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Nutritional Preferences of Preschool Children for Breakfast

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Abstract

The main purpose of this study is to identify children's breakfast habits and what they know about this topic, and see if they transfer all this into life. In this study, the case study design is used because the aim is to describe and interpret from holistic perspective children's preferences for breakfast. The study was conducted with a total of 30 children from the morning group. For one week, the children were offered a breakfast buffet containing food from each food group and what the children ate was observed. The structured individual interviews planned with 30 children were carried out with only 28 children on the grounds that two children were of Syrian origin and could not speak Turkish at an adequate level. As a study result, those children that stated they choose their preferred food and beverages at breakfast according to what they like know the correct foods, which they called "healthy," but do not choose them.

Keywords: Childhood Obesity; Nutrient; Frequency of breakfast; Social learning

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Introduction

Childhood is a critical period in which nutritional habits are learned [1]. From the perspective of physical development, early childhood experiences are important in terms of ideal weight status [2]. In adults and children alike, if any of the nutritional elements found in food is not taken in at all, or if too much or too little is taken in, this can disrupt health by affecting growth and development [3].

It is stated that children who are familiar with healthy foods early on are more likely to make healthy food choices in their lives and that parents play important roles in the development of nutritional preferences [4-6]. Research shows that parents are generally carefree about portions and often make decisions about portion size based on child characteristics such as the child's appetite [6,7].

Every day, children need a variety of foods from four food groups. The Ministry of Health's food and nutrition guidelines define four food groups (fruits and vegetables, bread and cereals, milk and dairy products, meat) and recommend two servings from the dairy group, two servings from the meat group, five servings from the group of vegetables and fruits, and three to six servings from the bread and cereals group, daily. Some foods do not fall into the four food groups. These foods include foods like biscuits, cakes, desserts, potato chips, pastries, pies, chocolates, and sodas. Their consumption should be limited because most of these foods are high in fat (especially saturated fat) and/or salt and/or sugar. Cooking methods such as frying add extra fat to the food. These foods are usually categorized as foods that should be consumed occasionally. They do not provide the nutrients that our bodies need. They can be added to our diets for diversity, but they should not replace the essential nutrients our bodies need every day [8].

The amount of food consumed by preschool children varies from day to day. For example, they can enjoy eating boiled eggs some days while refusing to eat them on others. Of all the food groups, children at this age prefer vegetables the least. They usually enjoy eating vegetables that can be eaten uncooked such as cucumbers, tomatoes, or carrots. Small children should have 1/4 to 1/3 of adults' portions because of their limited stomach capacity [9,10]. Therefore, it is very important that children eat at short intervals. In order to increase children's interest in eating, the act of preparing the plates can be turned into a game. It is reminded that every food group should be on the child's plate, and it is recommended that each food they take be a different color.

Breakfast is often considered to be one of the most important determinants of health. Behaviorally, studies have focused mainly on food intake and body mass index. The body mass index (BMI) of people who have breakfast turned out to be lower than that of those who do not. So, obese individuals are more likely to skip breakfast [11-14]. While it is observed that individuals with normal or low BMI receive more balanced energy during the day, by skipping breakfast obese individuals do not attach importance to this [15]. When long-term effects are considered, academic performance and cognitive skills are remarkable. It is observed that people who consume cereals at breakfast every day have less depression and are emotionally less troubled [16-18]. In a study examining the relationship between the frequency of breakfast and IQ scores in Chinese children, it was found that children who had breakfast frequently had higher scores than those who had breakfast occasionally [19]. Research on the nutritional habits of American children shows that on average, they consume more fat and add sugar and consume less fruits and vegetables than recommended. The omission of breakfast is one of many factors contributing to obesity in childhood, and about 40% of American two-to-five-year-olds are overweight or at risk of being overweight [20].

In a study with German children and adolescents, it was observed that the children had breakfast less frequently as they grew older. The consumption of bread and its derivatives at breakfast increased while the food intake remained constant. In addition, beverage consumption increased with age. In a study of Portuguese children aged 13-17 years, the frequency of having breakfast was between 87-94% [21]; similarly, in a study of Spanish students aged 3 to 16 years, the frequency of having breakfast was 88% [22]; 97% of 9-11 year old British children had breakfast [14]; In another study conducted by Dubois et al., only one tenth of the children in Canada had breakfast seven days a week [23]. When the literature is examined, it is observed in longitudinal studies that the habit of having breakfast is more common in childhood than in adolescence [24,25]. Fleig and Randler explain the change in these habits in adolescence as a shift from breakfast in the morning to dinner in the evening [26]. DONALD (Dortmund Nutritional and Anthropometric Longitudinally Designed) study showed that breakfast frequency decreased with age, but also that the quality of breakfast decreased compared to common rules [27]. When breakfast contents were examined, it was observed that calcium consumption decreased with age, particularly in adolescent girls; while the consumption of caffeine, sucrose, and sodium increased [28].

The nutritional status of people in Turkey varies depending on region, season, socioeconomic level, and location differences. The main reason for this is the inequality in income distribution. This has an effect on the nature and frequency of nutritional problems. The lack of knowledge about nutrition leads to improper food selection, incorrect preparation, cooking and storage methods, and leads to an increase in nutrition problems [29]. In addition to economic conditions and other factors over the years, advertisements, new products on the market and globally spreading fast food have also affected society's eating habits. These changes because nutritional problems and can affect public health [9].

It is important to contribute to a healthy lifestyle by cultivating breakfast habits in children in the first years of their life. There are many studies in the literature showing how breakfast positively affects children's school performance and achievements as well as their behavior [19,27,30-35]. However, very few studies have focused on what children eat for breakfast. In the literature although several studies have stated the positive effects of carbohydrate and protein intake in the morning breakfast, it emphasizes the importance of focusing on what children eat, and the necessity of instilling behavior in this direction [14,19,36-40].

This study is based on The Social Learning Theory that Vygotsky and Bandura pioneered. This is because the child follows his/her immediate environment when making a choice. Later, within the framework of the choices made, he/she then pushes the limits with his/her own choices, and measures his family's reaction. If the child gets a positive response from his/her family, he/she will repeat this behavior over and over again [41]. Children also follow the family first in their food preferences. They form their own diet and habits according to their family's diet. In the context of these habits, when the children come together with their friends at school, they will have established their own feeding style. For this reason, this study first conducted interviews followed by observations in order to understand the children's eating habits within the family. The main purpose of this study is to identify children's breakfast habits and what they know about this topic, and see if they transfer all this into life. In doing so, the aim is to instill healthy eating habits in children. The goal is to identify the educational requirements in developing a healthy eating program by studying breakfast habits. To this end, the basic aim of the study was to determine what children eat for breakfast and how are their behaviors during breakfast time.

In order to achieve the goal of the study, it was determined that the question "What are the preschoolers nutrition preferences for breakfast?" would be the basic problem sentence for the study.

Sub-problems are expressed as:

1-Do children prefer a carbohydrate-heavy diet?

2-Do children prefer a protein-heavy diet?

3-Do children show a tendency towards fatty and sugary foods?

4-Do the children's preference for liquids at breakfast favor milk or drinks with a high sugar content?

5-Do children prefer to eat mainly fruits and vegetables?

6-Is there a difference between the foods that children put on their plates and the foods they prefer to eat for breakfast?

Methods

Research Model

Although breakfast habits affect the quality of children's nutrition, they also have a positive effect on body mass index and healthy living skills [42]. In this study, the case study design is used because the aim is to describe and interpret from holistic perspective children's preferences for breakfast, which is very important for children's eating habits [43,44]. The aim of the case studies, which can be carried out using both quantitative and qualitative approaches, is to reveal the results of a particular situation [43].

Study Group

The study was conducted in a preschool affiliated with the Izmir Provincial Directorate of National Education. The study group of the independent preschool, which gives dual education, consists of the morning students. The main factor in conducting the research in this particular kindergarten is that the school is situated in a location populated by socioeconomically middleclass families and offers breakfast meals to the children in the form of an open buffet. For one week, the children were offered a breakfast buffet containing food from each food group (carbohydrate, protein, fruit & vegetable, fat & sugar, drink) and what the children ate was observed. The structured individual interviews planned with 30 children were carried out with only 28 children on the grounds that two children were of Syrian origin and could not speak Turkish at an adequate level.

Work Status

In this study, the foods preferred by the children at the open buffet breakfast given at a preschool affiliated with the Izmir Provincial Directorate of National Education were evaluated.

The dual-education school provides breakfast and a midday meal to its students. Intermediate meals are provided in the classroom through parent-teacher cooperation. The open buffet breakfast that forms that study's status was created using the budget of the preschool where the study took place in consultation with nutrition and dietary specialists. The buffet breakfast is given to the children of four classes in the school kitchen starting at 8.40 in the morning. The classes enter the kitchen at 10-minute intervals. The children are able to take as much as they want from the food and beverages arranged on the table in the kitchen with nobody intervening. Breakfast includes carbohydrates, protein, fruits/ vegetables, and foods from the fat/sugar group and beverages such as milk, herbal tea, juice, and water. The carbohydrate group includes bread; the protein group includes eggs and cheese; the fruits/vegetables group includes cucumbers, tomatoes, carrots, and parsley; the fats/sugar group includes chocolate spread, butter, sesame, and grape syrup.

Data Collection Tools

The observation technique was used in order to see from a broad perspective what foods the children preferred for breakfast. The unstructured field study type of observation was used since the practice was carried out in the school dining hall. At the same time, the observations were recorded on camera after having obtained the necessary consent from the families. In order to find out what the children prefer to have for breakfast, the meetings were conducted before the open buffet breakfast began. The semi-structured individual interview form was used in the interviews.

Since the children were observed in their school dining hall, the observation carried out was of the unstructured field study kind. The observer assumes the role of participant in this type of observation and the participant makes observations [43]. The children were observed by blending in with their culture and without making any intervention. An observation form developed jointly with field experts was used so as to prevent data loss. In addition to the observations recorded with the camera, the school administration gave the necessary permissions to take individual photographs of the children with their breakfast plates. In keeping with the code of ethics, the children's faces were deleted from the photographs and each plate was coded separately for each child [44].

Data Collection Process

When creating the interview form, the literature was examined first and then specialists were consulted. A total of six questions were written on the form that was created. Pilot interviews were conducted with two children selected from the classes that did not participate in the study. As a result of the interviews, two questions that did not contribute to the evaluation were removed from the form, then the form was finalized. Interviews lasted approximately 3 minutes with each child. In order to avoid data loss, the answers were written down. The environment in which the interview was conducted was a room agreed on with the school administration. The room was quiet and well lit with its temperature preset so as not to affect the children's interview answers. The two researchers were present in the interview room; one conducted the interview while the other took notes.

The two researchers were also present during the observation. One researcher filled out the observation form while the other recorded with the camera. The observation was made in the dining hall since this was where the children had breakfast. The children had breakfast one class at a time. Moving in single file they took what they wanted from the food comprising fruits and vegetables, protein, fat/sugar, carbohydrates, and beverages arranged left to right on the open buffet located to the left of the dining hall entrance, then sat at their tables. There are four tables in the dining hall based on the total number of children in the school. The researchers and the school staff did not intervene while the children were choosing what they wanted for breakfast. Each child sitting at the table was photographed together with their breakfast plate. In this way the foods preferred by each child were classified over the course of five days of observation.

Data Analysis

The data obtained in the research were analyzed using content analysis, which is frequently used in the qualitative analysis method. In the content analysis, the data is brought together using concepts and themes, and the concepts and themes created are intended to be understood and interpreted by the readers [41]. In the preparation phase of this process, students are coded as "Ö1 through to Ö28" in order to prevent ethical problems. At the coding stage, the data set was read without interruption and the meaningful data units on the data set were tagged with appropriate concepts or words and a list of codes was created. At the theme-forming stage, the codes were reviewed by the researchers and it was discussed which themes could be obtained by bringing together which codes. The data were organized by associating every piece of data with the resulting themes and codes. When interpreting and reporting the findings, the findings were defined and interpreted by taking suitable quotes and descriptions.

Validity and Reliability Measures

Work was carried out together with field specialists throughout the study. The dietitian was consulted in order to calculate the amount of energy the children needed to take in daily, and how much of which food group they needed to eat. As the researchers are two people, the aim was to increase validity and reliability by working together on data analysis. In order to provide data diversification, the qualitative data collection tools of observation, interview, and document review techniques were used.

Findings

The findings of the study are presented by associating the semistructured interviews conducted with the participants with the unstructured field observations.

Breakfast perception and food preference

When the findings about the perception of breakfast were examined, it was observed that the majority of the children (93.3%) stated that they like to have breakfast. The proportion of children who stated that they did not like to have breakfast was 3.4% while the proportion of children who were undecided was 3.3%. In observations, it was determined that all children attended the breakfast time at the school and that they did not show any reluctance during this time. According to the findings obtained from the observations, the children finished all the food they put on their plates. In other words, every child tends to take as much food as he/she can eat [44].

When the food preferences of the children were examined, three different themes were obtained: food, beverage, and school breakfast preferences. Food and school breakfast themes were investigated in four sub-themes: carbohydrate, protein, fruit/ vegetable and fat/sugar. The beverage theme was examined in four sub-themes: milk, herbal tea, fruit juice, and water.

During the interviews, the majority of the children stated that they preferred carbohydrates, protein, and fruits/vegetables for breakfast. In interviews with children, a total of nine (9) children said that "eggs" were their favorite food. This was followed by toast and cheese with six (6) children. However, when evaluated in terms of general categories, it was found that the children's basic preference was carbohydrates (21 children). No child stated that he/she preferred food from the fat/sugar group for breakfast. However, observation results paint a different picture. It was observed that children prefer foods from the carbohydrate and fat/sugar group during the breakfast buffet. In particular, it was found that they preferred to spread chocolate or jam on bread. It was determined that foods in the protein group were the least preferred foods. One of the findings of the observations is that children are influenced by each other's preferences. It was determined that they opted for similar foods to those taken by the children before them or with them at breakfast [45].

The vast majority of the children stated they preferred fruit juice (15 children) or milk (14 children) to drink at breakfast. In the observation results, it can be seen that the children's preferences favor fruit juice. It was observed that children who stated they preferred milk for breakfast during the interview actually mainly preferred fruit juice or herbal tea, and not milk during breakfast. It was determined that the children's expressed preferences during the interviews do not match their observed preferences. During the interview, the children gave the desired answers, but during a real breakfast they preferred food groups such as fat/sugar, which should be consumed less frequently. This situation shows us that children are aware of the food groups that they need to consume frequently and at breakfast, but they prefer to eat according to their eating habits. This suggests that nutrition education given to children remains only at the level of knowledge and is not transferred to behavior.

Reasons for food preference

When the reasons of food preferences of children were examined, two different themes were obtained: food and beverage preferences. The theme of food choices is evaluated in four sub-themes: liking food, finding food healthy, parental influence, and the desire to consume different foods. The theme of the beverage preferences was examined in three sub-themes: liking food, finding food healthy, and other.

In the interviews, 14 of the children stated that they prefer their favorite foods for breakfast. Factors such as liking the food or liking its taste lead to food preference:

"Eggs, chocolate bread, cucumbers, olives, and juice because they taste so sweet, which is why I always take them, but I do take greens from time to time". [Ö18]

As a result of the observations, it was observed that Ö18 preferred chocolate bread, cucumber, olives, and fruit juice, matching the responses in the interviews. However, as he stated, he chose "greens" only on the first day. After Ö18 chose "greens" it was observed that students Ö19, Ö20, and Ö21, who were standing behind Ö18 in line and saw what was on his plate, took the same vegetables. This shows that children are influenced by each other's preferences, and that this can be affected by people in their daily lives [45].

The proportion of children who stated they choose the food they like is followed by children who stated they preferred for breakfast food they think is healthy. It was seen that the children expressed the reasons for their preferences using such terms as "growing strong," "it has vitamins," and "growing up" instead of the concept of "healthy".

"Walnuts. Because it strengthens our muscles". [Ö3]

"...Because I have to eat them or I won't grow". [Ö12]

"Pizza the most, I am going to grow; I won't stay small". [Ö15]

Among the responses that were seldom given were those given by children who preferred what their parents prefer, and by children who named one thing while actually wanting to consume something else.

"Pasta soup. Because I eat pasta every day while drinking its soup". [Ö22]

"Because my mom and dad love eggs". [Ö2]

When it came to beverage preference it was mainly stated that they choose the beverage they do because they like it. This proportion is followed by the proportion of children who stated they chose a particular beverage because they consider it healthy. Unlike food preferences, it can be seen that children qualify the drinks they prefer as "healthy". Meanwhile, 15 of the children stated their preferred beverage was milk because it is "healthy".

"I want to drink milk. Because it is healthy to drink milk". [Ö4]

"Milk and juice. Because if I drink it I won't grow but if I drink it I will grow, if I don't drink it I won't grow". [Ö12]

In the observation results, it can be seen that children frequently prefer fruit juice to milk.

The reasons why children chose the beverage they did are grouped into two separate responses, unlike the variety seen in the reasons for choosing food. The children did not show any tendency to say something like it is healthy for any beverage other than milk, and they stated they like it as their reason for choosing it.

Conclusion and Suggestions

Those children that stated they choose their preferred food and beverages at breakfast according to what they like know the correct foods, which they called "well," but do not choose them. It is thought that the reason the children gave the desired answer stems as much from the role of the researcher as it does from the wish to give an adult the "correct" answer. However, the fact that information has not been transformed into behavior is a very important result for the study. In this context, activities should be prepared such that the correct knowledge held by the children can be converted into behavior. In order to enable children to learn in line with their life experiences, institutions could be advised to offer alternative nutritional options on certain days of the week. In addition, it is important to make sure that the education programs implemented in early childhood are skillbased and that they are supported by making observations with regard to behavioral development.

References

- 1. Cunnane SC (1993) Childhood origins of lifestyle-related risk factors for coronary heart disease in adulthood. Nutr Health 9: 107-15.
- Sharma S, Chuang R, Hedberg A (2011) Pilot testing CATCH Early Childhood: A Preschool-based Healthy Nutrition and Physical Activity Program. Am J Health Educ 42: 12-23.
- http://beslenme.gov.tr/content/files/arastirmalar/tbsa/1_ haziran_t_ber_rehber_y_ksek_kalite.pdf.
- 4. Lynch M (2012) Familiarizing with toy food: Preliminary research and future directions. J Nutr Educ Behav 44: 639-43.
- Savage JS, Fisher JO, Birch LL (2007) Parental influence on eating behavior. Conception to adolescence. J Law Med Ethics 35: 22-34.
- Briley M, Ranjit N, Holescher D, Sweitzer S, Almansour F, et al. (2012) Unbundling outcomes of a multilevel intervention to increase fruit, vegetables and whole grains parents pack for their preschool children in sack lunches. Am J Health Educ 43: 135-42.
- 7. Croker H, Sweetman C, Cooke L (2009) Mothers' views on portion sizes for children. J Hum Nutr Diet 22: 437-43.
- 8. Food and Beverage Classification System for Early Childhood Education Services: User Guide, 2007, Ministry of Health, New Zealand

- 9. Turkey Ministry of Health, Public Health Agency (2013) Obtained from: Nutrition Recommendations and Menu Programs for Preschool and School Age Children (Nutrition Suggestions and Menu Programs for Preschool and School Age Children).
- Potter C, Ferriday D, Griggs RL, Hamilton-Shield JP, Rogers PJ, et al. (2017) Parental beliefs about portion size, not children's own beliefs, predict child BMI. Pediatr Obes 13: 232-238.
- 11. Holub SC, Musher-Eizenman DR (2010) Examining preschoolers' nutrition knowledge using a meal creation and food group classification task: Age and gender differences. Early Child Dev Care 180: 787-98.
- Pearson N, Biddle SJH, Gorely T (2009) Family correlates of breakfast consumption among children and adolescents. A systematic review. Appetite 52: 1-7.
- Boutelle K, Neumark-Sztainer D, Story M, Resnick M (2002) Weight control behaviors among obese, overweight, and nonoverweight adolescents. J Pediatr Psychol 27: 531-40.
- 14. Hunking P (2014) Importance of breakfast for children. Nurs Gen Prac 18-19.
- 15. Ortega RM, Requejo AM, Lopez-Sobaler AM, Quintas ME, Andres P, et al. (1998) Difference in the breakfast habits of overweight/obese and normal weight schoolchildren. Int J Vitam Nutr Res 68: 125-32.
- 16. Smith AP (1998) Breakfast and mental health. Int J Food Sci Nutr 49: 397-402.
- 17. Smith AP (1999) Breakfast cereal consumption and subjective reports on health. Int J Food Sci Nutr 50: 445-9.
- 18. Smith AP (2002) Stress, breakfast cereal consumption, and cortisol. Nutritional Neuroscience 5: 141-4.
- 19. Liu J, Hwang WT, Dickerman B, Compher C (2013) Regular breakfast consumption is associated with increased IQ in kindergarten children. Early Human Development 89: 257- 62.
- 20. Mota J, Fidalgo F, Silva R, Ribeiro JC, Santos R, et al. (2008) Relationships between physical activity, obesity and meal frequency in adolescents. Ann Hum Biol 35: 1-10.
- Aranceta BJ, Perez RC, Serra ML, Delgado RA (2004) Food habits of students using school dining rooms in Spain. "Tell me how you eat" study. Aten Primaria 33: 131-9.
- Bellisle F, Rolland-Cachera MF (2007) Three consecutive (1993, 1995, 1997) surveys of food intake, nutritional attitudes and knowledge, and lifestyle in 1,000 French children, aged 9–11 years. J Hum Nutr Diet 20: 241-51.
- 23. Dubois L, Girard M, Kent MP, Farmer A, Tatone-Tokuda A (2009) Breakfast skipping is associated with differences in meal patterns, macronutrient intakes and overweight among pre-school children. Public Health Nutr 12: 19-28.
- Utter J, Scragg R, Mhurchu CN, Schaaf D (2007) At-home breakfast consumption among New Zealand children: associations with body mass index and related nutrition behaviors. J Am Diet Assoc 107: 570-6.
- 25. Affenito SG, Thompson DR, Barton BA, Franko DL, Daniels SR, et al. (2005) Breakfast consumption by African-American and White adolescent girls correlates positively with calcium and fiber intake and negatively with body mass index. J Am Diet Assoc 105: 938-45.
- 26. Fleig D, Randler C (2009) Association between chronotype and diet in adolescents based on food logs. Eat Behav 10: 115-8.

- Alexy U, Wicher M, Kersting M (2010) Breakfast trends in children and adolescents: Frequency and quality. Public Health Nutrition 13: 1795-802.
- Albertson AM, Franko DL, Thompson D, Eldridge AL, Holschuh N, et al. (2007) Longitudinal patterns of breakfast eating in black and White adolescent girls. Obesity (Silver Spring) 15: 2282-92.
- 29. https://app.trdizin.gov.tr/makale/TXpJMU1ERTBOQT09/kaliteli-vedengeli-beslenme-acisindan-kanatli-uretiminin-etkinligi
- Correa-Burrows P, Burrows R, Blanco E, Reyesa M, Gahagan S (2016) Nutritional quality of diet and academic performance in Chilean students. Bull World Health Organ 94: 185-92.
- Rausch R (2013) Nutrition and Academic Performance in School-Age Children; The Relation to Obesity and Food Insufficiency. J Nutr Food Sci 3: 190.
- Diana F, Jyoti A, Jones SJ (2005) Food Insecurity Affects School Children's Academic Performance, Weight Gain, and Social Skills. J Nutr 135: 2831-9.
- Ivanovic D, Vasquez M, Aguayo M, Ballester D, Marambio M, et al. (1992) Nutrition and education. III. Educational achievement and food habits of Chilean elementary and high school graduates. Arch Latinoam Nutr 42: 9-14.
- 34. Michelle D, Florence MS, Mark A, Paul JV (2008) Diet Quality and Academic Performance. J Sch Health 78: 209-15.
- 35. Edwards J (2011) Relationship of Nutrition and Physical Activity Behaviors and Fitness Measures to Academic Performance for Sixth Graders in a Midwest City School District. J Sch Health 81: 65-73.

- Murphy JM, Wehler CA, Pagano ME, Little M, Kleinman RE, et al. (1998) Relationship between hunger and psychosocial functioning in low-income American children. J Am Acad Child Adolesc Psychiatry 37: 163-70.
- Abalkhail B, Shawky S (2002) Prevalence of daily breakfast intake, iron deficiency anaemia, and awareness of being anemic among Saudi school students. Int J Food Sci Nutr 53: 519-28.
- Chandler AK, Walker SP, Connolly K, Grantham-McGregor SM (1995) School breakfast improves verbal fluency in undernourished Jamaican children. J Nutr 125: 894-900.
- 39. Edward HG, Evers S (2001) Benefits and barriers associated with participation in food programs in three, low income Ontario communities. Can J Diet Pract Res 62: 76-81.
- 40. Kleinman RE, Hall S, Green H (2002) Diet, breakfast, and academic performance in children. Ann Nutr Metab 46: 24-30.
- 41. Bee LH, Boyd DR (2009) The Developing Child. Boston: Allyn & Bacon, Istanbul.
- 42. Healthy Eating Guidelines Implementation Tool (2005) Department of Education and Children's Services in collaboration with the Department of Health, Government of South Australia.
- 43. Yildirim A, Simsek H (1999) Qualitative Research Methods in Social Sciences, Ankara: Seckin Yayincilik.
- 44. Patton MQ (2014) Qualitative Research & Evaluation Methods Integrating Theory and Practice (Fourth Edition), Sage Publications, Thousand Oaks, CA.
- 45. Ogden J (2017) Changing Behaviour: Child Nutrition. The British Psychological Society. Promoting Excellence in Psychology.