

FOOD PRACTICES IN NURSERY SCHOOLS

by

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## INTRODUCTION

Diets of the preschool child have been the subject of a number of studies but apparently there has been no extensive investigation of dietary practices in the nursery schools of this country. It was to obtain data on food planning and meal service practices in the nursery schools of this country and to make the information available to those concerned with child feeding that the present study was made.

The social and economic conditions of 6015 preschool children of Gary, Indiana were investigated by Roberts (1922). Their diets were recorded for a period of one day but the information was limited to the accuracy of the mother's memory. About nine per cent of the diets were judged to be adequate by the frequency of occurrence of essential foods in the menus. A lack of milk, vegetables, fruits, cereals, and eggs in the meals, and the prevalence of coffee as a beverage accounted for the inadequacy of the other 91 per cent of the diets. Meat and potatoes were the foods consumed in largest amounts. The meals were not only unsuitable for the age of the child but they were served at

irregular times and considerable food was eaten between times. Race and amount of income apparently influenced the choice of food in the diets.

MacCarthy (1923) suggested as fundamentals in child feeding, regular meals consisting of nourishing, well-cooked food suited to the age and digestive powers of the child. He believed no food should be offered between meals and that the child should not be urged if he refused to eat his food at the time of serving.

This author regarded milk as the most desirable food for the child and emphasized that it be pure and fresh, and pasteurized if safe raw milk were not obtainable. One quart a day for each child was recommended as was butter after the third year. Cereals were believed desirable, especially the cooked ones if well-cooked and salted, and served with little sugar. Eggs were recommended if fresh and slightly cooked but they were never to be fried for children. Well-baked bread was considered wholesome, if not exclusively white and not strictly fresh. Oatmeal, whole wheat, and cornmeal flours were suggested for use in bread. Sponge cake, two days old, and plain cookies were advised only for occasional use.

Methods thought desirable for cooking meats were

broiling, roasting, and stewing. No pork, liver, game, dried or salted meats, mackerel, or halibut were to be served to the child. Stews of meat and vegetables were considered economical as well as desirable for variety. Plain broth or vegetable puree of spinach, potato, or celery was included after the third year. Tomato soup was prohibited. It was recommended that vegetables other than potatoes be served at least once a day and white potatoes, either baked or boiled every day. Desirable vegetables were spinach, asparagus tips, peas, string beans, well-mashed young limas, carrots, young beets, celery, and squash. Approved methods of cooking these vegetables were steaming, baking, boiling, or stewing. The writer believed it desirable to avoid the use of radishes, onions, cucumbers, tomatoes, corn, old beets, cabbage, and egg plant. Fruit juices and the pulp of cooked fruit were suggested for desserts as well as simple cornstarch pudding, plain rice, baked custard, and ice cream. The latter was not to be served more than once a week.

Roberts and Waite (1925 a and b) made a study of the food served in a day nursery in Chicago to determine whether the individual method of dietary study was possible to use satisfactorily with large groups and to find to what

extent group averages represented the individual. They also desired to test the adequacy of the diets in the particular nursery studied. The children were served two meals a day at the school and all foods eaten were weighed and evaluated.

These workers found that the individual method of dietary study was satisfactory to use with a large group, but they did not think that group averages represented the individual child. Apparently there was no consistent relationship between the age of the child and the amount of food eaten. Although the meals served to the children were probably better than they would have had at home, they were regarded as too high in carbohydrate and too low in fats, fruits, and vegetables. These authors believed this condition might have been improved by having on the staff a trained person to plan the menus for the nursery.

A study of the Iowa State College Nursery School was made by Messenger (1926) to determine the food intake of the normal child under favorable conditions and also the relation of the school meal to the day's dietary. A variation of the individual method of dietary study was used in which the food was weighed or measured and placed on the plates in the kitchen. These plates were then put on the

serving table and the children carried them on individual trays to the tables.

Messenger found the average daily food intake for a six-day period for 13 preschool children to be 1337 Calories. The amount eaten varied from child to child and from day to day with the same child. The noon meal averaged 515 Calories per child or 38 per cent of the total number required for the day. The average daily intake of protein per child was 45.5 gm., 38.5 per cent of which was furnished by the school meal. The calcium averaged 1.03 gm. daily; the phosphorus, 1.03 gm.; and the iron, 8.3 mg. per child. The school meal furnished 38 per cent of the calcium for the day, 40 per cent of the phosphorus, and 49 per cent of the iron. This author believed that if the nursery school would supply one-third of the child's daily food needs, the home could be depended upon to furnish the other two-thirds, with the exception of iron.

A study of the diets and food habits of 30 preschool children living in Manhattan, Kansas was made by Brooks (1927). Of these children, 15 were enrolled in nursery school. It appeared that the nursery group had more servings of fruits, vegetables, and eggs, fewer servings of cereals, and slightly less milk than the non-nursery one.

Although the food of the non-nursery school children was probably adequate, those receiving the nursery school lunch apparently had a more desirable diet.

Rose (1929) considered favorable learning conditions of the child to include an appetite stimulated by good health and freedom from physical or nervous fatigue, supervision by a cheerful person capable of heartily recommending the food to be eaten, and food of the same flavor, texture, and temperature of some previous experience. Refusals of food should be suppressed, according to this author, and the child should be required to eat some of that which he has refused. Four meals a day were recommended.

From three cups to one quart of milk daily was the first food to consider, according to Rose. A well-cooked cereal served once or twice a day with milk or thin cream but no sugar was considered desirable. Raw or soft-cooked egg yolk, or steamed and ground liver, as well as fruits and vegetables were considered essential for each day's diet. The use of mild fruits was advised, juice and strained pulp for the younger child and well-cooked fruit for the older one. Recommended vegetables were string beans, squash, celery, spinach, carrots, peas, and potatoes. Dried beans and peas were suggested for use in soup when economy was necessary. It was believed that raw vegetables



were not well digested but that the habit of eating them should be cultivated early. A small amount of lean beef, lamb, chicken, or liver was permitted occasionally but was not considered necessary if the diet were otherwise adequate in protein, as it should be if one quart of milk were used daily. Short cooking periods for vegetables were advocated.

Ford (1929) offered suggestions helpful to the nursery school in aiding the child to meet situations, both at school and in the home. To get a child to eat what he should, she recommended that the adult assume that the child will eat his food and that he be prevented from taking advantage of any particular situation permitting him to show his power. It was also suggested that mealtime be made a pleasant occasion for the child, that scolding or punishing or talking about food and the process of eating be avoided during the meal.

Ford further recommended that all members of the family set a good example for the child, that he have regular hours for eating, and that no food be allowed at other times. It was found helpful to have all food carefully cooked and attractively served, to have the amounts small enough to be consumed readily, and to see that the food

was of the right temperature and not too highly seasoned. If the child would not eat under these conditions, it was assumed that he was over-tired, not well, nervous, worried, unhappy, or too much excited or interested in other things.

Several studies of food intakes of normal preschool children were presented and compared by Sweeny and Chatfield (1932). Food standards formulated from the findings of these studies included 99 Calories of energy and 3.5 gm. of protein per kg. of body weight daily for a three-year old child. A gm. each of calcium and phosphorus per day were recommended for all children from two to six years of age. An adequate daily standard for iron for the three-year old child was considered by these workers to be 0.61 mg. per kg. of body weight. Factors believed to affect the child's appetite were his physical condition, the emotional atmosphere before and at mealtime, the aesthetic appeal of the food, and the ease with which he could handle it. A noon meal and two lunches were expected to furnish half the day's protein and phosphorus, and slightly more than half the calcium and iron, besides liberal quantities of vitamins.

A study of the food intakes of normal preschool chil-

dren by means of an individual dietary study was undertaken by Tasso (1933) at the Utah State Agricultural College. She desired to compare the findings of her study with commonly accepted standards and to determine the amounts of food consumed by the children. She also wished to know the cost of serving an adequate noon lunch for a nursery school group.

The average daily food intake for the group was 1383 Calories for the children two to three years old and 1300 Calories for those three to four years of age. The mean protein consumption was 44 gm. per day for the children of two to three years and 45 gm. for those of three to four. The average fat consumption was 47 gm. daily for the first group and 58 gm. for the last one. The younger children consumed 166 gm. of carbohydrate daily compared with 169 gm. eaten by the older ones. The average calcium intake was 0.98 gm. for the two to three year olds and 1.15 gm. for the others, while phosphorus averaged 0.92 gm. per day for the smaller group and 1.24 gm. for the larger one. The iron was higher for the younger children, averaging 12 mg., while it was only 8 mg. for the older ones.

It appeared that vitamins were adequately provided by the liberal use of milk, fruit, vegetables, and cod-liver

oil in the diets. The calcium and phosphorus findings agreed with accepted standards. Gains in weight and height of the children were equal to and above the expected increase of five pounds and two and one-half inches. The average cost of the nursery school meals was 16 cents per child.

Roberts (1935) considered the noon meal of the nursery school to be an important nutrition measure and a means of development of desirable food habits in the child. According to this author, the influence of the group at lunch time helps the child, who has difficulty in conforming to rules, by setting examples before him; the doing of certain expected things teaches him to accept routine as a matter of fact; the suggestion and approval of the supervisor encourages him to strive to do as well again, and allowing him to participate in getting the meal gives him initiative. Careful observation was suggested as a means of determining methods of correcting problems met during the lunch period.

Carpenter, Hann, and Yeatman (1936) compiled a group of menus and recipes suitable for use in nursery schools including commonly recommended food standards and useful suggestions for nursery food preparation. They believed that a preschool child should have his principal meal in the

middle of the day and that this, with the mid-afternoon lunch, should supply about half his daily food needs. It was recommended that the noon meal provide egg or meat or other high-protein main dish, a vegetable rich in vitamins and minerals, a starchy food, and milk. A dessert might be served in addition. It was further recommended that the nutritionist check and suggest foods for the child's home meals and plan school menus a week in advance so they might be posted for the parents to see.

In the emergency nursery schools of New York State, Dale (1936) found that a diet based on definite articles and fairly definite quantities of food was most economical to serve. A corrective diet higher than normal in minerals, vitamins, and protein was planned for emergency schools. In the parent education work of this state, a breakfast of milk and whole grain cereal was stressed and, in most cases, the same items were recommended for supper as well. A limited amount of fat in the diet, carefully distributed throughout the day, was suggested to increase rapidity of digestion with consequent inducement of hunger. A program emphasizing slight social pressure in matter-of-course eating, quiet pleasure in the dinner experience, and stimulation of appetite was found to bring desirable results.

Prevey (1936) reported an observation on a group of nursery school children of the Institute of Child Welfare of the University of Minnesota. The purpose of this study was to discover whether or not children, when serving themselves, would select adequate quantities of each essential food and what their attitude would be during the meal. The foods offered were those of the regular school menu and in addition, an extra cooked vegetable, a raw vegetable, and a dessert. These permitted considerable choice. Self-service with little adult interference was recommended as a satisfactory method of serving the children. Prevey believed it would be impractical for a nursery school to offer a variety of each type of food daily but, if essential foods were offered regularly, the children would secure a diet which would be adequate over a period of time if not for the day.

The staff of the nursery school at Cornell University (1936) recognized nutrition and learning as two "principles" involved in the nursery school meal. They believed these were both present on every eating occasion. To meet these conditions, it was suggested that the adult arrange an eating situation which would challenge the child's interest and activity, that he be allowed to undertake only that which was reasonable, and that he be given just enough

guidance and approval to encourage him to greater development. Under this plan, these workers thought the child gradually gained independence and at the same time ate adequate food in a fairly reasonable time and with an approximately constant or increasing efficiency score.

Sweeny and Buck (1936) made suggestions for feeding children in nursery schools, basing their recommendations largely on personal experimentation and experience at the Merrill Palmer School. Use was made of irradiated evaporated milk in solving the problem of lowering costs, increasing food values, and developing more convenient procedures for food preparation.

These workers recommended that the food eaten at the nursery school include each day for each child one pint of milk, one egg or its equivalent in meat, fish, or liver, one slice of whole wheat bread, an uncooked green leafy or yellow vegetable (either in a sandwich or a salad), a cooked vegetable, and fruit or a dessert flavored with a fruit. To this they would add some starchy food. Menus for the different seasons and recipes for use in the nursery school were included.

The food consumption of children at the National Child Research Center in Washington, D. C. was studied by Hann

and Stiebeling (1938) to obtain data on the food consumption habits and nutritive value of the diets of healthy young children. Three groups of children ranging in age from 24 to 71 months were observed, some at home and others both at home and at school. A noon meal and a mid-afternoon lunch were served at the school. This study indicated that normal children of two to three years consumed food furnishing 1200 to 1350 Calories; from four to five years, 1450 to 1700 Calories; and those from five to six years, 1600 to 1700 Calories daily.

It was suggested that these meals might be expected to furnish per child per day at moderate cost about two-thirds to three-fourths gm. each of calcium and phosphorus, four to five mg. of iron, 2000 to 4000 International units of vitamin A, 130 to 190 International units of vitamin B<sub>1</sub>, 350 to 650 International units of vitamin C, and 350 to 500 "Sherman units" of vitamin G. It was recommended that home diets, apparently adequate, might be made more nearly optimal by a larger use of lightly milled grain products, iron-rich foods other than muscle meat and fish, some reduction in the use of sugar, and the replacement of some of the sugar with molasses or sirups.

According to Lowenburg (1938) appetites and likes and



dislikes for certain foodssshould not be encouraged in children lest they interfere with proper growth and mental, nervous, and nutritional development. He suggested that meals should be eaten at regular periods, with no food between, and that overfeeding or forced feeding might result in digestive disturbances, loss of appetite, or stubborn refusal of wholesome foods. He recommended that the heaviest meal should be served between the hours of 12:00 and 2:00 p. m.

Lowenburg further advocated the freshest and cleanest foods, simply prepared dishes, and little seasoning. He believed that meats should never be fried, that they were best if broiled or roasted, but acceptable if stewed or pan-broiled. Meat should be well-cooked and served only once a day, according to this author. The best meats were chicken, squab, young turkey, beef, or lamb. He regarded mutton, veal, and pork, except bacon, as undesirable.

Canned or cold storage vegetables were recommended. The cabbage family, except Brussels sprouts and cauliflower, as a rule were to be used sparingly. He regarded as undesirable such vegetables as turnips, corn, shelled dried beans, radishes, onions, old kohlrabi, kale, cucumbers, raw tomatoes, oyster plant, sweet potatoes, and yams.

Methods advocated as desirable for preparing potatoes were mashing, or baking and running through a sieve. It was recommended that a sufficient supply of fruits be selected from the citrus group, apples, peaches, bananas, and prunes. Ways of serving eggs regarded favorably were raw, coddled, soft- and "hard-boiled", poached, soft scrambled, as omelet, or in custards and puddings. Well-cooked cereals were thought to be desirable and white or whole wheat bread if at least a day old.

#### PROCEDURE

In 1937-1938, a study was made of food planning and meal service practices in nursery schools in this country sponsored by colleges and universities, by public schools, by tuition, and by philanthropic groups. The group of philanthropic schools included the emergency nursery schools as well as those sponsored by individuals and organizations.

Checking lists containing 380 questions and items relating to food practices in nursery schools were sent to 320 supervisors in various parts of the United States. A letter of instruction was included with each list (See

Appendix). The state supervisors of emergency nursery schools were asked to distribute checking lists to three of their representative schools (See Appendix).

Data from the 219 returned checking lists were tabulated and summarized.

The items in the checking lists which were used in this study are shown in the Appendix.

#### DISCUSSION OF RESULTS

The study was begun in June, 1937 and was continued until October, 1938. Out of the 328 checking lists sent out, 48 were returned from college and university nursery schools, 11 from public schools sponsoring nursery schools, 24 from tuition schools, and 136 from philanthropic ones, making a total of 219. In addition, checking lists were returned unmarked by two schools which had been closed. Also lists were returned unchecked by 12 others that did not furnish a noon meal. Three of these served a mid-morning lunch of crackers and milk, or tomato or fruit juice.

In assembling the data, the material was compiled and studied under the 21 specific divisions included in the checking list. The evaluation of these items follows.

### Number of Years Nursery School has been Maintained

Table 1 indicates that at the time the lists were checked (1937-38), about one-fourth of the college and university nursery schools had been in existence for as long as 10 years. One had continued for 20 years, while the most recent had been established for only two years. Out of the 11 public schools reporting, one had been maintained for 14 years, and about one-third for three years. These were the most recent in this group. The duration of the 24 tuition schools ranged from 2 to 18 years, but the largest number had existed for a period of 10 years. One philanthropic school had been maintained for 24 years but the majority had been organized for only three years. The most recently established ones were in the philanthropic group because of the emergency nursery schools which had been organized less than one year before this study was made.

Table 1. Number of years nursery school has been maintained.

Years no.	School			
	Colleges and universities no.	Public no.	Tuition no.	Philanthropic no.
Less than 1	-	-	-	7
1	-	-	-	11
2	3	-	1	19
3	1	4	-	65
4	2	1	-	21
5	-	-	1	-
6	1	-	2	1
7	3	2	4	-
8	8	-	1	-
9	5	1	2	-
10	12	1	7	2
11	4	-	1	1
12	4	1	1	1
13	2	-	-	-
14	-	1	-	1
15	-	-	2	1
16	1	-	-	1
17	-	-	-	-
18	-	-	1	-
19	-	-	-	-
20	1	-	-	-
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	1
Total	47	11	23	132

### Average Daily Attendance

The attendance varied greatly being as low as eight to ten pupils daily in some cases and as high as 50 to 100 in others (Table 2). The schools sponsored by colleges and universities, for the most part, reported from 11 to 20 children in attendance, whereas in the public schools the average was slightly higher, ranging from 16 to 25 daily. The tuition schools showed greatest variation in numbers. They had approximately as many reporting in the low brackets as in the high ones while the majority of the philanthropic group had a daily attendance of 21 to 25 pupils.

### Lower Age Limit for Acceptance of Pupils

Schools of each of the four types enrolled pupils as young as 18 months, while one philanthropic school reported accepting children eight months old (Table 3). The majority of college and university and philanthropic nursery schools and the largest group of tuition schools did not take pupils younger than 24 months of age. The largest group of public schools reported 36 months as the lower age limit for

Table 2. Average daily attendance.

Daily Attendance no.	School									
	Colleges and universities:			Public		Tuition		Philanthropic		
	no.	per cent	no.	per cent	no.	per cent	no.	per cent	no.	per cent
6 - 10	8	16.7	1	9.1	2	8.3	-	-	-	-
11 - 15	20	41.7	1	9.1	6	25.0	4	2.9	4	2.9
16 - 20	15	31.3	4	36.4	5	20.8	26	19.1	26	19.1
21 - 25	3	6.3	4	36.4	4	16.7	69	50.7	69	50.7
26 - 50	2	4.2	1	9.1	6	25.0	36	26.5	36	26.5
51 - 100	-	-	-	-	1	4.2	1	0.7	1	0.7
Over 100	-	-	-	-	-	-	-	-	-	-
Total	48	100.2	11	100.2	24	100.2	136	99.9	136	99.9

Table 3. Lower age limit for acceptance of pupils.

Age months	School							
	Colleges and universities:		Public		Tuition		Philanthropic:	
	no.	per cent	no.	per cent	no.	per cent	no.	per cent
18	11	22.9	3	27.3	9	39.1	19	14.1
24	32	66.7	3	27.3	11	47.8	101	74.8
30	2	4.2	1	9.1	1	4.3	11	8.1
36	3	6.3	4	36.4	2	8.7	6	4.4
Total	48	100.1	11	100.1	23	99.9	138 <sup>1</sup>	

<sup>1</sup> Based on 135 schools. Three reported having two different groups of children; one accepted children as young as eight months.



acceptance of pupils.

#### Upper Age Limit for Acceptance of Pupils

Only two nursery schools in each of the college and university and philanthropic groups reported a limit as low as 36 months as the upper age for enrollment of pupils (Table 4). For the most part, the college and university schools indicated a maximum age ranging from 48 to 60 months, while in the majority of the public schools the limit was 60 months. The variation was slightly greater in the tuition and philanthropic schools, extending from 48 to 66 months. It appeared that these schools included children somewhat older than those of the other groups.

#### Race Predominating

The philanthropic group of schools was the only one reporting other than white children enrolled (Table 5). This indicated that children of other races were not admitted or did not apply for admittance into any but the philanthropic nursery schools. The pupils of the majority

Table 4. Upper age limit for acceptance of pupils.

Age months	School							
	Colleges and universities:		Public		Tuition		Philanthropic:	
	no.	per cent	no.	per cent	no.	per cent	no.	per cent
36	2	4.2	-	-	-	-	2	1.5
48	9	18.8	2	18.2	5	21.8	19	14.0
54	10	20.8	2	18.2	3	13.0	27	19.9
60	24	50.0	6	54.5	5	21.7	67	49.3
66	3	6.3	1	9.1	10	43.5	26	19.1
Total	48	100.0	11	100.0	23	100.0	141 <sup>1</sup>	

<sup>1</sup> Based on 136 schools. Four reported having two different groups of children and one had three.

Table 5. Race predominating.

Race	School							
	: Colleges and universities:		Public		: Tuition		: Philanthropic:	
	: no.	: per cent	:no.:	per cent:	no.:	per cent:	no.:	per cent:
Colored	-	-	-	-	-	-	24	17.9
White	48	100.0	11	100.0	23	100.0	102	76.1
Chinese	-	-	-	-	-	-	-	-
Mexican	-	-	-	-	-	-	3	2.2
Other	-	-	-	-	-	-	5 <sup>1</sup>	3.7
Total	48	100.0	11	100.0	23	100.0	134	99.9

<sup>1</sup> One Indian school, one Italian and Austrian, and one Polish and Russian were reported.

of schools having other than white children enrolled consisted of Negroes.

#### Person Planning Meals

Meals in the college and university schools were usually planned by the dietitian, the home economics teacher, or by other staff members (Table 6). In the majority of the public and philanthropic groups, staff members other than those mentioned in Table 6 were found to plan the meals most frequently. The largest group of tuition schools had a dietitian to perform this duty. Many of the nursery schools used two or more persons for planning the meals.

#### Guiding Principles Regarding Food Practices in the Nursery School

The majority of all the nursery schools replying to the questionnaires agreed as to the following guiding principles concerning food practices for nursery schools; i. e., desirable standards should be maintained for the benefit of the child, the parent, and adult visitors and emphasis should be placed upon acquiring a liking for a

Table 6. Person planning meals.

Person	Schools							
	Colleges and universities (43 schools)		Public (11 schools)		Tuition (23 schools)		Philanthropic (131 schools)	
	no.	per cent	no.	per cent	no.	per cent	no.	per cent
Cook	3	7.0	2	18.2	3	13.0	24	18.3
Dietitian	17	39.5	3	27.3	11	47.8	40	30.5
Home Economics teacher	19	44.2	1	9.1	3	13.0	16	12.2
Other staff members	11	25.6	6	54.5	8	34.8	67	51.1

wide variety of foods (Table 7). However, there were extensive differences in reaction to the idea that "One should insist that the child receive his due amount of every item of balanced diet in every nursery school meal." The majority of the philanthropic schools reported favorably on this principle, while only a small percentage of college and university schools accepted it.

#### Specific Aims in Nursery School Food Service

More than half of the public and the philanthropic nursery schools emphasized nutritious meals at minimum cost (Table 8). Fewer schools in the college and university and tuition groups appeared to be especially concerned with this problem. Regardless of type, only a few nursery schools reported the serving of minimum cost meals as a chief aim. The majority of the philanthropic group planned to include some minimum cost foods but most of the nursery schools of the other types did not mention this objective in their plans. Quantitative records of food consumption were maintained by comparatively few and the public schools were the only ones keeping qualitative eating records to any large extent, 64 per cent.

Table 7. Guiding principles regarding food practices in the nursery school.

Guiding principles	School							
	Colleges and universities: (45 schools)		Public (11 schools)		Tuition (24 schools)		Philanthropic (136 schools)	
	no.	per cent	no.	per cent	no.	per cent	no.	per cent
Desirable standards maintained for benefit of child	44	97.8	10	90.9	23	95.8	133	97.8
Desirable standards maintained for benefit of parents, students, and other adult visitors	34	75.6	9	81.8	17	70.8	109	80.1
Insist child receive his due amount of every item of balanced diet in each nursery school meal	7	15.6	5	45.5	11	45.8	84	61.8
Emphasis placed upon acquiring liking for wide variety of foods rather than upon present food habits	33	73.3	11	100.0	17	70.8	115	84.6

Table 8. Specific aims in nursery school food service.

Aims	Schools							
	Colleges and universities (45 schools)		Public (11 schools)		Tuition (24 schools)		Philanthropic (136 schools)	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Offer well balanced meals, containing desirable combinations of food	44	97.8	11	100.0	24	100.0	134	98.5
Serve to each child in each meal food which will supply required calories	33	73.3	9	81.8	17	70.8	110	80.9
Include seasonable foods	41	91.1	11	100.0	19	79.2	118	86.8
Provide nutritious food at minimum cost	17	37.8	9	81.8	12	50.0	127	93.4
Serve minimum cost meals occasionally	8	17.8	2	18.2	6	25.0	64	47.1
Serve some dishes prepared at minimum cost	6	13.3	3	27.3	7	29.2	75	55.1
Provide a variety of foods so that child will learn to like them	43	95.6	11	100.0	22	91.7	132	97.1
Serve foods prepared in a variety of ways so child will learn to enjoy different dishes	37	82.2	9	81.8	22	91.7	129	94.9
Use fresh fruits and vegetables when available rather than canned ones	39	86.7	11	100.0	24	100.0	125	91.9
Keep quantitative records of food consumption	17	37.8	3	27.3	5	20.8	65	47.8
Keep qualitative eating records	16	35.6	7	63.6	10	41.7	60	44.1
Help child to become accustomed to eating food set before him	45	100.0	11	100.0	21	87.5	135	99.3
Help child to learn to enjoy a balanced meal, including dessert	42	93.3	11	100.0	23	95.8	133	97.8
Help the child learn to enjoy mildly seasoned food	39	86.7	10	90.9	14	58.3	119	87.5



### Nursery School Space and Equipment

The schools providing a separate room for preparation of the food for the lunch ranged from 86 per cent in the philanthropic to 100 per cent in the public school group (Table 9). Only one tuition and nine philanthropic schools reported using coal as fuel for cooking. A few in the philanthropic group used wood as fuel and some reported the use of kerosene. Only a few schools from the public, tuition, and philanthropic groups had an electric toaster. The majority of schools of all types had an oven, a refrigerator, a double boiler, running water, and hot water in the kitchen. A large proportion of the nursery schools had such equipment as forks, teaspoons, tumblers, cups, plates, cereal or soup bowls, dessert dishes, and sherbet cups, but a smaller number provided knives, soup spoons, and individual baking dishes.

### Selection of Food

More than half the tuition nursery schools used fresh tomatoes in the winter months but few of the others reported this practice (Table 10). Tomato juice was generally served by all classes of schools for a mid-morning drink. Those using fresh orange juice for this purpose varied from 38

Table 9. Nursery school space and equipment.

Equipment	Schools							
	Colleges and		Public		Tuition		Philanthropic	
	universities		(11 schools)		(24 schools)		(136 schools)	
	(45 schools)							
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
A separate room for food preparation	44	97.8	11	100.0	21	87.5	117	86.0
A stove using for fuel:								
Gas	38	84.4	10	90.9	21	87.5	86	63.2
Coal	--	---	--	---	1	4.2	9	6.6
Wood	--	---	--	---	--	---	8	5.9
Kerosene	--	---	--	---	--	---	16	11.8
Gasoline	--	---	--	---	--	---	--	---
Electricity	9	20.0	1	9.1	2	8.3	21	15.4
Oven	44	97.8	11	100.0	22	91.7	128	94.1
Electric toaster	--	---	2	18.2	6	25.0	6	4.4
Running water in the kitchen	45	100.0	10	90.9	24	100.0	115	84.6
Refrigerator	26	57.8	6	54.5	12	50.0	97	71.3
Mechanical refrigerator	24	53.3	4	36.4	15	62.5	15	11.0
Double boiler	45	100.0	11	100.0	23	95.8	124	91.2
Hot water in the kitchen	43	95.6	7	63.6	23	95.8	84	61.8
Knives	26	57.8	3	27.3	8	33.3	52	38.2
Forks	45	100.0	8	72.7	22	91.7	120	88.2
Teaspoons	45	100.0	11	100.0	24	100.0	134	98.5
Soup spoons	4	8.9	--	---	8	33.3	22	16.2
Water tumblers	32	71.1	6	54.5	15	62.5	98	72.1
Cups	31	68.9	6	54.5	19	79.2	90	66.2
Plates	43	95.6	11	100.0	21	87.5	130	95.6
Cereal or soup bowls	30	66.7	5	45.5	18	75.0	89	65.4
Individual baking dishes	25	55.6	3	27.3	11	45.8	19	14.0
Dessert dishes	42	93.3	11	100.0	23	95.8	112	82.4
Sherbet cups	31	68.9	4	36.4	9	37.5	20	14.7

per cent in the tuition schools to 53 per cent in the college and university ones. Concentrated orange juice was not served extensively by any group, however more of it was used in the philanthropic one than in any other. Pasteurized whole milk appeared more frequently than any other kind in all types of nursery schools, while evaporated milk ranked second in popularity.

Fish was the most extensively consumed protein food included in the list which omitted fresh beef and lamb. Canned fish appeared slightly more often than fresh. Poultry and dried beef were ranked next to fish as popular protein foods. The college and university and tuition schools served poultry more often than dried beef, while a larger number of the philanthropic ones used dried beef more frequently. In the tuition schools, dried beef and poultry were served equally often. Pork and salt fish were not commonly served by any group.

Whole grain bread was used to a larger extent than white by all groups. More college and university, public, and philanthropic schools used white rice than brown rice whereas the opposite was true in the tuition schools. Commercial cakes and cookies appeared on 21 per cent of the menus of the tuition group and on 30 per cent in the philanthropic one. The other schools ranked between these two

Table 10. Selection of food.

Food	Schools							
	Colleges and: universities (45 schools)		Public (11 schools)		Tuition (24 schools)		Philanthropic (135 schools)	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Fresh tomatoes in winter	14	31.1	3	27.3	14	58.3	31	23.0
Tomato juice for mid-morning drink	35	77.8	9	81.8	19	79.2	128	94.8
Fresh oranges for mid-morning drink	24	53.3	5	45.5	9	37.5	68	50.4
Concentrated orange juice	1	2.2	1	9.1	2	8.3	23	17.4
Pasteurized whole milk	39	86.7	10	90.9	24	100.0	105	77.8
Raw whole milk	3	6.7	1	9.1	2	8.3	27	20.0
Fresh skim milk	1	2.2	--	---	1	4.2	6	4.4
Vitamin D milk	3	6.7	1	9.1	4	16.7	25	18.5
Dried skim milk	1	2.2	--	---	1	4.2	24	17.8
Dried whole milk	--	---	--	---	1	4.2	13	9.6
Evaporated milk	8	17.8	3	27.3	8	33.3	89	65.9
Fresh pork	--	---	--	---	1	4.2	--	---
Cured ham	3	6.7	--	---	1	4.2	5	3.7
Dried beef	15	33.3	5	45.5	7	29.2	63	46.7
Poultry	27	60.0	5	45.5	18	75.0	58	43.0
Fresh fish	27	60.0	10	90.9	21	87.5	68	50.4
Canned fish	43	95.6	10	90.9	17	70.8	126	93.3
Salt fish	4	8.9	7	63.3	4	16.7	20	14.8
White bread	12	26.7	1	9.1	11	45.8	29	21.5
Whole grain bread	45	100.0	11	100.0	24	100.0	133	98.5
White rice	26	57.8	8	72.7	12	50.0	111	82.2
Brown rice	20	44.4	4	36.4	18	75.0	40	29.6
Commercial cakes and cookies	12	26.7	3	27.3	5	20.8	40	29.6
Foods in bulk i.e. gelatin when possible	20	44.4	5	45.5	15	62.5	83	61.5
Butter substitute for bread or sandwiches	--	---	--	---	1	4.2	14	10.4
Dried eggs	--	---	--	---	--	---	--	---
Frozen eggs	--	---	--	---	--	---	--	---
Cod liver oil	22	48.9	7	63.6	12	50.0	133	98.5
Haliver oil	1	2.2	--	---	3	12.5	6	4.4

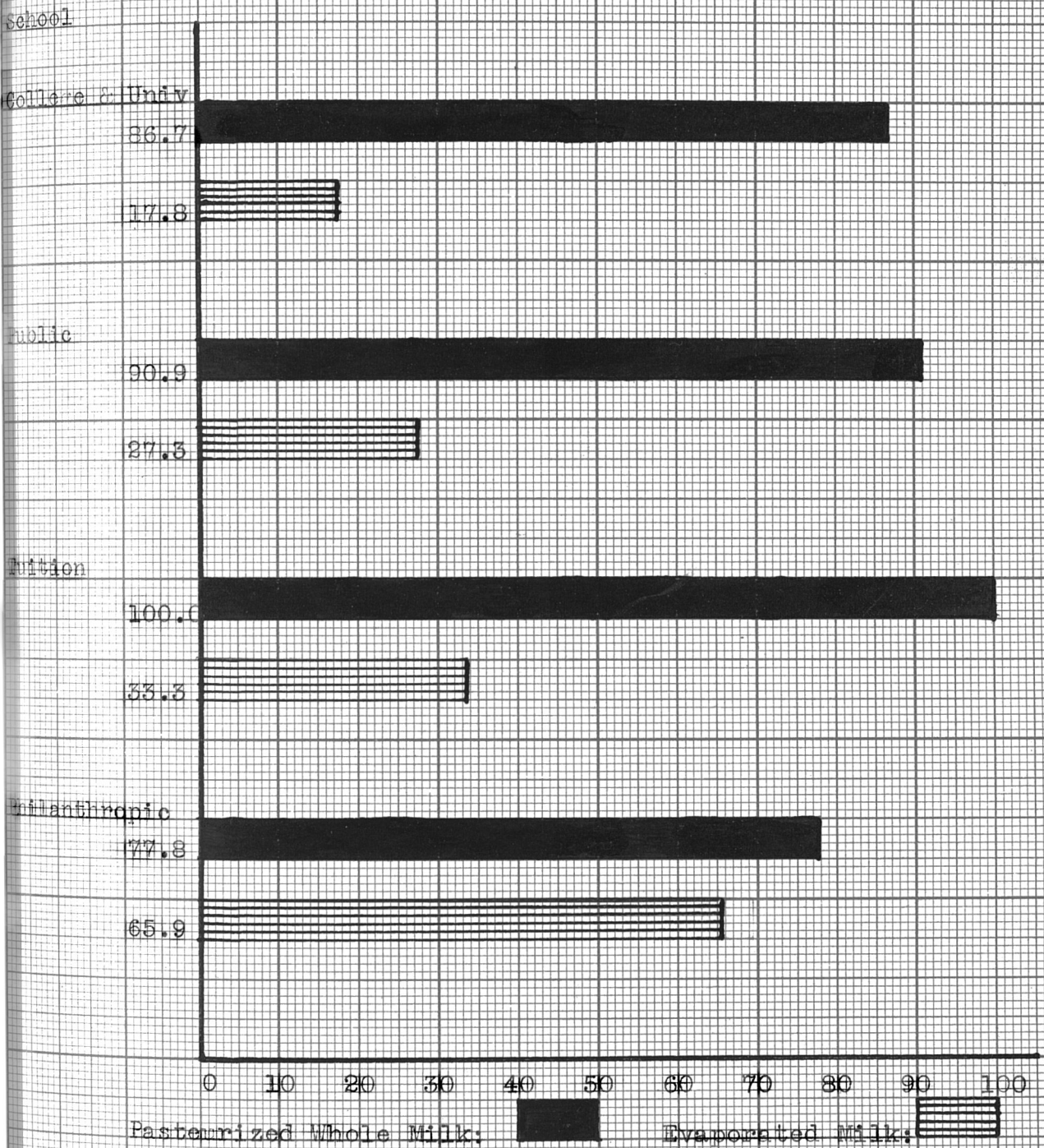


Fig. 1. Percentage of schools using pasteurized whole and evaporated milk.

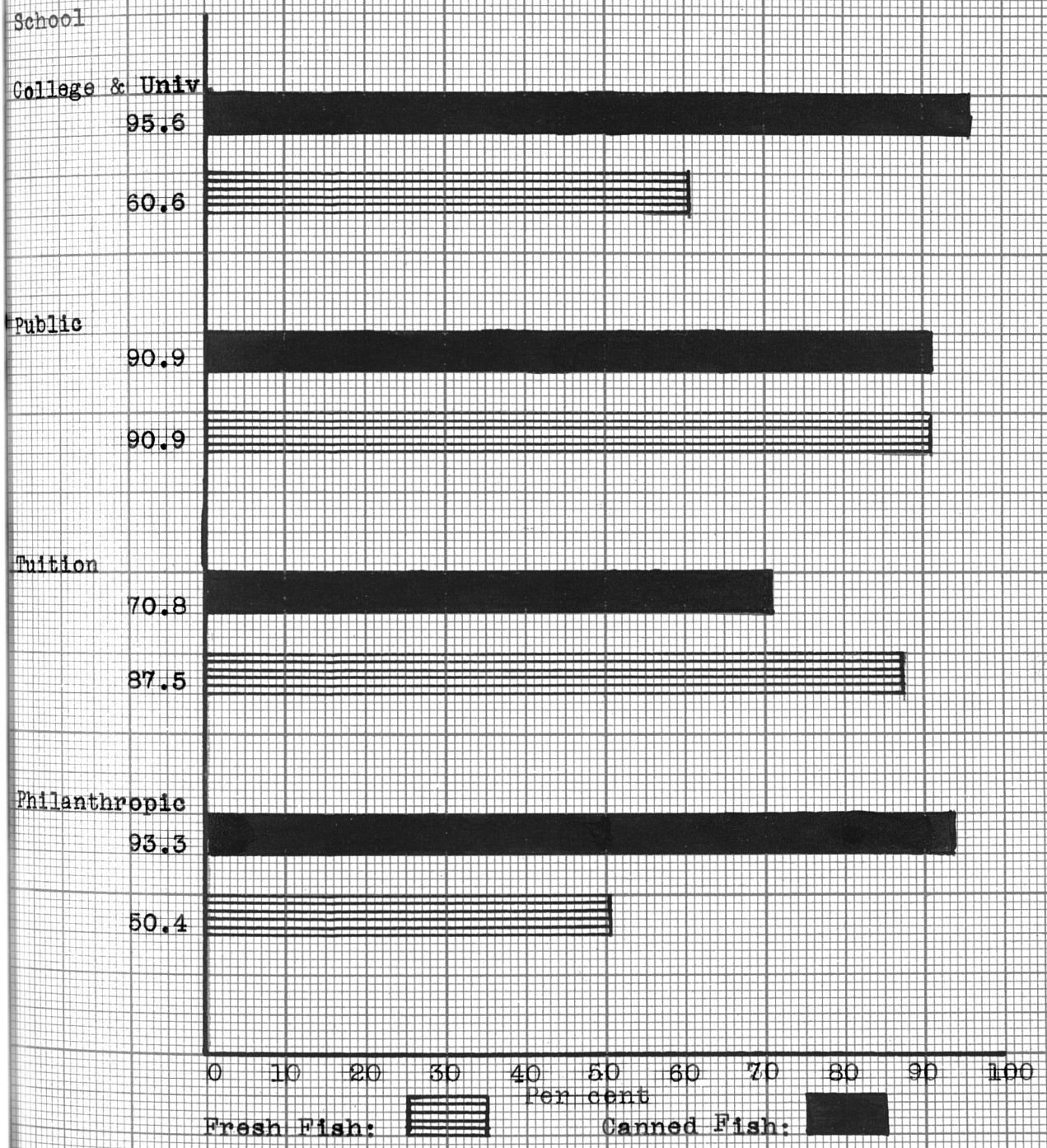


Fig. 2. Percentage of schools using fresh and canned fish.

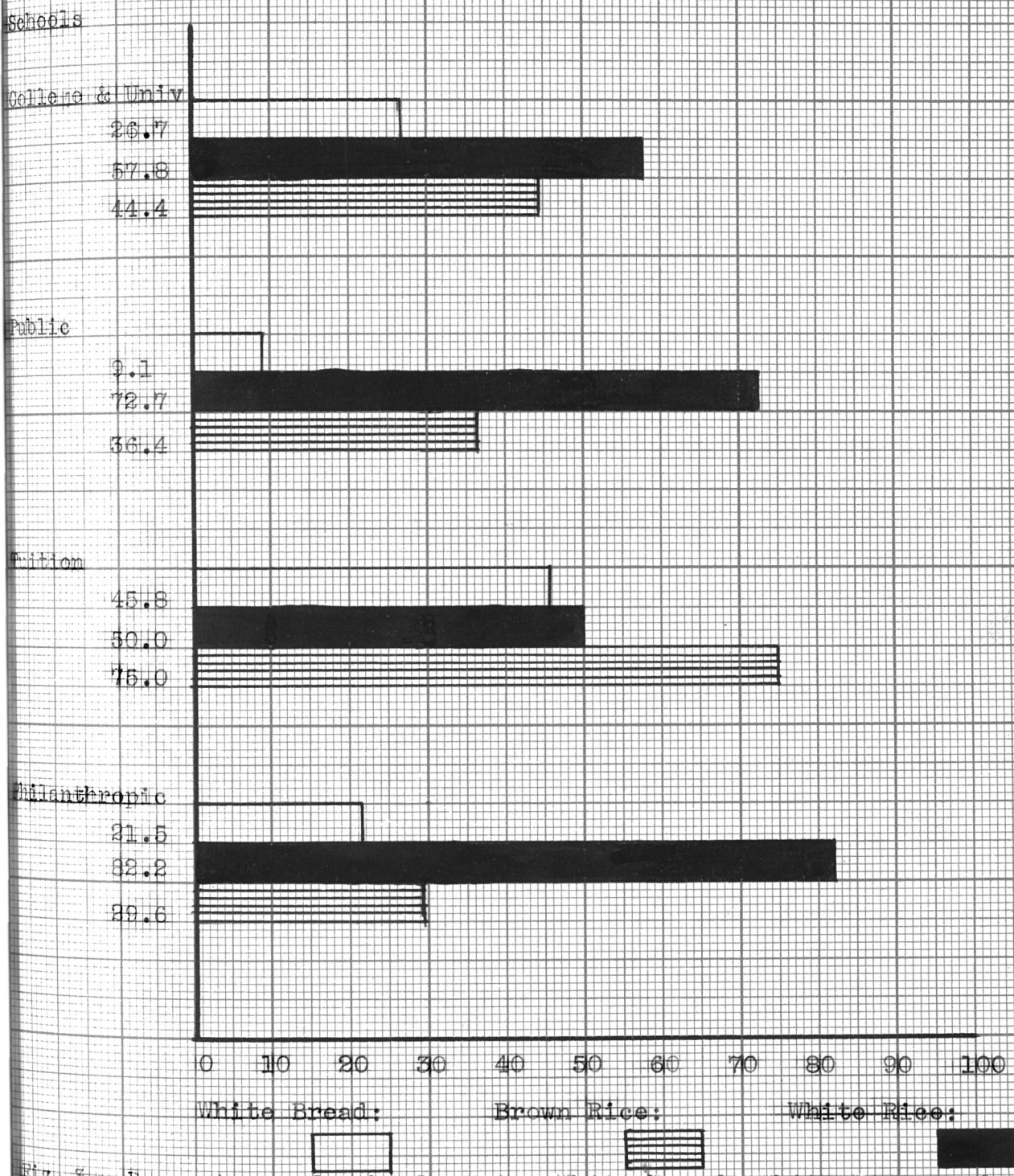


Fig. 5. Percentage of schools using white bread, white rice, and brown rice.

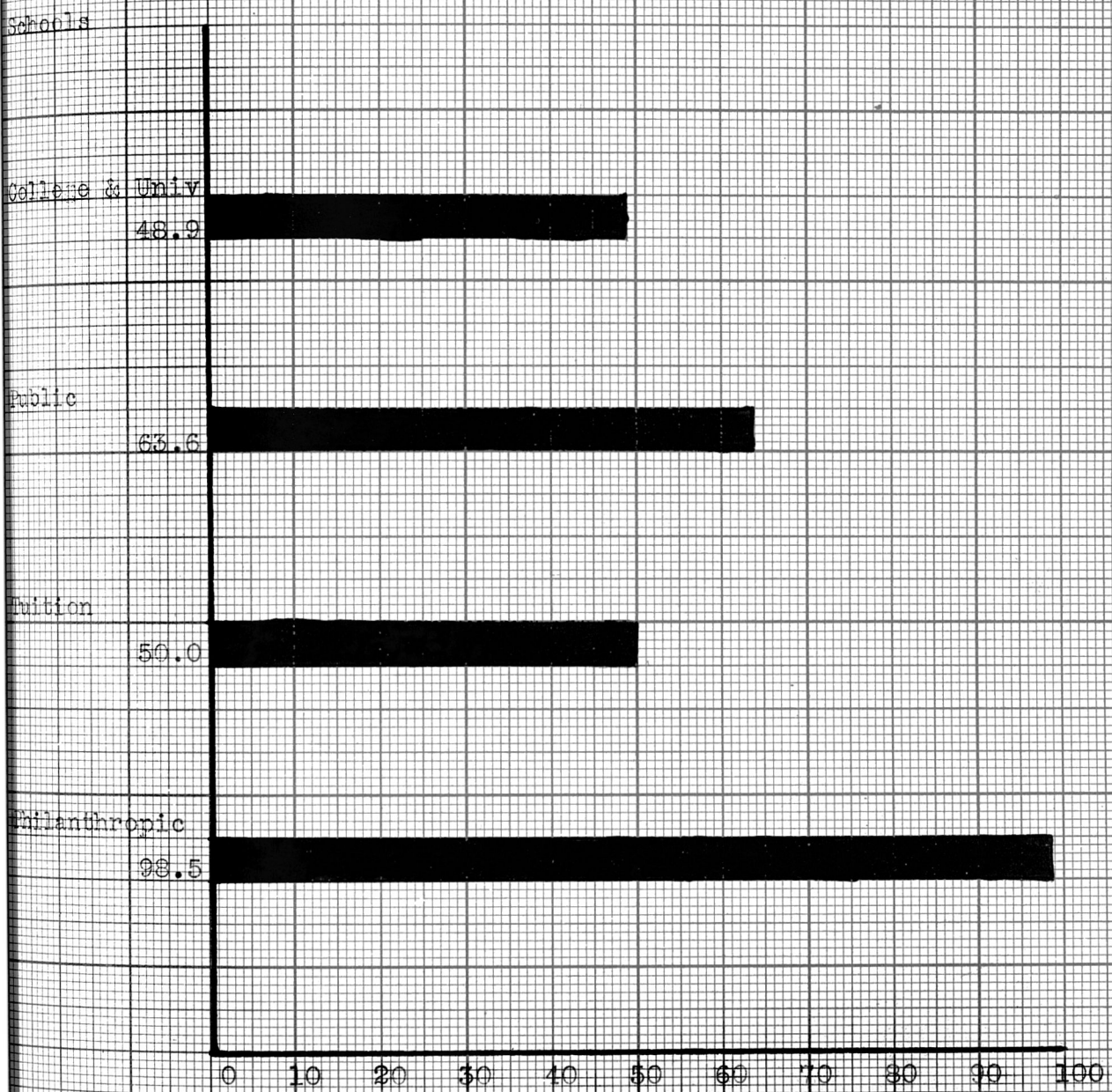


Fig. 4. Percentage of schools using cod liver oil.



in the use of this type of food.

Foods were purchased in bulk by the majority of the tuition and philanthropic schools, but by slightly less than half of the college and university and public schools. Butter substitutes were seldom served, being used by only one out of the 24 tuition schools and by 14 of the philanthropic group. None of those studied used dried or frozen eggs. Cod liver oil was given to the children in 50 per cent of the college and university and tuition schools, in 64 per cent of the public, and 99 per cent of the philanthropic ones. Few reported the use of Haliver oil.

#### Usual Practices Regarding Menus for Lunches

Soups were apparently not an important item in nursery schools lunches (Table 11). Those serving soup for lunch varied from 27 per cent in the college and university and public schools to 35 per cent in the philanthropic group. A minority of schools in all cases followed the practice of serving hot cereal, hot cocoa or chocolate, hot or cold chocolate milk beverages, and hot breads.

Main dishes of meat, fish, or poultry usually appeared on the menu two or three times a week rather than four or five and, in a large number of the cases, a raw fruit or vegetable was included practically every day. The larger

Table 11. Usual practices regarding menus for lunches.

	Schools							
	Colleges and universities (45 schools)		Public (11 schools)		Tuition (24 schools)		Philanthropic (136 schools)	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Foods served in nursery school lunches								
Soups	12	26.7	3	27.3	7	29.2	48	35.3
Hot cereals	--	--	--	--	--	--	8	5.9
Hot cocoa or chocolate	2	4.4	--	--	1	4.2	32	23.5
Cold chocolate milk beverages	1	2.2	--	--	1	4.2	25	18.4
Hot rolls, hot biscuits, hot muffins	--	--	--	--	1	4.2	4	2.9
Main dishes of meat, fish or poultry 4 or 5 times per week	11	24.4	3	27.3	11	45.8	24	17.6
Main dishes of meat, fish or poultry 2 or 3 times per week	29	64.4	8	72.7	12	50.0	83	61.0
Raw fruit or vegetable	37	82.2	11	100.0	19	79.2	112	82.4
Fruit in some form daily	22	48.9	2	18.2	12	50.0	86	63.2
At least 1 and sometimes 2 hot dishes in the main course	6	13.3	1	9.1	4	16.7	52	38.2
At least 2 hot dishes in the main course	29	64.4	9	81.8	10	41.7	63	46.3
3 or more hot dishes in the main course	18	40.0	3	27.3	14	58.3	30	22.1
Combinations which will be attractive in color	42	93.3	10	90.9	21	87.5	116	83.3
Combinations which will include texture contrasts	41	91.1	9	81.8	16	66.7	109	80.1
Some smooth desserts, like cornstarch pudding	38	84.4	8	72.7	21	87.5	109	80.1

part of the tuition schools used three or more hot dishes in the main course, but the majority of those in the other three groups usually served only two hot foods at this time. From 67 to 93 per cent of the schools considered the use of food combinations attractive as to color and contrasting as to texture, desirable as well as the use of some smooth desserts, as cornstarch pudding.

#### Food Preparation Practices

The practice of cooking vegetables in varying combinations ranged from 36 per cent in the public schools to 60 per cent in the philanthropic group (Table 12). Almost all of those reporting regarded long cooking of vegetables as undesirable and used brief cooking periods. Seasonings, as salt and sugar, were used sparingly.

#### Meal Service

Airing the dining room before serving the meal was a usual practice in all the nursery schools (Table 13). The number in which the dining room was occupied by children immediately before meals varied from 21 per cent in the tuition group to 41 per cent in the college and university schools. It was customary in the majority of cases to serve the meal to all the children at one time. The phil-

Table 12. Food preparation practices.

Practices	Schools							
	Colleges and universities: (44 schools)		Public (11 schools)		Tuition (24 schools)		Philanthropic (136 schools)	
	no.	per cent	no.	per cent	no.	per cent	no.	per cent
Cooking vegetables in combinations	22	50.0	4	36.4	11	45.8	81	59.6
Long cooking of all cooked vegetables	1	2.3	-	-	-	-	5	3.7
Brief cooking of some vegetables	43	97.7	11	100.0	23	95.8	129	94.8
Scanty use of salt	41	93.2	11	100.0	24	100.0	134	98.5
Generous use of salt	-	-	-	-	-	-	-	-
Scanty use of sugar	41	93.2	10	90.9	21	87.5	125	91.9
Generous use of sugar	-	-	-	-	2	8.3	5	3.7

anthropic schools were more likely to have large groups (26 to 50 persons) eating in one room at the same time, while fewer than 25 ate in one room in most of the other schools.

#### Dining Room Tables

Wooden tables with painted tops were employed by more than half of all but the public schools in which oil cloth covers were used in most cases (Table 14). Only one school, a member of the philanthropic group, reported the use of tables with metal tops. Cloth covers for the tables were uncommon and less than half the schools had doilies on the table tops.

#### Protection for Clothing While Eating

Paper napkins protected the children's clothing while they were eating in the majority of schools of the four types (Table 15). Slightly less than half used cloth bibs whereas paper bibs and cloth napkins were noted in only a few schools.

#### Filling the Plates

In the largest percentage of the nursery schools of each group, the dinner plates were filled at a serving table

Table 13. Meal service.

Service	Schools							
	Colleges and universities (44 schools)		Public (11 schools)		Tuition (24 schools)		Philanthropic (135 schools)	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Is the dining room sired before the meal is served?	38	86.4	11	100.0	21	87.5	120	88.9
Is the dining room occupied by children immediately before meals?	18	40.9	4	36.4	5	20.8	45	33.3
Do fewer than 25 persons (children and adults) eat in one room?	39	88.6	9	81.8	18	75.0	64	47.4
Do 26 to 50 persons (children and adults) eat in one room?	2	4.5	2	18.2	2	8.3	68	50.4
Do more than 50 persons (children and adults) eat in one room?	1	2.3	1	9.1	--	---	2	14.8
Do all eat in one shift?	41	93.2	8	72.7	17	70.8	99	73.3

Table 14. Dining room tables.

Tables	School							
	:Colleges and universities:		Public		: Tuition		:Philanthropic :	
	:(42 schools)		:(11 schools)		:(24 schools)		:(135 schools)	
	no.	per cent	no.	per cent	no.	per cent	no.	per cent
Wooden tops	15	35.7	4	36.4	6	25.0	40	29.6
Wooden tops (painted)	25	59.5	5	45.5	16	66.7	82	60.7
Metal tops	-	-	-	-	-	-	1	0.1
Oilcloth covers	9	21.4	7	63.6	8	33.3	51	37.8
Cloth covers	12	28.6	1	9.1	2	8.3	10	7.4
Doilies	17	40.5	4	36.4	11	45.8	58	43.0

Table 15. Protection for clothing while eating.

Protection	Schools							
	:Colleges and universities:		Public		: Tuition		:Philanthropic :	
	:(44 schools)		:(11 schools):		:(24 schools):		:(134 schools) :	
	no.	per cent	no.:	per cent:	no.:	per cent:	no.:	per cent:
Cloth bibs	21	47.7	5	45.5	12	50.0	85	63.4
Paper bibs	1	2.3	-	-	2	8.3	3	2.2
Cloth napkins	3	6.8	1	9.1	3	12.5	11	8.2
Paper napkins	25	56.8	6	54.5	15	62.5	93	69.4



in the dining room (Table 16). In the philanthropic schools this was usually done by the cook, but in the public and tuition ones, it was more often the duty of staff members. In the college and university schools, students or staff members were usually responsible for filling the plates. A large majority of all the groups reported that they based the size of the serving of food offered upon what the child would eat without undue pressure.

The practices of allowing children to assist in setting tables and to wait on themselves and others at their tables were commonly followed by the nursery schools. One person usually was responsible for the food service throughout the meal, and in the largest group of college and university and tuition schools the plates were served as the children presented themselves at the serving table. However, in the philanthropic and public institutions, the plates were more often served and on the tables when the children entered the dining room. Extra condiments, sweets, or beverages, as a rule were not provided for adults, although more schools in the college and university than in the other groups reported this practice.

Table 16. Filling the plates.

Practice	Schools							
	Colleges and		Public		Tuition		Philanthropic	
	universities		(11 schools)		(24 schools)		(134 schools)	
	(44 schools)	Per	No.	cent	No.	cent	No.	cent
In the kitchen	13	29.5	1	9.1	9	37.5	42	31.1
At a serving table in the dining room	28	63.6	9	81.8	11	45.8	86	63.7
Elsewhere	5	11.4	--	---	3	12.5	2	1.5
By the cook	10	22.7	2	18.2	5	20.8	84	62.2
By students	21	47.7	3	27.7	4	16.7	12	8.9
By a dietitian or nutritionist	10	22.7	2	18.2	6	25.0	30	22.2
By other staff members	21	47.7	6	54.5	15	62.5	48	35.6
Size of serving offered based on what child will eat without undue pressure	41	93.2	11	100.0	20	83.3	125	93.0
Size of serving determined by age of child	14	31.8	1	9.1	5	20.8	46	34.1
Size of serving determined by size of child	9	20.5	--	---	4	16.7	24	17.8
Children may assist in setting tables	29	65.9	9	81.8	16	66.7	93	68.9
Children wait on themselves	32	72.7	6	54.5	10	41.7	71	52.6
Child waits on others at his table	17	38.6	4	36.4	10	41.7	71	52.6
One person responsible for food service throughout meal	23	52.3	8	72.7	14	58.3	72	53.3
Plates served and on table when children enter dining room	13	29.5	4	36.4	6	25.0	61	45.2
Plates served as children present themselves at serving table	15	34.1	3	27.3	8	33.3	35	26.0
Plates ready on serving table for children to carry to tables	8	18.2	2	18.2	3	12.5	25	18.5
Extra condiments, sweets or beverages provided for adults	18	40.9	2	18.2	7	29.2	19	14.1

## Food Preparation Practices in College and University Nursery Schools

The foods which were most commonly served raw were cabbage, carrots, celery, and lettuce (Table 17a). Cauliflower, spinach, and turnips occurred less frequently, while only once was the use of raw onions reported. Three schools served raw radishes. The only food which was fried was beef, which practice was indicated by two schools.

Creaming was a popular way of preparing eggs, fish, asparagus, cabbage, carrots, cauliflower, celery, onions, peas, and white potatoes. Occasionally beef, lamb, string beans, spinach, and turnips were creamed. One nursery school reported the use of creamed egg plant and another served creamed squash.

Scalloped dishes appeared less often than creamed ones. White potatoes were the only food which was scalloped by the majority of the schools. The foods which were most often baked were eggs, beef, fish, lamb, sweet and white potatoes, and squash. Foods were not generally mashed except potatoes, both white and sweet, squash, and turnips. One school served mashed spinach and two reported mashed carrots.

Steaming was used by a few schools as a method for preparing eggs, beef, fish, lamb, celery, kale, onions, dried peas, and turnips, and, by a large percentage, for

Table 17 (a). Food preparation practices in college and university schools.<sup>1</sup>

Food	Raw		Fried		Creamed		Scalloped		Baked		Mashed		Steamed		Other	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Eggs	---	---	---	---	41	91.1	14	31.1	15	33.3	---	---	4	8.9	34	75.6
Beef	---	---	2	4.4	14	31.1	6	13.3	26	57.8	---	---	2	4.4	32	71.1
Fish	---	---	---	---	37	82.2	16	35.6	36	80.0	---	---	5	11.1	13	28.9
Lamb	---	---	---	---	6	13.3	6	13.3	14	31.1	---	---	3	6.7	23	51.1
Asparagus	---	---	---	---	28	62.2	4	8.8	1	2.2	---	---	20	44.4	15	33.3
Beans, string	---	---	---	---	15	33.3	---	---	---	---	---	---	22	48.9	25	55.6
Cabbage	36	80.0	---	---	25	55.6	16	35.6	---	---	---	---	18	40.0	15	33.3
Carrots	44	97.8	---	---	32	71.1	4	8.9	1	2.2	2	4.4	23	51.1	23	51.1
Cauliflower	10	22.2	---	---	28	62.2	9	20.0	---	---	---	---	17	37.8	14	31.1
Celery	43	95.6	---	---	29	64.4	3	6.7	---	---	---	---	8	17.8	13	28.9
Cucumber	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Egg plant	---	---	---	---	1	2.2	7	15.6	1	2.2	---	---	---	---	---	---
Kale	---	---	---	---	---	---	---	---	---	---	---	---	3	6.7	---	---
Lettuce	45	100.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Onions	1	2.2	---	---	23	51.1	7	15.6	3	6.7	---	---	5	11.1	10	22.2
Peas	---	---	---	---	33	73.3	1	2.2	---	---	---	---	17	37.8	27	60.0
Peas, dried	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Potatoes, sweet	---	---	---	---	---	---	4	8.9	24	53.3	29	64.4	6	13.3	5	11.1
Potatoes, white	---	---	---	---	37	82.2	31	68.9	42	93.3	40	88.9	14	31.1	13	28.9
Radishes	3	6.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Spinach	13	28.9	---	---	6	13.3	3	6.7	1	2.2	1	2.2	26	57.8	18	40.0
Squash	---	---	---	---	1	2.2	---	---	21	46.7	11	24.4	19	42.2	4	8.9
Turnips	10	22.2	---	---	7	15.6	1	2.2	---	---	12	26.7	8	17.8	11	24.4
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

1. Based on 45 schools.

asparagus, string beans, cabbage, carrots, cauliflower, peas, sweet potatoes, spinach, and squash. Many schools reported employing other methods for preparing eggs, beef, fish, lamb, asparagus, string beans, cabbage, carrots, cauliflower, celery, onions, peas, white potatoes, spinach, and turnips, but the methods were not stated.

#### Food Preparation Practices in Public Schools

Raw carrots and celery were used by all the nursery schools in the public school group and raw cabbage, by the majority of them (Table 17b). Raw cauliflower, spinach, and turnips appeared in only a few cases. No fried foods were served in any meal. A large percentage of these schools creamed eggs, beef, fish, lamb, asparagus, string beans, cabbage, carrots, cauliflower, celery, onions, peas, dried peas, sweet potatoes, white potatoes, and spinach. One school reported the use of creamed lettuce.

Scalloped eggs, carrots, celery, and peas were each used by only one school, while scalloped white potatoes were served by more than half. Fish, lamb, carrots, egg plant, and onions were less frequently prepared by this method. A large percentage of the schools baked eggs, beef, fish, lamb, sweet potatoes, white potatoes, and squash and some used this method for preparing onions and

Table 17 (b). Food preparation practices in public schools.<sup>1</sup>

Food	Raw		Fried		Creamed		Scalloped		Baked		Mashed		Steamed		Other	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Eggs	---	---	---	---	9	81.8	1	9.1	5	45.5	---	---	4	36.4	10	90.9
Beef	---	---	---	---	4	36.4	---	---	6	54.5	---	---	---	---	7	63.6
Fish	---	---	---	---	11	100.0	5	45.5	7	63.6	---	---	---	---	5	45.5
Lamb	---	---	---	---	4	36.4	3	27.3	5	45.5	---	---	---	---	6	54.5
Asparagus	---	---	---	---	8	72.7	---	---	---	---	1	9.1	8	72.7	4	36.4
Beans, string	---	---	---	---	4	36.4	---	---	---	---	---	---	4	36.4	6	54.5
Cabbage	9	81.8	---	---	6	54.5	4	36.4	---	---	---	---	6	54.5	6	54.5
Carrots	11	100.0	---	---	9	81.8	1	9.1	---	---	4	36.4	3	27.3	9	81.8
Cauliflower	4	36.4	---	---	8	72.7	---	---	---	---	---	---	5	45.5	5	45.5
Celery	11	100.0	---	---	9	81.8	1	9.1	---	---	---	---	1	9.1	5	45.5
Cucumber	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Egg plant	---	---	---	---	---	---	3	27.3	---	---	---	---	---	---	1	9.1
Kale	---	---	---	---	---	---	---	---	---	---	---	---	4	36.4	3	27.3
Lettuce	11	100.0	---	---	1	9.1	---	---	---	---	---	---	---	---	---	---
Onions	---	---	---	---	6	54.5	4	36.4	3	27.3	---	---	3	27.3	5	45.5
Peas	---	---	---	---	9	81.8	1	9.1	---	---	---	---	3	27.3	7	63.6
Peas, dried	---	---	---	---	3	27.3	---	---	---	---	---	---	---	---	4	36.4
Potatoes, sweet	---	---	---	---	3	27.3	---	---	8	72.7	8	72.7	---	---	3	27.3
Potatoes, white	---	---	---	---	9	81.8	10	90.9	11	100.0	11	100.0	1	9.1	4	36.4
Radishes	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Spinach	3	27.3	---	---	7	63.6	---	---	2	18.2	1	9.1	8	72.7	7	63.6
Squash	---	---	---	---	---	---	---	---	8	72.7	5	45.5	4	36.4	4	36.4
Turnips	4	36.4	---	---	---	---	---	---	---	---	4	36.4	---	---	4	36.4

1. Based on 11 schools.

spinach. Eggs, beef, fish, lamb, onions, sweet potatoes, white potatoes, radishes, and spinach were also baked.

The foods most frequently prepared by mashing were carrots, sweet potatoes, white potatoes, and turnips. Eggs, asparagus, string beans, cabbage, cauliflower, kale, onions, peas, spinach, and squash were often steamed. Some of the nursery schools reported preparation of eggs, beef, fish, lamb, asparagus, string beans, cabbage, carrots, cauliflower, celery, kale, onions, peas, dried peas, sweet potatoes, white potatoes, spinach, squash, and turnips in other ways than those suggested by the checking sheet.

#### Food Preparation Practices in Tuition Schools

Cabbage, carrots, cauliflower, celery, lettuce, spinach, and turnips were the foods most often served raw (Table 17c). Eggs, cucumber, egg plant, onions, peas, sweet potatoes, white potatoes, and radishes were also reported by some schools as being used raw. Eggs, fish, and lamb were each fried by one school while egg plant and onions were fried by two. No other foods were fried. Popular creamed dishes were eggs, fish, cabbage, cauliflower, celery, onions, peas, and white potatoes. In addition to these, beef, lamb, asparagus, string beans, carrots, dried peas, sweet potatoes, spinach, squash, and turnips were prepared by this method in some schools.

Table 17 (c). Food preparation practices in tuition schools.<sup>1</sup>

Food	Raw		Fried		Creamed		Scalloped		Baked		Mashed		Steamed		Other	
	:Per		:Per		:Per		:Per		:Per		:Per		:Per		:Per	
	:No.:	:cent	:No.:	:cent	:No.:	:cent	:No.:	:cent	:No.:	:cent	:No.:	:cent	:No.:	:cent	:No.:	:cent
Eggs	: 2 :	8.3	: 1 :	4.2	: 16 :	66.7	: 5 :	20.8	: 8 :	33.3	: -- :	--	: 4 :	16.7	: 15 :	62.5
Beef	: -- :	--	: -- :	--	: 4 :	16.7	: 1 :	4.2	: 14 :	58.3	: -- :	--	: 2 :	8.3	: 14 :	58.3
Fish	: -- :	--	: 1 :	4.2	: 14 :	58.3	: 8 :	33.3	: 18 :	75.0	: 1 :	4.2	: 8 :	33.3	: 6 :	25.0
Lamb	: -- :	--	: 1 :	4.2	: 4 :	16.7	: 4 :	16.7	: 13 :	52.2	: 3 :	12.5	: 4 :	16.7	: 13 :	52.2
Asparagus	: -- :	--	: -- :	--	: 9 :	37.5	: -- :	--	: -- :	--	: -- :	--	: 17 :	70.8	: 6 :	25.0
Beans, string	: -- :	--	: -- :	--	: 7 :	29.2	: 2 :	8.3	: 1 :	4.2	: -- :	--	: 17 :	70.8	: 9 :	37.5
Cabbage	: 23 :	95.8	: -- :	--	: 14 :	58.3	: 8 :	33.3	: 3 :	12.5	: -- :	--	: 15 :	62.5	: 3 :	12.5
Carrots	: 22 :	91.7	: -- :	--	: 10 :	41.7	: 4 :	16.7	: 3 :	12.5	: 3 :	12.5	: 16 :	66.7	: 9 :	37.5
Cauliflower	: 5 :	20.8	: -- :	--	: 13 :	54.2	: 4 :	16.7	: 1 :	4.2	: -- :	--	: 14 :	58.3	: 4 :	16.7
Celery	: 23 :	95.8	: -- :	--	: 18 :	75.0	: 6 :	25.0	: -- :	--	: -- :	--	: 11 :	45.8	: 5 :	20.8
Cucumber	: 4 :	16.7	: -- :	--	: -- :	--	: 1 :	4.2	: 1 :	4.2	: -- :	--	: -- :	--	: -- :	--
Egg plant	: 1 :	4.2	: 2 :	8.3	: -- :	--	: 6 :	25.0	: 5 :	20.8	: -- :	--	: 1 :	4.2	: -- :	--
Kale	: -- :	--	: -- :	--	: -- :	--	: -- :	--	: -- :	--	: -- :	--	: 5 :	20.8	: -- :	--
Lettuce	: 23 :	95.8	: -- :	--	: -- :	--	: -- :	--	: -- :	--	: -- :	--	: 2 :	8.3	: -- :	--
Onion	: 4 :	16.7	: 2 :	8.3	: 12 :	50.0	: 5 :	20.8	: 5 :	20.8	: -- :	--	: 7 :	29.2	: 5 :	20.8
Peas	: 2 :	8.3	: -- :	--	: 13 :	54.2	: 1 :	4.2	: 1 :	4.2	: 1 :	4.2	: 16 :	66.7	: 10 :	41.7
Peas, dried	: -- :	--	: -- :	--	: 1 :	4.2	: -- :	--	: 1 :	4.2	: -- :	--	: 1 :	4.2	: 6 :	25.0
Potatoes, sweet:	: 1 :	4.2	: -- :	--	: 1 :	4.2	: 2 :	8.3	: 14 :	58.3	: 11 :	45.8	: 6 :	25.0	: 3 :	12.5
Potatoes, white:	: 1 :	4.2	: -- :	--	: 16 :	66.7	: 16 :	66.7	: 23 :	95.8	: 20 :	83.3	: 11 :	45.8	: 5 :	20.8
Radishes	: 2 :	8.3	: -- :	--	: -- :	--	: -- :	--	: -- :	--	: -- :	--	: -- :	--	: -- :	--
Spinach	: 8 :	33.3	: -- :	--	: 6 :	25.0	: 3 :	12.5	: 2 :	8.3	: 1 :	4.2	: 19 :	79.2	: 7 :	29.2
Squash	: -- :	--	: -- :	--	: 1 :	4.2	: 2 :	8.3	: 9 :	37.5	: 7 :	29.2	: 13 :	52.2	: 3 :	12.5
Turnips	: 6 :	25.0	: -- :	--	: 5 :	20.8	: 2 :	8.3	: 2 :	8.3	: 9 :	37.5	: 10 :	41.7	: 3 :	12.5
	: :	:	: :	:	: :	:	: :	:	: :	:	: :	:	: :	:	: :	:

1. Based on 24 schools.



Scalloped dishes with the exception of white potatoes were seldom used. However, some schools prepared eggs, beef, fish, lamb, string beans, cabbage, carrots, cauliflower, celery, cucumber, egg plant, onions, peas, sweet potatoes, spinach, squash, and turnips in this way. The majority of the schools reported that they baked beef, fish, lamb, sweet and white potatoes. Fewer schools prepared eggs, cabbage, carrots, egg plant, onions, and squash by baking. String beans, cauliflower, cucumber, fresh and dried peas were each baked by one school, while two others reported baking spinach and turnips. Sweet potatoes, white potatoes, squash, and turnips were the foods which were most frequently prepared by mashing. One school served mashed fish, peas, and spinach. In some cases lamb and carrots were mashed according to the checking sheet.

The most popular steamed foods were asparagus, string beans, cabbage, cauliflower, peas, and squash. In addition to these, fish, celery, kale, onions, sweet potatoes, white potatoes, and turnips were steamed and in some cases eggs, beef, lamb, egg plant, lettuce, and dried peas. A large percentage of the schools prepared eggs, beef, fish, lamb, asparagus, string beans, carrots, celery, onions, peas, dried peas, white potatoes, and spinach in other ways and some schools used other methods of preparing cabbage, cauli-

flower, sweet potatoes, squash, and turnips.

#### Food Preparation Practices in Philanthropic Schools

The majority of the philanthropic schools served raw cabbage, carrots, celery, and lettuce (Table 17d). Some schools also served raw cauliflower, cucumber, onions, radishes, spinach, turnips, and eggs. String beans, sweet potatoes, white potatoes, and fish were each reported to be served raw in one school, asparagus in two, and kale in three. Fried egg plant and white potatoes were served in one school while onions and beef were each fried in two and fish in eight others.

The most widely used creamed foods were eggs, beef, fish, asparagus, string beans, cabbage, carrots, cauliflower, celery, onions, peas, white potatoes, spinach, and turnips. In some cases lamb, egg plant, kale, lettuce, dried peas, sweet potatoes, radishes, and squash, were also creamed. Scalloped white potatoes were generally used whereas other foods were not prepared in this way in the majority of the schools. The most popular baked foods were eggs, beef, fish, sweet potatoes, white potatoes, and squash. Other foods which were baked in some schools were lamb, asparagus, string beans, cabbage, carrots, cauliflower, celery, egg plant, onions, peas, dried peas,

Table 17 (d). Food preparation practices in philanthropic schools.<sup>1</sup>

Food	Raw		Fried		Creamed		Scalloped		Baked		Mashed		Steamed		Other	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Eggs	4	3.0	---	---	112	83.5	41	30.6	51	38.1	---	---	17	22.7	82	61.2
Beef	---	---	2	1.4	61	45.5	15	11.2	64	47.8	---	---	27	20.1	75	55.9
Fish	1	0.7	8	6.0	95	70.9	54	40.3	91	67.9	2	1.4	14	10.4	37	27.6
Lamb	---	---	---	---	13	9.7	10	7.5	21	15.7	---	---	16	11.9	48	35.8
Asparagus	2	1.4	---	---	81	60.4	13	9.7	3	2.2	1	0.7	35	26.1	29	21.5
Beans, string	1	0.7	---	---	73	54.5	6	4.5	1	0.7	---	---	75	56.0	62	46.3
Cabbage	108	80.6	---	---	94	70.1	40	29.9	9	6.7	1	0.7	55	41.0	38	28.4
Carrots	133	99.3	---	---	119	88.8	12	9.0	19	14.2	15	11.2	59	44.0	62	46.3
Cauliflower	19	14.2	---	---	80	59.7	19	14.2	8	6.0	1	0.7	36	26.9	26	19.4
Celery	121	90.3	---	---	78	58.2	16	11.9	3	2.2	---	---	17	12.7	24	17.9
Cucumber	11	8.2	---	---	---	---	---	---	---	---	---	---	---	---	1	0.7
Egg plant	---	---	1	0.7	2	1.4	7	5.2	8	6.0	---	---	1	0.7	1	0.7
Kale	3	2.2	---	---	3	2.2	1	0.7	---	---	---	---	28	21.0	2	1.4
Lettuce	132	98.5	---	---	1	0.7	---	---	---	---	---	---	1	0.7	7	5.2
Onion	24	17.9	2	1.4	92	68.7	31	23.1	15	11.2	1	0.7	32	20.9	37	27.7
Peas	2	1.4	---	---	108	80.5	7	5.2	3	2.2	4	3.0	52	38.8	68	50.7
Peas, dried	---	---	---	---	19	14.2	1	0.7	6	4.5	3	2.2	22	16.4	30	22.4
Potatoes, sweet	1	0.7	---	---	8	6.0	7	5.2	72	53.7	60	44.8	17	22.7	19	14.2
Potatoes, white	1	0.7	1	0.7	107	79.8	111	82.8	129	96.2	129	96.2	37	27.6	31	23.1
Radishes	21	15.7	---	---	1	0.7	---	---	---	---	---	---	---	---	2	1.4
Spinach	31	23.1	---	---	51	38.1	11	8.2	10	7.5	1	0.7	86	64.2	49	36.6
Squash	---	---	---	---	13	9.7	8	6.0	72	53.7	48	35.8	50	37.3	14	10.4
Turnips	41	30.6	---	---	41	30.6	2	1.4	4	3.0	55	41.0	50	37.3	29	21.6

1. Based on 134 schools.

spinach, and turnips.

The only foods which were mashed by many of the schools were sweet potatoes, white potatoes, squash, and turnips. The foods which were most frequently prepared by steaming were eggs, beef, asparagus, string beans, cabbage, carrots, cauliflower, onions, kale, peas, sweet potatoes, white potatoes, spinach, squash, and turnips. Fish, lamb, celery, egg plant, lettuce, and dried peas, were also steamed, but by fewer schools. Those foods which were prepared in other ways in many instances were eggs, beef, fish, lamb, asparagus, string beans, cabbage, carrots, cauliflower, celery, onions, peas, dried peas, white potatoes, spinach, and turnips.

#### Methods Used for Overcoming Established Food Dislikes

The majority of the public and philanthropic schools followed the practice of serving small amounts of a disliked food in combination with other foods (Table 18). Fewer of the college and university and tuition schools used this method of procedure. Almost all of the schools of all groups served small portions of disliked foods to the children. The practice of starting a game with the child was reported by only one college and university school and by 20 philanthropic ones. The majority of all

Table 18. Methods used for overcoming established food dislikes.

Method	Schools							
	Colleges and universities (45 schools)		Public (11 schools)		Tuition (21 schools)		Philanthropic (134 schools)	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Serve product in small amounts combined with other foods	17	37.8	8	72.7	9	42.9	96	71.6
Serve small portions of disliked foods	44	97.8	10	90.9	19	90.5	124	92.5
Start a game--the adult eats a bite--the child eats a bite	1	2.2	--	---	--	---	20	14.9
Assure child of his ability to eat small amount of the food	35	77.8	10	90.9	14	66.7	111	82.8
Insist child eat small amount so that he finds he can eat it	28	62.2	7	63.6	12	57.1	101	75.4
Insist child eat all he is served, even of disliked food	5	11.1	1	9.1	8	38.1	42	31.3
Use containers with pictures in bottom as an incentive to consume food	--	---	--	---	1	4.8	14	10.4
Tell stories to child while he eats	--	---	--	---	1	4.8	8	6.0

classes of schools assured the child of his ability to eat a small amount of the food and insisted that he do it so he would find that he could.

Only in the group of tuition schools did the majority insist that the child eat all he was served, even of a disliked food. Dishes with pictures on the bottom and story telling were not used by any college or university or public school and by few of the others.

#### Methods of Encouraging a Liking for a Wide Variety of Foods

The only method listed which was not generally practiced by the majority of all the nursery schools was permitting the child to assist in the preparation of food (Table 19). More than half the public schools used this method while a slightly smaller percentage of those in the other groups did so, the number ranging from 34 in the philanthropic group to 43 per cent in the tuition schools.

#### Conditions of Supervision

The majority of nursery schools of the four types followed the practice of having trained staff members at the tables with the children at lunch time (Table 20). More than half of the college and university groups also had students at the tables with the children, while fewer of

Table 19. Methods of encouraging a liking for a wide variety of foods.

Method	Schools							
	Colleges and universities (45 schools)		Public (11 schools)		Tuition (21 schools)		Philanthropic (134 schools)	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Include in menu as wide a variety as market offers	31	68.9	10	90.9	15	71.4	106	79.1
Variety of preparations	42	93.3	8	72.7	16	76.2	114	85.1
Colorful menu	40	88.9	8	72.7	17	81.0	121	90.3
Avoid slick, slimy products	33	73.3	8	72.7	13	61.9	111	82.8
Avoid gummy textures	34	75.6	9	81.8	14	66.7	110	82.1
Avoid dry textures	26	57.8	9	81.8	9	42.9	96	71.6
Avoid lumpy textures	35	77.8	10	90.9	15	71.4	118	88.1
Avoid watery curdled products	40	88.9	10	90.9	17	81.0	114	85.1
Adults eat of dishes prepared for children without extras	36	80.0	10	90.9	15	71.4	121	90.3
Let child assist in preparation of food	18	40.0	6	54.5	9	42.9	45	33.6

Table 20. Conditions of supervision.

Conditions	Schools							
	Colleges and universities (45 schools)		Public (11 schools)		Tuition (24 schools)		Philanthropic (24 schools)	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Trained staff members at tables with children	38	84.4	8	72.7	18	85.7	132	98.5
Students at tables with children alone	26	57.8	5	45.5	2	9.5	14	10.4
Students at tables with children and teachers	15	33.3	5	45.5	4	19.0	30	22.4
Parents at tables with children	5	11.1	1	9.1	3	14.3	18	13.4
Each adult eats her own lunch as children eat	43	95.6	9	81.8	16	76.2	100	74.6
Adult eats only of foods prepared for children	33	73.3	10	90.9	17	81.0	120	89.6
Adults check food records at tables while children eat	15	33.3	3	27.3	3	14.3	23	17.2
Adults encourage conversation at lunch table	25	55.6	3	27.3	13	61.9	68	50.7
Adults encourage children in conversation about their experiences	22	48.9	--	---	7	33.3	62	46.2
Usually 2 children to each adult at lunch table	8	17.8	--	---	--	---	1	0.1
Usually 3 to 4 children to each adult at lunch table	34	75.6	7	63.6	10	47.6	14	10.4
Usually 5 to 10 children to each adult	6	13.3	4	36.3	12	57.1	107	79.9
There are more than 10 children per adult	--	---	--	---	--	---	16	11.9



the other schools did this. Parent supervision was used by only a small number. The adult usually at her lunch of foods prepared for the children while the children were eating. As a rule the adult did not check food records at the table while the children ate. In the majority of college and university, tuition, and philanthropic schools, the adults promoted conversation at the lunch table. A large percentage but fewer than half the college and university, tuition, and philanthropic schools encouraged the children while at the table, to talk about their experiences, whereas no public school reported this practice. The usual number of children assigned to each adult at the lunch table was three or four in the college and university and public schools and five to ten in the tuition and philanthropic ones.

#### Methods of Supervision

Methods of supervision used by the majority of the schools of all classes were: (a) they showed the children convenient ways to hold silver, (b) they usually insisted that each child finish one serving of each food before having a second helping of anything, (c) they always insisted that each child finish the first course before having dessert (Table 21). The procedures were varied in

Table 21. Methods of supervision.

Methods	Schools							
	Colleges and universities (45 schools)		Public (11 schools)		Tuition (21 schools)		Philanthropic (134 schools)	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Finished table manners are usually stressed	--	---	--	---	1	4.8	13	9.7
Children are shown convenient ways to hold silver	39	86.7	10	90.9	18	85.7	123	91.8
Usually insist that each child finish one serving of each food before having second serving of anything	44	97.8	9	81.8	18	85.7	122	91.0
Insist each child finish first course before having dessert	38	84.4	9	81.8	15	71.4	117	87.3
Dessert is used as a reward for finishing other food	5	11.1	--	---	6	38.6	24	17.9
Force is used to get child to eat disliked foods	--	---	--	---	3	14.3	4	3.0
Portions of disliked foods removed in special cases	38	88.4	11	100.0	10	47.6	93	69.4
Procedures varied in special cases when so doing would seem to help children	43	95.6	11	100.0	16	76.2	119	88.8
Certain rules of food consumption are taken for granted by children	38	84.4	11	100.0	17	81.0	115	85.8
Time limit of 30 minutes for finishing lunch	5	11.1	1	9.1	7	33.3	40	29.9
Time limit of 40 or 45 minutes for finishing lunch	28	62.2	8	72.7	7	33.3	67	50.0

special cases when so doing would seem to help the children. Certain rules of food consumption were taken for granted by the children.

Few schools stressed finished table manners, used dessert as a reward for finishing other food, or forced the child to eat disliked foods. The majority of the college and university, public, and philanthropic institutions removed portions of disliked foods in special cases, whereas a slightly smaller number of the tuition schools followed this procedure. The practice of setting a time limit of 40 to 45 minutes for the children to finish lunch was generally used in all groups except the tuition one.

Table 22. Variation in the different types of nursery schools.

Item	Type of school				
	:Universities and :colleges	: :	Public :	Tuition :	:Philanthropic :
Returned checking lists	48	11	24	136	
Years maintained	2-20	3-14	2-18	1/4 - 24	
Daily attendance	11-20	16-25	11-50	16 - 50	
Average age of children, mo.	24-60	18-60	18-66	24 - 60	
Race	white	white	white	white	
Meals planned by	home economics teacher	staff members	dietitian	staff members	
Chief milk used	pasteurized whole	pasteurized whole	pasteurized whole	pasteurized whole	
Chief protein food other than beef and lamb	canned fish	canned & fresh fish	fresh fish	canned fish	
Bread	whole grain	whole grain	whole grain	whole grain	
Rice	white	white	brown	white	
Main dishes per week	2-3 times	2-3 times	2-3 times	2-3 times	
Fruit daily	49 per cent	18 per cent	50 per cent	63 per cent	
Hot dishes per meal	at least two	at least two	three or more	at least two	
Cooking period of vegetables	short	short	short	short	
Use of seasonings	scanty	scanty	scanty	scanty	
Number persons eating in one room	fewer than 25	fewer than 25	fewer than 25	26-50	
Number children assigned to each adult at table	3-4	3-4	5-10	5-10	
Dining room tables	painted wooden tops	oilcloth covers	painted wooden tops	painted wooden tops	
Protection for clothing	paper napkins	paper napkins	paper napkins	paper napkins	
Plates filled at	serving table	serving table	serving table	serving table	
Plates filled by	students staff members	staff members	staff members	cook	
Size of serving based on	appetite	appetite	appetite	appetite	
Food dislikes overcome by	serve small por- tion;insist child eat small amount	serve small por- tion;insist child eat small amount	serve small por- tion;insist child eat small amount	serve small por- tion;insist child eat small amount	
Child participation	helps set tables waits on self	helps set tables waits on self	helps set tables	helps set tables waits on self waits on others	
Method of cooking:					
vegetables	creamed	creamed	creamed	creamed	
beef	baked	baked	baked	baked	
lamb	baked	baked	baked	baked	
fish	baked; creamed	creamed	baked	baked	
eggs	creamed	creamed	creamed	creamed	

### CONCLUSION

Predominating food and other practices in the nursery schools were similar, however, wide variation existed in some of the schools investigated.

It appeared that the nursery schools were following, with some exceptions, recommended procedures for child feeding.

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APPENDIX



## Form 1

Letter of instruction sent to nursery school supervisors

As you will note from the checking list, we are making a survey of current food practices in nursery schools in this country.

We will appreciate your cooperation in this study.

Will you please fill out the checking list herein enclosed and return to us in the addressed envelope?

## Form 2

Letter of instructions sent to state supervisors of  
Emergency Nursery Schools.

As you will note from this checking list, we are  
making a survey of current food practices in nursery  
schools in this country.

We will appreciate your cooperation in this study.

Will you please distribute the enclosed checking  
lists among three of your emergency nursery schools and  
ask the supervisors to fill out the list and return to  
us in the addressed envelope?

## Form 3

Survey of Current Food Practices in Nursery Schools

Checking sheets prepared by a committee for the American Home Economics Association, including:

Mary E. Sweeney  
Evelyn Turney

Virginia Messenger  
Dorothy Triplett

Will you cooperate in this study by checking lists and returning to:

Martha M. Kramer, Chairman  
Kansas State College  
Manhattan, Kansas

This nursery school is located \_\_\_\_\_ . It is maintained by \_\_\_\_\_ and has been operating for about \_\_\_\_\_ years. This list has been checked by \_\_\_\_\_ .

Please indicate the phrase which applies to your school.

The average daily attendance is:

6 - 10	Colored children predominate
11 - 15	White " "
16 - 20	Chinese " "
21 - 25	Mexican " "
26 - 50	Other " "
51 - 100	
over 100	

Meals are planned by:

Lower age limits are:

18 months  
24 months  
30 months  
36 months

Cook  
Dietitian  
Home economics teacher  
Other staff members

Upper age limits are:

- 36 months
- 48 months
- 54 months
- 60 months
- 66 months

On this and succeeding pages, please check the statements to which your answer would be "yes". Will you please make a note regarding any item to which you are strongly opposed.

Yes

Guiding principles - regarding food practices in the nursery school, we believe

- \_\_\_\_\_ Desirable standards should be maintained for the benefit of the child.
- \_\_\_\_\_ Desirable standards should be maintained also for the benefit of parents, students, and other adult visitors.
- \_\_\_\_\_ One should insist that the child receive his due amount of every item of a balanced diet in each nursery school meal.
- \_\_\_\_\_ Emphasis should be placed upon acquiring a liking for a wide variety of foods rather than upon present food habits.

In the nursery school food service, we aim specifically to

- \_\_\_\_\_ Offer well-balanced meals, containing desirable combinations of foods.
- \_\_\_\_\_ Serve to each child in each meal food which will supply required calories, etc.
- \_\_\_\_\_ Include seasonable foods.
- \_\_\_\_\_ Provide nutritious food at minimum cost.
- \_\_\_\_\_ Serve minimum cost meals occasionally.
- \_\_\_\_\_ Serve some dishes prepared at minimum cost.
- \_\_\_\_\_ Provide a variety of foods, so that the child will learn to like them.
- \_\_\_\_\_ Serve foods prepared in a variety of ways, so the child will learn to enjoy different dishes.
- \_\_\_\_\_ Use fresh rather than canned fruits and vegetables when available.
- \_\_\_\_\_ Keep quantitative records of food consumption.
- \_\_\_\_\_ Keep qualitative eating records.
- \_\_\_\_\_ Help the child become accustomed to eating food set

before him.

\_\_\_ Help the child learn to enjoy a balanced meal, including dessert.

\_\_\_ Help the child learn to enjoy mildly seasoned food.

Our nursery school space and equipment include:

\_\_\_ A separate room for food preparation

\_\_\_ A stove using for fuel:

\_\_\_ Gas

\_\_\_ Coal

\_\_\_ Wood

\_\_\_ Kerosene

\_\_\_ Gasoline

\_\_\_ Electricity

\_\_\_ An oven

\_\_\_ Electric toaster

\_\_\_ Running water in the kitchen

\_\_\_ Refrigerator

\_\_\_ Mechanical refrigerator

\_\_\_ Double boiler

\_\_\_ Hot water in the kitchen

\_\_\_ Tableware

\_\_\_ Knives

\_\_\_ Forks

\_\_\_ Tea spoons

\_\_\_ Soup spoons

\_\_\_ Water tumblers

\_\_\_ Cups

\_\_\_ Plates

\_\_\_ Cereal or soup

\_\_\_ bowls

\_\_\_ Individual baking

\_\_\_ dishes

\_\_\_ Dessert dishes

\_\_\_ Sherbet cups

Yes

In selecting food, we use:

\_\_\_ Fresh tomatoes in winter

\_\_\_ Pasteurized whole milk

\_\_\_ Raw whole milk

\_\_\_ Fresh skim milk

\_\_\_ Some form of vitamin D milk

\_\_\_ Dried skim milk

\_\_\_ Dried whole milk

\_\_\_ Evaporated milk

\_\_\_ Fresh pork

\_\_\_ Cured ham

\_\_\_ Poultry

\_\_\_ Fresh fish

\_\_\_ Canned fish

\_\_\_ Salt fish

\_\_\_ Dried beef

\_\_\_ Foods in bulk, i.e., gelatin, when possible

\_\_\_ White bread

\_\_\_ Whole grain bread

\_\_\_ White rice

Yes

- Brown rice
- Fresh oranges for mid-morning drink
- Concentrated orange juice
- Tomato juice for mid-morning drink
- Butter substitute for bread or sandwiches
- Commercial cakes or cookies
- Dried eggs
- Frozen eggs
- Cod liver oil
- Haliver oil

Our usual practices regarding meal planning include:

- Using soups for noon lunches
- Serving hot cereals for noon lunches
- Making hot cocoa or chocolate
- Serving cold chocolate milk beverages
- Using hot rolls, hot biscuits, hot muffins
- Serving main dishes of meat, fish, or poultry 4 or times per week
- Serving main dishes of meat, fish, or poultry 2 or 3 times per week
- Serving raw fruit or vegetable practically every noon
- Serving fruit in some form each noon
- Using at least 1 and sometimes 2 hot dishes in the main course at noon
- Using at least 2 hot dishes in the main course at noon
- Using 3 or more hot dishes in the main course at noon
- Planning combinations which will be attractive in color
- Planning combinations which will include texture contrasts
- Using some smooth desserts, like cornstarch pudding

For meal service

- May the dining room be aired before the meal is served
- Is the dining room occupied by children immediately before meals
- Do less than 25 persons (children and adults) eat in one room
- Do 26 to 50 persons (children and adults) eat in one room
- Do more than 50 persons (children and adults) eat in one room
- Do all eat in one shift

Yes

Yes

Dining room tables have:We use for the children:

- Wooden tops  
 Wooden tops painted  
 Metal tops  
 Oilcloth covers  
 Cloth covers  
 Doilies

- Cloth bibs  
 Paper bibs  
 Cloth napkins  
 Paper napkins

Plates are filled:

- In the kitchen  
 At a serving table in the dining room  
 Elsewhere  
 By the cook  
 By the students  
 By a dietitian or nutritionist  
 By other staff members

- Size of serving offered is based on what the child will eat without undue pressure  
 Size of serving is determined by the age of the child  
 Size of serving is determined by the size of the child

- Children may assist in setting the tables  
 Children wait on themselves  
 Child waits on others at his table  
 One person is responsible for food service through the meal  
 Plates are served and on table when children enter dining room  
 Plates are served as children present themselves at serving table  
 Plates are ready on serving table for children to carry to tables  
 Extra condiments, sweets or beverages are provided for adults

(Check methods of preparation used)

Our food preparation practices include the following:

:Raw:Fried:Creamed:Scal-:Baked:Mashed:Steamed:Other  
:loped:

Asparagus:	:	:	:	:	:	:	:
Cabbage	:	:	:	:	:	:	:
Carrots	:	:	:	:	:	:	:
Celery	:	:	:	:	:	:	:
Cauli- flower	:	:	:	:	:	:	:
Cucumber	:	:	:	:	:	:	:
Egg plant:	:	:	:	:	:	:	:
Kale	:	:	:	:	:	:	:
Lettuee	:	:	:	:	:	:	:
Onions	:	:	:	:	:	:	:
Radishes	:	:	:	:	:	:	:
White potatoes:	:	:	:	:	:	:	:
Sweet potatoes:	:	:	:	:	:	:	:
Peas	:	:	:	:	:	:	:
String beans	:	:	:	:	:	:	:
Dried Peas	:	:	:	:	:	:	:
Squash	:	:	:	:	:	:	:
Spinach	:	:	:	:	:	:	:
Turnips	:	:	:	:	:	:	:
Eggs	:	:	:	:	:	:	:
Beef	:	:	:	:	:	:	:
Lamb	:	:	:	:	:	:	:
Fish	:	:	:	:	:	:	:



Yes

To overcome established food dislikes, we may

- Serve the product in small amounts combined with other foods
- Serve small portions of disliked foods
- Start a game - the adult eats a bite, the child eats a bite
- Assure child of his ability to eat a small amount of the food
- Insist child eats a small amount so that he finds that he can eat it
- Insist that a child eats all he is served, even of disliked foods
- Use containers with pictures in bottom, as incentive to consume food
- Tell stories to child while he eats

To encourage liking for a wide variety of foods we may

- Include in menus as wide a variety as the market offers
- Have variety of preparations
- Plan colorful menus
- Try particularly to avoid slick, slimy products
- Avoid gummy textures
- Avoid dry textures
- Avoid lumpy textures
- Avoid watery, curdled products
- Have adults eat of dishes prepared for children, without extras
- Let children assist in preparation of food

Conditions of supervision

- Trained staff members are at tables with the children
- Students are at tables with the children alone
- Students are at the tables with the children and teachers
- Parents are at the tables with the children
- Each adult eats her own lunch as the children eat
- Adults eat only of foods prepared for the children
- Adults check food records at the table while the children eat
- Adults encourage conversation at the lunch table

Yes

\_\_\_\_\_ Adults encourage the children in conversation about their experiences

\_\_\_\_\_ At lunch, there are usually two children to each adult at the table

\_\_\_\_\_ There are usually 3 or 4 children to each adult

\_\_\_\_\_ There are usually 5 to 10 children to each adult

\_\_\_\_\_ There are more than 10 children per adult

Methods of supervision:

\_\_\_\_\_ Finished table manners are usually stressed

\_\_\_\_\_ Children are shown convenient ways to hold silver

\_\_\_\_\_ We usually insist that each child finish one serving of each food before having a second serving of anything

\_\_\_\_\_ We insist that each child finish first course before having dessert

\_\_\_\_\_ Dessert is used as a reward for finishing other food

\_\_\_\_\_ Force is used to get a child to eat disliked foods

\_\_\_\_\_ Portions of disliked foods are removed in special cases

\_\_\_\_\_ Procedures are varied in special cases when so doing would seem to help children

\_\_\_\_\_ There are certain rules of food consumption which are taken for granted by the children

\_\_\_\_\_ There is a time limit of 30 minutes for finishing lunch

\_\_\_\_\_ There is a time limit of 40 or 45 minutes for finishing lunch.