acquired through study. The tabulation showed that more than 26 per cent of the pupils had cokes and cookies, approximately 17 per cent had candy or soda pop, and 19 per cent of the pupils listed foods other than those named which they ate between meals. The findings pointed out that a small percentage of the pupils took fruit, sandwiches, cake and milk for between meal snacks.

One of the foremost objectives of high school education is to learn how to live and learn. Good food practices should be included as the essential in the successful completion of this objective. Nutrition may possibly be taught through a program of education to a group of high school pupils eating in a school lunchroom where the choices of food can be observed. Then as pupils gain knowledge of nutrition one should expect to see evidences of changes in their food habits. The evidences of improved behavior should guide one in further teaching. Table 5 shows the reason as given by the pupil for not eating breakfast and the number who gave the reasons.

The habit of eating breakfast is considered important and should be started early in life (1). Questions were asked as to reasons for not eating breakfast, and the tabulation showed that 26 per cent believed that to eat breakfast made feel ill, 51 per cent did not have time to eat,

15 per cent did not want any breakfast, and 8 per cent made no reply. Time, it seemed kept these pupils from eating breakfast. It may be assumed that they had the appetite and would have eaten, had it been possible or if someone had awakened them in time to eat and catch the school bus.

Table 5

Pupils Failed to Eat Breakfast

Reasons	Number	Per Cent
Not enough time	40	51
Made ill	20	26
No appetite	12	15
No reply	6	8
Total	78	100

When one omits breakfast one of the three opportunities of getting building material and fuel supplies has been lost, thereby one is running the risk of becoming undernourished which in turn causes unusual susceptibility to diseases, early signs of old age or other disorders (1). The average daily breakfast menu should contain some of the following foods which have been selected from the standards given (30) and (33).

Fruit: Citrus or other fresh fruit

Eggs: With or without bacon

Whole grain restored or enriched cereals with milk and

sugar if desired

Fortified margarine or butter

Bread: Made with enriched or whole grain flour

Sweet spread, marmalade, jelly, jam, syrup or preserves

Milk

Three meals each day is the first step toward good nutrition (1). One of the recognized ills of modern life is constipation (31) and the omission of breakfast, the eating of a hasty breakfast and rushing out to activities of the day are often thought to be, causes of constipation.

The writer believed that the habits of eating breakfast by the fifty-seven (57) pupils who ate breakfast was a good beginning in establishing desirable food habits.

The human body is composed of many materials, and the food eaten must supply the needed material (31). To determine whether the pupils had selected food which would meet their nutritional needs, the pupils were asked to check from a list of foods those foods which they included in their diet almost daily. The foods listed in Table 6 were included almost daily by the pupils.

Sherman (29) stated that because of the vitamin and mineral content of fruits and vegetables they should be included in the diet daily. Vitamin A, the B complex, and vitamin C are very essential in protecting the body from various deficiency diseases such as scurvy, pellagra and

metaplasia. We see that money spend for fruits and vegetables yields fully its proportionate return in nutritive value. Vegetables give one a bountiful supply of the much-needed minerals and vitamins.

Table 6
Foods in Diets Almost Daily

Foods	Number	Per Cent
Bread	125	100
Butter	48	35
Cereal	29	23
Eggs	53	42
Fruit	47	38
Green vegetables	62	50
Meat	93	74
Milk	81	65
Other vegetables	37	30
Potatoes	67	54
Salads	52	42
Soda pop	55	44
Sweets	106	84
Yellow vegetables	54	43

It was found that all the pupils in the study ate bread in some form daily, sweets were eaten daily by 84 per cent of the pupils; followed by meats, 74 per cent; green and yellow vegetables, 50 per cent.

When one eats at home, there is often a tendency to promote an habitual and a limited choice of food, because it seems that most families are set on eating certain foods on

certain days in the week, and family members have food which they like, whereas, when one eats in groups outside of the family, there may be a trend toward greater variety, interest and choice (1) in food selection.

Children must be taught to choose intelligently since this probably one of the means of bringing about desirable changes in eating habits. Hence, pupils must fact the experiences of food selection and be guided into making correct choices through some phase of the school program of work.

The problem of the changing of food dislike to food likes in children rests not just in placing in disguised form before them the foods which are desirable, but basically the problem is one of educating the child as to the relation of adequate diet to the development of healthful bodies (18).

It is customary for the percentage of pupils having recommended amounts of other fruits and vegetables to be higher than that of the pupils having recommended amounts of green and yellow vegetables. This study was somewhat contrary to custom in that a greater percentage of pupils reported that they consumed other vegetables and fruits as is indicated in Table 4.

Milk is food number one (29) for balancing the diet because it contributes more to good nutrition than does any

other food. There is no one food, however, that contains everything the body needs and in the right proportion (18). This fact is a wise provision of nature, for human beings thrive on variety and are bored on monotony (31). It is also a wise provision of nature that milk and a few other foods supply abundantly much of the food materials needed daily. So important is it in the diet that nutritionists advise a quart daily until one reaches adult, and after that, a pint. Table 7 shows how the pupils in the study included milk in their diet.

Table 7

Habit of Drinking Milk as Given by the Pupils

Milk	Number	Per Cent
Three Times Daily	28	22
Twice Daily	48	38
Once Daily	5	4
Once a Week	10	8
Never	16	13
No Answer	18	15
Total	125	100

Most people choose certain foods in preference to others. The pupils were asked to check the answers "yes" and "no" if they had food favorites. Eighty-nine (89) pupils stated that they did have food favorites; eleven had no favorites and 25 did not check. Among those foods named by pupils as favorites, were chicken as listed by thirty-two

(32) pupils, most of whom specified their choice of preparation as "fried chicken;" and ice cream was named by 15 pupils. Table 8 shows the ten listed most time by the pupils.

Table 8

Favorite Foods of Pupils

Foods	Number
Banana pudding	4
Cake	5
Chicken	32
Corn	5
Greens	4
Green peas	9
Ice cream	15
Lemon pie	5
Pork ribs	3
Total	89

The pupils were asked to check the vegetables and fruits which they liked or disliked and fruits and vegetables which they had never eaten, (See Appendix, Exhibits B and C). Table 6 showed that 50 per cent ate green vegetables; 43 per cent, yellow vegetables; 30 per cent, other vegetables; and 38 per cent, fruits. Exhibits B and C show the vegetables and fruits which were liked and eaten by the pupils which failed to give sufficient variety in the meals to meet nutritional needs. When the diet consists of a variety of wholesome foods including fresh

fruits and vegetables, it would probably supply also all of the needed nutrients for health and vigor, and for growth, development and the repair of tissues (19).

Vegetables are like fruits and other important foods which nature contributes to good health and good looks. Healthy skin, hair, eyes, body vigor are a part of being attractive (3.). It is a good rule to make vegetables the main dish for one meal daily. Vegetables should appeal to the appetite because of their variety of color, shape, flavor and texture. All vegetables contain cellulose and fibers which are valuable as a laxative (26). They are important sources of three minerals in which the diet is most likely to be deficient; iron, phosphorus, and calcium are important sources of vitamins A, B, C, G, E and niacin.

Fruits and vegetables should be selected on the basis of whether or not they are needed rather than on the facts of dislikes or likes. The tabulation showed that more fruits were never eaten than vegetables. The pupils who lived in the urban areas (Table 1) ate more different kinds of vegetables and fruits than did the pupils who lived in the rural area, yet pupils who lived in rural areas ate fruits and vegetables more regularly than did the pupils who lived in the urban area.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This has been an investigation of the food habits of one hundred twenty-five (125) high school pupils. The data were secured by means of food record forms, which gave such information as, where they lived, foods eaten, amounts eaten at meals, foods and amounts eaten between meals. The period used for the survey was seven days. The purposes of this study were to:

1. Gather data concerning food habits of the pupils.
2. Secure a record of food intake and evaluate its nutritional adequacy when compared with recognized standards.

The daily dietary records as judged, for adequacy by the Vital Eleven (30) and (18) food chart showed that there was a definite need for improving the food habits of all persons studied, since the amounts eaten of vegetables, most fruits, milk and milk products, and foods made from whole-grain cereals were inadequate according to the Vital Eleven standard.

It was found that forty-two pupils omitted eating breakfast daily, noon meal was omitted by twenty (20) pupils daily and fifteen pupils had formed the habit of not eating

the evening meal. Many pupils checked that the foods which were disliked, were vegetables most often. It is probable that if new vegetables could be served by the families the students would be encouraged to eat more of them.

An appreciable number of pupils indicated that they ate and drank between meals, and their failure to manage so that they would have time to eat breakfast in the morning before leaving for school may have encouraged their habit of eating between meals.

It has been concluded that teachers, parents and all concerned with the health and development of the pupils might put forth every effort to bring about better nutrition among school children.

It has been concluded, also that it is necessary for improvement to be made in diets for proper growth and development and something can be done, by providing an opportunity for helping those children whose parents are not able to provide them with necessary funds for adequate meals and for getting the correct types of practical experiences in nutrition education in the school lunch room. The problem of improving the eating habits and health of individuals is one of great complexity. The solutions to this problem will depend upon the efforts of many organizations and individuals.

It is now believed that well balanced diets are essential to a longer life. If the teachings of nutrition education are well applied in daily living, individuals will

likely enjoy good health and happiness and there should be improvements in diets in order that pupils might develop or grow properly.

The findings showed a need for improving the food habits of pupils of Dunbar High School and upon the basis of these findings the investigator made the following recommendations:

- I. That the program of nutrition in the Dunbar High School be increased in scope and depth by:
 - A. Integrating nutrition in the entire curriculum starting with the primary grades.
 - B. Teaching nutrition to high school boys and girls.
 - C. Extending adult education in the area of nutrition with special references to:
 1. The basic relationship of food to health.
 2. Desirable food habits and how they are developed in children.
 3. The preparation and service of attractive meals.
- II. That the school lunchroom be used as a nutrition education center to help students to improve their food habits by:
 1. Serving attractive and well-prepared food.
 2. Preparing familiar foods in different ways.
 3. Introducing new foods with old ones.
 4. Making provision to serve breakfast and lunch to pupils who find it impossible to secure these meals at home.
 5. Advocating that the between meal sale of soft drinks be discouraged.
 6. Providing a basic eleven chart for each family

to be used as a basis for planning family meals.

7. Providing clean, attractive and pleasant surrounding in the lunch room by adding:
 - a. Floor covering
 - b. Service counter with steam
 - c. Hidden garbage disposal
 - d. Water fountain where the fingers will not come in contact with the water while water is being served.

III. That further study be made to investigate:

- A. The effect that food habits have on the psychological and social attitudes of the pupils.

Some of these recommendation can be carried out by sending home with pupils such varied sources of information as can be gleaned from the school newspaper, clippings or pamphlets about current food, and pamphlets and charts, (after careful evaluations) issued by commercial companies and government agencies; and individual classroom bulletins or reports.

Parents should be invited to come to school to attend exhibits and programs and to observe the class work when pupils are studying some interesting phase of nutrition.

The writer believes that the most valuable link between the school and the home is the pupil himself. Scientists have said: "Improvement in food habits was one of the most powerful factors in bringing up a nation as a whole." Good nutrition is everybody's job, and as such it is largely

a matter of personal choice, and starts with the individual. If these boys and girls can be taught even at this relatively late date to evaluate their own food habits, it is possible that they may lead healthy and happy lives, and may likewise influence the other members of their families to do so.

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APPENDIX

EXHIBIT A

THE "VITAL XI" FOOD CHART

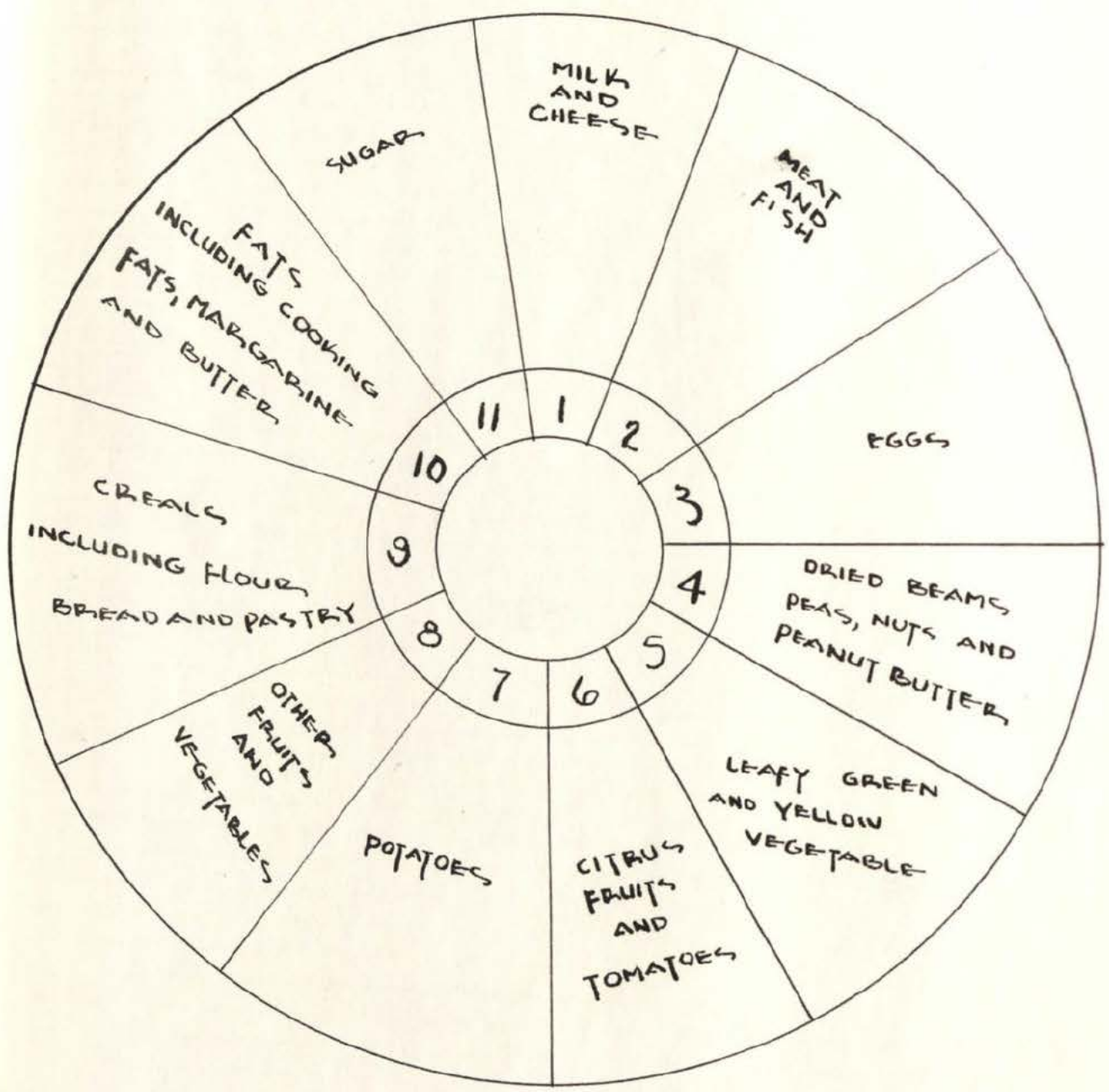


Exhibit B

Comparison of the Vegetables Liked, Disliked
and Never Eaten by the Pupils

Vegetables	Liked	Per cent	Dis-liked	Per cent	Never Eaten	Per cent
Artichokes					125	100.0
Beans, Lima	46	36.8	79	63.2		
Navy	98	78.4	27	21.6		
Pinto	112	89.6	13	10.4		
Kidney	41	32.8	80	64.0	4	3.2
Broccoli	38	30.4	12	9.6	75	60.0
Brussel Sprouts	38	30.4	46	36.8	41	32.8
Cabbage	94	75.2	31	24.8		
Carrots	73	58.4	52	41.6		
Cauliflower	26	20.8	15	12.0	84	61.2
Celery Cabbage	109	87.2	16	12.8		
Chard					125	100.0
Collards	78	62.4	47	37.6		
Corn	115	92.0	10	8.0		
Sweet	91	72.8	19	15.2	15	1.2
Dandelion Green					125	100.0
Greens, Mustard	86	68.8	17	13.6	22	17.6
Turnips	52	41.6	73	58.4		
Green Pepper	65	52.0	60	48.0		
Horse Radish	12	9.6			113	90.4
Kale	52	42.0	27	21.6	48	36.4
Leek	2	1.6			123	98.4
Lettuce	82	65.6	43	34.4		
Mushrooms	37	29.6	56	44.8	32	25.6
Okra	49	39.2	76	6.8		
Onions	117	93.6	8	6.4		
Parsley	75	60.0	10	8.0	40	32.0
Parsnips					125	100.0
Peas, English	125	100.0				
Blackeyes	108	86.4	17	13.6		
Purple Hull	112	89.6	8	6.4		
Cream	89	71.2	36	28.8		
Radishes	97	77.6	28	22.4		
Soy Beans					125	100.0
Squash	47	37.6	78	62.4		
Spinach	66	52.8	47	37.6	12	9.6
Tomatoes	115	92.0	10	8.0		

Exhibit C

Comparison of Fruits Liked, Disliked and
Never Eaten by the Pupils

Fruits	Liked	Per cent	Dis-liked	Per cent	Never Eaten	Per cent
Apples	125	100.				
Apricots	81	64.8	37	29.6	7	5.6
Avocado	27	21.6	8	6.4	90	72.0
Bananas	86	68.8	39	31.2		
Blackberries	95	76.0	30	26.0		
Cantaloupe	115	92.0	10	8.0		
Currants	42	33.6	15	12.0	68	54.4
Dates	56	44.8	29	23.2	40	32.0
Dewberries	108	86.4	17	13.6		
Elderberries					125	100.0
Figs	87	69.6	26	20.8	12	9.6
Gooseberries					125	100.0
Grapes	125	100.0				
Grapefruit	93	74.4	32	25.6		
Huckleberries	37	29.6	10	8.0	78	62.4
Kumquat					125	100.0
Lemons	125	100.0				
Limes					125	100.0
Loganberries					125	100.0
Muskmelons	89	71.2	14	11.2	22	17.6
Peaches	125	100.0				
Pears	115	92.0	10	8.0		
Pineapples	125	100.0				
Plums	125	100.0				
Plumcot					125	100.0
Plumgrape	86	68.8	17	13.6	22	17.6

Exhibit D

PRAIRIE VIEW AGRICULTURAL AND MECHANICAL COLLEGE
 PRAIRIE VIEW, TEXAS
 1955

Home Economics Graduate Division

Mrs. Hugh S. Washington, Investigator

Mrs. E. M. Galloway,
Advisor

A STUDY OF THE FOOD HABITS OF BOYS AND GIRLS
 OF THE VOCATIONAL DEPARTMENT OF THE
 DUNBAR JUNIOR-SENIOR HIGH
 SCHOOL
 LUFKIN, TEXAS

Record of meals for one week

Please fill in blanks: 1st Day

Age _____ Height _____ Sex _____ and weight _____

Where live? In town _____ or rural _____

Forms have been set up below in which you are asked to list all the foods you have eaten in the last 24 hours, including butter and beverages. Tell whether food was raw or cooked, as raw apples, bread made from wheat or corn, and indicate the amount of food eaten average, above average or less than average. If you did not eat or drink anything for any meal kindly state so in the space allowed for listing the foods.

FOOD EATEN AND DRANK FOR
 MORNING MEAL
Monday

Foods	Amount as 1 helping
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

Did not eat any thing for breakfast _____

Reason for not eating breakfast? _____

Size of serving? _____ Average _____, larger than average _____ or smaller than average? _____

Do you have food favorite? Yes _____, No _____, if yes state in blank _____.

FOODS EATEN AT NOON (Name foods and give amounts, such as rice one helping)

1. _____ 1. _____
2. _____ 2. _____

List any food eaten between morning and noon meal. (Give amount as one cup of fruit juice).

1. _____ 1. _____
2. _____ 2. _____

FOODS EATEN AT NOON (Name foods and give amounts such as beans, 1 helping)

1. _____ 1. _____
2. _____ 2. _____
3. _____ 3. _____
4. _____ 4. _____

List any foods eaten between noon and evening meal (give amount, such as candy, 1 bar):

1. _____ 1. _____
2. _____ 2. _____
3. _____ 3. _____

FOODS EATEN AT EVENING MEAL (Give amount as meat, 1 chop)

1. _____ 1. _____
2. _____ 2. _____
3. _____ 3. _____
4. _____ 4. _____
5. _____ 5. _____

List any food eaten between the evening meal and going to bed (give amount)

1. _____ 1. _____
2. _____ 2. _____

LIST OF FOODS I ATE AND DRANK ON TUESDAY.

FOODS EATEN AT MORNING MEAL (Give amount such as cereal, one cup):

Did not eat morning meal _____

Reason for not eating morning meal? _____

1. _____ 1. _____
2. _____ 2. _____
3. _____ 3. _____

List foods eaten between morning meal and noon (give amount as 1 candy bar)

1. _____ 1. _____
2. _____ 2. _____

FOODS I ATE AND DRANK AT NOON (give amount)

1. _____ 1. _____
 2. _____ 2. _____
 3. _____ 3. _____

List of foods eaten between noon and evening meal (give amount)

1. _____ 1. _____
 2. _____ 2. _____

FOODS EATEN AT EVENING MEAL (give amount)

1. _____ 1. _____
 2. _____ 2. _____
 3. _____ 3. _____
 4. _____ 4. _____
 5. _____ 5. _____

List foods eaten between evening meal and going to bed (give amount)

1. _____ 1. _____
 2. _____ 2. _____

LIST OF FOODS I ATE AND DRANK ON WEDNESDAY

FOODS EATEN AT MORNING MEAL (give amount)

Did not eat morning meal _____

Reason for not eating morning meal _____

1. _____ 1. _____
 2. _____ 2. _____
 3. _____ 3. _____

List foods eaten between morning and noon meal (give amount)

1. _____ 1. _____

LIST FOODS EATEN AT NOON MEAL (give amount)

1. _____ 1. _____
 2. _____ 2. _____
 3. _____ 3. _____
 4. _____ 4. _____
 5. _____ 5. _____

List foods eaten between noon and evening meal (give amount)

1. _____ 1. _____
 2. _____ 2. _____

LIST OF FOODS EATEN AT EVENING MEAL (give amount)

1. _____ 1. _____
 2. _____ 2. _____
 3. _____ 3. _____

LIST OF FOODS I ATE AND DRANK ON THURSDAY

FOODS EATEN AT MORNING MEAL (give amount)

Did not eat morning meal _____.

Reason for not eating morning meal _____

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |

List of foods eaten between morning and noon meal (give amount)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |

FOODS EATEN AT NOON MEAL (give amount)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| 4. _____ | 4. _____ |
| 5. _____ | 5. _____ |

List of food eaten between noon and evening meal (give amount)

LIST OF FOODS EATEN AT EVENING MEAL (give amount)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| 4. _____ | 4. _____ |

List of foods eaten between evening meal and going to bed (give amount)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |

LIST OF FOODS I ATE AND DRANK ON FRIDAY

FOODS EATEN AT MORNING MEAL (give amount)

Did not eat morning meal _____

Reason for not eating morning meal _____

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |

What foods eaten between morning and noon meal? (give amount)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |

LIST OF FOODS EATEN NOON MEAL (give amount)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |
| 4. _____ | 4. _____ |

List foods eaten between noon and evening meal (give amount)

- | | |
|----------|----------|
| 1. _____ | 1. _____ |
| 2. _____ | 2. _____ |
| 3. _____ | 3. _____ |

LIST FOODS EATEN AT EVENING MEAL (give amount)

1.	_____	1.	_____
2.	_____	2.	_____
3.	_____	3.	_____
4.	_____	4.	_____

List foods eaten between evening and going to bed (give amount)

1.	_____	1.	_____
2.	_____	2.	_____
3.	_____	3.	_____

LIST OF FOODS I ATE AND DRANK ON SATURDAY

FOODS EATEN AT MORNING MEAL

Did not eat morning meal _____

Reason for not eating morning meal _____

1.	_____	1.	_____
2.	_____	2.	_____
3.	_____	3.	_____
4.	_____	4.	_____

List food eaten between morning and noon meal (give amount)

1.	_____	1.	_____
2.	_____	2.	_____
3.	_____	3.	_____

LIST FOODS EATEN AT NOON MEAL (give amount)

1.	_____	1.	_____
2.	_____	2.	_____
3.	_____	3.	_____
4.	_____	4.	_____

List foods eaten between morning and noon meal (give amount)

1.	_____	1.	_____
2.	_____	2.	_____

LIST FOODS EATEN AT EVENING MEAL (give amount)

1.	_____	1.	_____
2.	_____	2.	_____

List foods eaten between evening meal and going to bed (give amount)

LIST OF FOOD I ATE AND DRANK ON SUNDAY

FOOD EATEN AT MORNING MEAL

Did not eat morning meal _____

Reason for not eating morning meal _____

1.	_____	1.	_____
2.	_____	2.	_____
3.	_____	3.	_____
4.	_____	4.	_____

List foods eaten between morning and noon meal (give amount)

1.	_____	1.	_____
----	-------	----	-------

FOODS EATEN AT NOON MEALS (give amount)

1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____

List foods eaten between noon and evening meal (give amount)

1. _____	1. _____
2. _____	2. _____

FOODS EATEN AT EVENING MEAL (give amount)

1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

List foods eaten between evening meal and going to bed (give amount)

1. _____	1. _____
2. _____	2. _____

Check the fruits and vegetables eaten thus (V). The ones you have not eaten with a mark (X), and place a line under the ones you do not like. Thus:

Apple V _____, pears X _____, and spinach

FRUITS

Apples
 Apricot
 Avocado
 Bananas
 Blackberries
 Cantaloup
 Currants
 Dates
 Dewberries
 Figs
 Gooseberries
 Grapes
 Grapefruit
 Huckleberries
 Kumquat
 Lemons
 Limes

VEGETABLES

Artichoke
 Beans, kidney
 lima
 navy
 pinto
 Broccoli
 Brussel Sprout
 Cabbage
 Carrots
 Cauliflower
 Celery cabbage
 chard
 Collards
 Corn
 Sweet
 Dandelion green
 Greens, Mustard

FRUITS

Loganberries
Mushmelons
Peaches
Pears
Pinapples
Plums
Plumscot
Plumegrante

VEGETABLES

Greens, turnip
Green pepper
Horse radish
Kale
Leek
Lettuce
Mushrooms
Okra
Onions
Parsley
Parsnips
Peas, blackeye
 cream
 English
 purple hull
Radishes
Soy beans
Squash
Tomatoes
Potatoes