STUDY ON NUTRITIONAL KNOWLEDGE, AWARENESS, ATTITUDE AND BEHAVIOR AMONG STUDENTS IN AL-AZHAR PRIMARY SCHOOLS

Shaymaa O. Atallah [1]; Mohamed A. El-Nawawy[2]; Osama. E. Mustafa[3] and Farouk M. El-tallawy[4]

1) Postgraduate student Environmental Agric. Department, Faculty of Graduate Studies and Environmental Research, Ain Shams University. 2) Faculty of Agriculture, Ain Shams University. 3) Faculty of Special Education., Ain Shams University 4) Department of Environmental Agric. Sciences, Faculty of Graduate Studies and Environmental Research, Ain Shams University.

ABSTRACT

Foods play an important role for primary school children because school-age children try to develop personal independence and establish a measure of values. The aim of this study is to assess the behavior, direction and awareness of nutritional knowledge among students (boys and girls) in primary institutes in Al-Azhar, in addition to identifying their nutritional knowledge and the effects of nutritional knowledge among students and its impact on nutritional behaviors. behavior, to determine the quantity and quality of dietary intake. The nutritional status of the students was made for the convenience of the sample through anthropometric measurements such as weight, height, and body mass index. The current study includes some government institutes in Cairo and others in the Dakahlia government, which are classified as rural and urban governorates. Height and weight are measured for all students. The total number of students in this study was 516 students, including 218 boys and 298 girls. One questionnaire is used for students. The language of the questionnaire is Arabic. The average student age was 6.97. There is a lack of nutritional knowledge among the children of the institute. Knowledge of nutritional education is needed. Collaboration between parents and institutes to give a simple nutritional message to their children.

Key words: nutritional knowledge, nutritional status, questionnaire, nutritional behavior and primary school.

21

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

INTRODUCTION

Human nutrition deals with the provision of essential nutrients in food that are necessary to support human life and good health. Human nutrition, the process by which substances in food are transformed into body tissues and provide energy for the full range of physical and mental activities that make up human life. The study of human nutrition is interdisciplinary in nature, involving not only physiology, biochemistry, and molecular biology but also fields such as psychology and anthropology, which explore the influence of cultural attitudes, beliefs, preferences, and traditions on food choices. Human nutrition also touches economics and political science as the global community recognizes and responds to the suffering and death caused by malnutrition. The goal of nutritional science is to promote optimal health and reduce the risk of chronic diseases such as cardiovascular disease and cancer as well as prevent classic nutritional deficiency diseases such as kwashiorkor and pellagra. (Encyclopedia Britannica. 2021)

Good nutrition is vital to human health and well-being. A varied, balanced and adequate diet is the main source of good nutrition. On the other hand, lack of food and especially low nutritional foods leads to malnutrition which contributes to many diseases and disorders. Too much food and too little exercise causes obesity and associated medical problems. Imbalances in the diet are also examples of malnutrition. For example, heart disease and some types of cancer may occur when people eat too much fat. Too much salt in the diet can exacerbate high blood pressure in susceptible individuals. People who eat large amounts of sugar may suffer from vitamin and mineral deficiencies, which can lead to a variety of health problems in addition to tooth decay. (WHO, 2013)

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

Human nutrition is the study of foods, their nutrients and other chemical components, their actions and interactions in the body and their influence on health and disease. (Encyclopedia Britannica. 2020)

Nutrition has a fundamental role in human health specially the vulnerable groups such as children. Nutrition is one of the important factors that affects human health, besides it helps his growth, physical ability and intellectual achievement particularly in his early life. It is also important for sound social behavior. Hence, it plays a big role in the development of the community. (WHO, 2013)

Marcdante & Kliegman (2019) stated that school-age children attempt to develop personal independence and establish a scale of values. Individual variations in children become more noticeable in such governorates as rates of growth, activity patterns, nutrient requirements, personality development and food intakes. There is a wide range of nutrient requirements of children at any age during this period. Body size and composition, activity patterns and rates of growth influence basic needs. The foods available to and accepted by the child are determined not only by parental food selection but also by the mealtime environment, peer pressures, and the child's food experiences. If appropriate support is provided by parents, food patterns that support normal growth and weight, ensure good dental hygiene and prevent nutritional deficiencies including iron-deficiency anemia.

Nutrient requirements are affected by a generally slowed and erratic growth rate between infancy and adolescence and a child's individual needs. A child's food choices are determined by numerous family and community factors. Nutrient intake and developing food patterns in young children are governed by food availability and food choices. Considerations in feeding young

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

children are guided by meeting physical and psychosocial needs. Nutrition concerns during childhood relate to growth and development needs for positive health (FAO, 2007)

Naeeni *et al.,* (2014) evaluated the nutritional knowledge, practice, and dietary habits of primary school and junior high school students in Isfahan province. Also explored crucial differences regarding gender and living governorate of the above-mentioned population in Iran. Their results showed that adolescents failed to meet sufficient nutritional requirements, and they had an imbalanced diet, which was considerably low in several essential nutrients and high in some food materials.

Nomsa *et al*., (2019) studied the nutrition knowledge, attitudes and practices of grade 4–6 learners from three primary schools in a South African township. They found that there is a need to explore innovative and novel approaches to improve nutrition knowledge of school children. Parents also need to be targeted to ensure better outcomes.

Moreover, Kigaru *et al*., (2015) established nutrition knowledge, attitude and practices among urban school children in Nairobi. Nutrition knowledge had no significant relationship with dietary practices, but attitude had. They stated that children had moderate nutrition knowledge and poor dietary practices, associated with negative dietary attitude. They recommend activities to raise awareness on the effect of poor dietary practices on obesity and related health risks.

Zalilah *et al*., (2008) determined the changes in knowledge, attitude and practices of primary school children after receiving a nutrition education intervention for 6 weeks. The findings support the importance of providing children with nutrition knowledge to promote healthy dietary behaviors. Cate, *et al*., (2020) assessed the nutrition knowledge underpinning the food

24

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

choices and factors influencing food choices of primary school learners in selected rural schools of Limpopo Province, South Africa. These interventions should target schools, homes and communities to ensure that the environment is supportive, and knowledge is shared and applied by all.

Kana"An *et al*., (2022) assessed the level of knowledge, attitude, and practice among teachers about healthy food and to examine the associated factors. The study results showed limited knowledge combined with a low level of positive attitude. Thus suggests an ongoing educational workshop should be established to promote healthy nutrition.

The aim of this research is to identify the nutritional knowledge of Al-Azhar primary school students and its impact on nutritional behavior. Inventory of students' diets in terms of quantity and quality. The study was conducted to determine the nutritional status of the students with different measurements such as weight, height, and body mass index

MATERIALS AND METHODS

Study design and subjects: The total number of students in our study was 516 students, of which 218 were boys and 298 were girls. The same questionnaire was used for all students. The language of the questionnaire is Arabic. The answer to the questionnaire is evaluated statistically. This study included some institutes in the governorates of Cairo and Dakahlia, and the latter was classified into rural and urban. This study was conducted between September 2019 and September 2020.

Data were collected from each student include:

1- Socio-economic data: Include name, sex, age, family size, parents' education and occupation.

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

2- Anthropometric measurements: Included weight, height and Body Mass Index of children.

Weight (WT): Body weight was recorded using a beam balance. The children were weight to the nearest kilogram without shoes and in light clothes. The scales were calibrated before use.

Height (HT): The height of each student subject was measured using a measuring tape fixed to the wall without shoes to the nearest centimeter. The children were adjusted stand upright position with heals, shoulders and back of head touching the upright wall and with eyes looking straight ahead. The heels were together, the shoulders were relaxed and the arms were relaxed and hanging loosely at the sides. The head was in horizontal plan, when the lower border of the left orbit and the upper margin of the external auditory meet us are horizontal.

Then, weight and height were corrected as an indicator of body composition, a weight/ height index should have a high correlation with body fat.

Body Mass Index of children (BMI): BMI is an indicator Quetelet calculates BMI = (kg / m^2) = mass (kg) / height (m)^2 and is the most used index today. Its association with body fat is high and its association with body height is generally low. The World Health Organization (WHO) promotes BMI as the primary indicator for weight estimation. In young children, weight compared to height is relatively low, as is BMI. During growth, the increase in weight is greater than the increase in height, so BMI increases with age during adulthood. These differences could have important consequences in the definition of obesity (based on BMI cut-off values) and the prevalence of obesity in the population.

The nutritional status indicators for the Growth Charts include obesity, overweight, underweight, and short stature. Percentiles are used to rank an individual or a group on a growth chart and indicate where fit in the context of the reference population. The definition of

26

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

nutritional status indicators recommended for use to screen using the Growth Charts are listed below:

Anthropometric Index	Percentile Cut Off Value	Nutritional Status Indicators
BMI-for-age	> 95th Percentile	Obesity
BMI-for-age	> 85th and < 95th Percentile	Overweight
BMI-for-age	< 5th Percentile	Underweight
Stature-for-age	< 5th Percentile	Short Stature*

Appropriate reference population, accurate measurements and age calculations are important factors when assessing childhood growth. Comparing body measurements to the appropriate age and sex specific growth chart enables pediatric health care providers to monitor growth and identify potential health or nutrition related problems. (Flegal & Cole. 2013)

3- Statistical Analysis: Results analysis was performed by SPSS V 18 software (0.01). A word processing, database and statistical system for epidemiology on microcomputers. Any descriptive statistic such as mean, standard deviation and percentages of frequencies were provided. Chi-square significance was applied to identify it.

RESULTS AND DISCUSSION

Data in Table (1) shows that the percentage of the boys students about 38.00%, where the boys students who age <9 years about 21.50% and the boys students who age >9 years about 16.50% where the girls students who <9 years raise in the Cairo' governorate about 40.0% and the boys students who age >9 years raise in the Cairo' governorate about 22.00%. Also, Table (1) shows that the percentage of the boys students about 44.94%, where the boys students who age <9 years about 28.16% and the boys students who age >9 years about 17.09% where the girls

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

students who <9 years raise in the Dakahlia's governorate about 34.49% and the boys students who age >9 years raise in the Dakahlia's governorate about 20.25%.

Table(1): Description of the research sample

Variable (Al-Azhar students)	Cairo's governorate	Dakahlia's governorate	% Cairo's governorate	% Dakahlia's governorate
Total count of students	200	316	100.00%	100.00%
Count of boys	76	142	38.00%	44.94%
Count of girls	124	174	62.00%	55.06%
Count of boys ≤9 age	43	89	21.50%	28.16%
Count of boys >9 age	33	54	16.50%	17.09%
Count of girls ≤9 age	80	109	40.00%	34.49%
Count of girls >9 age	44	64	22.00%	20.45%
Rural	0	115	0.00%	36.39%
Urban	200	201	100.00%	63.61%

Table 2 shows the relationship between age, height and weight where correlation age and height as correlation age and weight; also, the correlation between height and weight. It is noticed that correlation between age, height and weight is significant at the 0.01 level (2-tailed) for students.

Table(2): shows correlation between age, height and weight is significant at the 0.01 level (2-tailed) for students.

		Age	Height	Weight
Age	Pearson Correlation	1.000	.218(**)	.243(**)
	Sig. (2-tailed)		.000	.000
	N	611	611	611
Height	Pearson Correlation	.218(**)	1.000	.338(**)
	+-Sig. (2-tailed)	.000		.000
	N	611	611	611
Weight	Pearson Correlation	.243(**)	.338(**)	1.000
	Sig. (2-tailed)	.000	.000	
	N	611	611	611

**Correlation is significant at the 0.01level (2-tailed)

28

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

The students' ages ranged from 6.97 ± 1.42 and their heights ranged from 93.16 ± 14.42 while their weights ranged from 23.83 ± 7.81 and their BMI was from 14.87 ± 6.07

Table No. (3) show the other hand relationship between nutritional knowledge in the question Q1" what is the benefits of the nourishment to human?" and behavior in the question Q3" how much is number of the meals which eat with single of your family?" where false knowledge raise with who eat 1 meals is 36.8% while non-enough knowledge raise with who eat 3 meals is 60% while true knowledge raise with who eat 1meals is 26.3%, When the answers are part of the correct answer and incomplete, it is considered non-enough knowledge, where there is significant differences. In Italy; Adults have a low level of knowledge about nutrition and/or unhealthy eating habits. (Scalvedi et al., 2021)

Table (3): Relationship between nutritional knowledge Q1"benefits of nourishment to human" and behavior Q3"number of the meals with your family"

			Nutritional behavior Q3			Total
			1meal	2meal	3meal	
Nutritional knowledge Q1	False knowledge	count	7	45	76	128
		%Within Q1	5.4%	35.2%	59.4%	100.0%
		%Within Q3	36.8%	27.8%	22.7%	24.8%
	Non-enough knowledge	count	7	80	201	288
		%Within Q1	2.4%	27.8%	69.8%	100.0%
		%Within Q3	36.8%	49.4%	60.0%	55.8%
	True knowledge	count	5	37	58	100
		%Within Q1	5%	37.0%	58.0%	100.0%
		%Within Q3	26.3%	22.8%	17.3%	19.4%
	Total	count	19	162	335	516
		%Within Q1	3.7%	31.4%	64.9%	100.0%
		%Within Q3	100.0%	100.0%	100.0%	100.0%

Chi square=7.817 df=4 P= 0.020

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

Table (4) shows the other hand relationship between nutritional knowledge in the question Q1 "what is the benefits of the nourishment to human?" and behavior in the question Q4 "are you desire to drink the milk in the breakfast?" There is no significant difference. Sahingoz & Sanlier, (2011) found poor nutrition knowledge of Turkish adolescents.

Table (4): Relationship between nutritional knowledge Q1 "the benefits of the nourishment to human" and behavior Q3 "drink the milk in the breakfast"

| | | | Nutritional behavior Q4 | | | Total |
			Most-times	sometimes	Always	
Nutritional knowledge Q1	False knowledge	count	26	47	55	128
		%Within Q1	20.3%	35.2%	44.5%	100.0%
		%Within Q4	29.2%	26.3%	22.2%	24.8%
	Non-enough knowledge	count	45	101	142	288
		%Within Q1	15.6%	35.1%	49.3%	100.0%
		%Within Q4	50.6%	56.4%	57.3%	55.8%
	True knowledge	count	18	31	51	100
		%Within Q1	18.0%	31.0%	51.0%	100.0%
		%Within Q4	20.2%	17.3%	20.6%	19.4%
	Total	count	89	179	248	516
		%Within Q1	17.2%	34.7%	48.1%	100.0%
		%Within Q4	100.0%	100.0%	100.0%	100.0%

Chi square=2.646 df=4 P= 0.326

Table (5) show the other hand relationship between nutritional knowledge in the question " what is the benefits of the nourishment to human?" and behavior in the question " are you desire to eat your breakfast?" where false knowledge raise with who don't eat the breakfast is 36.8% while non-enough knowledge raise with who always eat the breakfast is 59.4% while true knowledge raise with who don't eat the breakfast is 26.3% where there is significant differences. In Australian adults, knowledge was lowest for nutrient content and label reading. Turner et al.,

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

(2023) in their study found that attitudes and behaviors were generally positive and were not associated with level of knowledge.

Table (5): Relationship between nutritional knowledge Q1 "the benefits of the nourishment to human" and behavior Q5 "eat your breakfast"

			Nutritional behaviorQ5			Total
			I don't eat breakfast	sometimes	Always	
Nutritional knowledge Q1	False knowledge	count	7	39	82	128
		%Within Q1	5.5%	30.5%	64.1%	100.0%
		%Within Q5	36.8%	30.0%	22.3%	24.8%
	Non-enough knowledge	count	7	63	218	288
		%Within Q1	2.4%	21.9%	75.7%	100.0%
		%Within Q5	36.8%	48.5%	59.4%	55.8%
	True knowledge	count	5	28	67	100
		%Within Q1	5.0%	28.0%	67.0%	100.0%
		%Within Q5	26.3%	21.5%	18.3%	19.4%
	Total	count	19	130	367	516
		%Within Q1	3.7%	25.2%	71.1%	100.0%
		%Within Q5	100.0%	100.0%	100.0%	100.0%

Chi square=7.746 df=4 P= 0.0220

Table (6) show the other hand relationship between nutritional knowledge in the question Q1 " what is the benefits of the nourishment to human?" and behavior in the question Q13" are you prefer to eat the vegetable's salad and the fruits daily?" where false knowledge raise with who most-times prefer to eat the vegetable's salad and fruits daily is 29.8% while non-enough knowledge raise with who most-times prefer to eat the vegetable's salad and fruits daily is 57.6% while true knowledge raise with who sometimes prefer to eat the vegetable's salad and fruits daily is 24.8% where there is significant differences.

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

Table (6): Relationship between nutritional knowledge Q1 "benefits of nourishment to human" and behavior Q13"eat the vegetable's salad and fruits daily"

			Nutritional behavior Q13			Total
			Most-times	sometimes	Always	
Nutritional knowledge Q1	False knowledge	count	45	33	50	128
		%Within Q1	35.2%	25.8%	39.1%	100.0%
		%Within Q13	29.8%	23.4%	22.3%	24.8%
	Non-enough knowledge	count	87	73	128	288
		%Within Q1	30.2%	25.3%	44.4%	100.0%
		%Within Q13	57.6%	51.8%	57.1%	55.8%
	True knowledge	count	19	35	46	100
		%Within Q1	19.0%	35.0%	46.0%	100.0%
		%Within Q13	12.6%	24.8%	20.5%	19.4%
	Total	count	151	141	224	516
		%Within Q1	29.3%	27.3%	43.4%	100.0%
		%Within Q13	100.0%	100.0%	100.0%	100.0%

Chi square=8.056 df=4 P= 0.018

Table (7) show the other hand relationship between nutritional knowledge in the question Q1 " what is the benefits of the nourishment to human?" and behavior in the question Q17 " do you prefer to eat the food in home?" where not true knowledge raise with who not prefer to eat the food in home is 50% while non-enough knowledge raise with who always prefer to eat the food in home is 57.3% while true knowledge raise with who always prefer to eat the food in home is 83% where there is significant differences.

Journal of Environmental Sciences (JES)
Faculty of Graduate Studies and Environmental Research, Ain Shams University
Atallah, Shaymaa.. *et al.*

Table (7): Relationship between nutritional knowledge Q1 "benefits of nourishment to human" and behavior Q17 "eat the food in home"

			Nutritional behavior Q17			Total
			Not prefer	sometimes	Always	
Nutritional knowledge Q1	Not true knowledge	count	4	16	108	128
		%Within Q1	3.1%	25.8%	39.1%	100.0%
		%Within Q17	50%	23.4%	22.3%	24.8%
	Non-enough knowledge	count	1	31	256	288
		%Within Q1	0.3%	10.8%	88.9%	100.0%
		%Within Q17	12.5%	50.8%	57.3%	55.8%
	True knowledge	count	3	14	83	100
		%Within Q1	3%	14%	83%	100.0%
		%Within Q17	37.5%	23%	18.6%	19.4%
	Total	count	8	61	447	516
		%Within Q1	1.6%	11.8%	86.6%	100.0%
		%Within Q17	100.0%	100.0%	100.0%	100.0%

Chi square=5.805 df=4 P= 0.013

Generally, the most important research results for student consumption can be summarized as follows:

• Consumption tomato, cucumber and carrot daily, weekly, monthly and yearly raise in the Dakahlia's governorate but non consumption tomato raises in the Cairo's governorate.

• Consumption summer daily, weekly, monthly, yearly and non-consumption raise in the Dakahlia's governorate.

• Consumption meat and chicken daily raise in the Cairo's governorate but consumption meat and chicken weekly, monthly and yearly raise in the Dakahlia's governorate but non consumption meat raise in the Dakahlia's governorate but non consumption chicken raise in the Cairo's governorate.

- Consumption Duck daily, weekly, monthly and yearly raise in the Dakahlia's governorate but non consumption Duck raise in the Cairo's governorate.

- Consumption goose daily, monthly and non-consumption raise in the Dakahlia's governorate but weekly and yearly raise in the Cairo's governorate.

- Consumption fish daily and non-consumption raise in the Cairo's governorate but consumption fish weekly, monthly and yearly raise in the Dakahlia's governorate.

- Consumption orange daily, monthly and non-consumption raise in the Dakahlia's governorate but weekly and yearly raise in the Cairo's governorate.

- Consumption apple daily, weekly, monthly, yearly and non-consumption raise in the Dakahlia's governorate.

- Consumption sugar, honey, Tehinnah and butter daily, weekly, monthly, yearly and non-consumption raise in the Dakahlia's governorate.

- Consumption oil and rice daily and non-consumption oil rise in the Dakahlia's governorate, but consumption oil and rice weekly, monthly and yearly raise in the Cairo's governorate.

- Consumption bread daily, weekly, monthly and yearly raise in the Dakahlia's governorate but non consumption bread raises in the Cairo's governorate.

- Consumption macaroni daily raise in the Cairo's governorate, but weekly, monthly and yearly raise in the Dakahlia's governorate. Consumption blacked-eyed bean, lentils, spinach and eggplant daily, weekly, monthly, yearly and non-consumption raise in the Dakahlia's governorate but non consumption lentils raise in the Cairo's governorate.

- Consumption bean and eggs daily raise in the Dakahlia's governorate but weekly, monthly and yearly raise in the Cairo's governorate.

Atallah, Shaymaa.. *et al.*

CONCLUSION

It can be concluded that there is nutritional knowledge defect between institute's children. Thus, there is a need to develop program for nutritional education in Al Azhar primary institutes for the students and their parents.

REFERNCES

Cate M Molotja, Lucy L Maliwichi and Afam IO Jideani. (2020). Nutrition knowledge and food choices of primary school learners in limpopo province, south africa. Journal of Consumer Sciences, Special Edition Food and nutrition challenges in Southern Africa, Vol 5, ISSN 0378-5254

Encyclopedia Britannica. Retrieved 29 December 2020. "Human nutrition | Importance, Essential Nutrients, Food Groups, & Facts"

Encyclopedia Britannica. Retrieved 29 December 2021. "Human nutrition | Importance, Essential Nutrients, Food Groups, & Facts"

FAO, Food and Agriculture Organization (2007) Nutritional Status Indicators

Kana"An, H., Saadeh, R., Zruqait, A., & Alenezi, M. (2022). Knowledge, attitude, and practice of healthy eating among public school teachers in kuwait. Journal of Public Health Research, 11(2), jphr-2021.

Kigaru, D. M. D., Loechl, C., Moleah, T., Macharia-Mutie, C. W., & Ndungu, Z. W. (2015). Nutrition knowledge, attitude and practices among urban primary school children in Nairobi City, Kenya: a KAP study. BMC nutrition, 1, 1-8.

Marcdante KJ and Kliegman RM (2019). Normal development. In: Marcdante KJ, Kliegman RM, eds. Nelson Essentials of Pediatrics. 8th ed. Philadelphia, PA: Elsevier; chap 7.

Marjan Manouchehri Naeeni, Sakineh Jafari, Maryam Fouladgar, Kamal Heidari,1 Ziba Farajzadegan,2 Maryam Fakhri,3 Parvaneh Karami,4 and Razieh Omidi (2014), Nutritional Knowledge, Practice, and Dietary Habits among school Children and Adolescents. Int J Prev Med. Dec; 5(Suppl 2): S171–S178.

Mesbah Fathy Sharaf, Elhussien Ibrahim Mansour and Ahmed Shoukry Rashad (2019). Child Nutritional Status in Egypt: A Comprehensive Analysis of Socioeconomic Determinants Using a Quantile Regression Approach. Journal of Biosocial Science, 51(١): 1 – 17.

Nomsa P.S.; Mamba Lizeka Napoles, Nelly M. Mwaka. (2019) Nutrition knowledge, attitudes and practices of primary school children in Tshwane Metropole, South Africa. African Journal of Primary Health Care & Family Medicine ISSN: 2071-2928

Charuai Suwanbamrung, Bussarawadee Saengsuwan, Thamonwan Sangmanee, Napaporn Thrikaew, Poungpen Srimoung, Sarunya Maneerattanasak (2021). Knowledge, attitudes, and practices towards dengue prevention among primary school children with and without experience of previous dengue infection in southern Thailand. One Health Volume, Jun 7; 13:100275.

Sahingoz, S. A., and Sanlier, N. (2011). Compliance with Mediterranean diet qualityindex (KIDMED) and nutrition knowledge levels in adolescents. A case study fromTurkey. Appetite 57, 272–277.

Scalvedi, M. L., Gennaro, L., Saba, A., & Rossi, L. (2021). Relationship between nutrition knowledge and dietary intake: an assessment among a sample of Italian adults. Frontiers in Nutrition, 8, 714493.

Turner A, LaMonica HM, Moroney C, O'Leary F, Naismith SL, Flood VM. (2023). Knowledge, Attitudes, and Behaviours Concerning the Mediterranean Diet Among Older Adults in Australia.J Community Health. Jun 8:1-12

WHO, World Health Organization (2013). Essential Nutrition Actions: Improving maternal, newborn, infant and young child health and nutrition. Washington, DC: WHO.

Zalilah Mohd Shariff; Siti Sabariah Bukhari; Norlijah Othman; Normah Hashim; Maznah Ismail; Zubaidah Jamil; Sham Mohd Kasim; Laily Paim; Bahaman Abu Samah; Zabidi Azhar Mohd Hussein (2008). Nutrition Education Intervention Improves Nutrition Knowledge, Attitude and Practices of Primary School Children: A Pilot Study. International Electronic Journal of Health Education; 11:119-132

دراسة على المعلومات و الاتجاهات و السلوكيات الغذائية للطلاب في المدارس الإبتدائية الأزهرية

شيماء عمرعطاالله(١)- محمد عبد الرازق النواوي(٢)- أسامة السيد مصطفى(٣)- فاروق محمد التلاوى(٤)

١) طالبة دراسات عليا، قسم العلوم الزراعية البيئية، كلية الدراسات العليا والبحوث البيئة، جامعة عين شمس ٢) كلية الزراعة جامعة عين شمس ٣) كلية التربية النوعية، جامعة عين شمس ٤) قسم العلوم الزراعية، كلية الدراسات العليا والبحوث البيئة، جامعة عين شمس

المستخلص

تلعب الأطعمة دوراً مهماً لأطفال المدارس الابتدائية لأن الأطفال في سن المدرسة يحاولون تطوير الاستقلال الشخصي وإنشاء مقياس للقيم. الهدف من هذه الدراسة هو تقييم السلوك والمعلومات التغذوية والاتجاه والوعي لدى الطلاب (بنين، بنات) في المعاهد الابتدائية الأزهرية، بالإضافة إلى التعرف على معرفتهم التغذوية وأثرها على الاتجاه والسلوك الغذائى ولتحديد كمية ونوعية الغذاء المتناول وتم إجراء الحالة التغذوية للطلاب لاختبار بسيط من خلال القياسات البشرية مثل الوزن والطول ومؤشر كتلة الجسم. تضمنت الدراسة الحالية بعض المعاهد الأزهرية بالقاهرة وأخرى بالدقهلية ضمن المناطق الريفية والحضرية. يتم قياس الطول والوزن لجميع الطلاب. بلغ إجمالي عدد الطلاب في هذه الدراسة 516طالباً منهم 218طالباً و 298فتاة، باستخدام الإستبيان ولغة الاستبيان هي اللغة العربية. كان متوسط عمر الطلاب 6.97. من الواضح أن هناك عيباً في المعرفة التغذوية بين طلاب المعهد. هناك حاجة إلى إضافة المعرفة التغذوية فى المعاهد والتعاون بين أولياء الأمور والمعاهد لإعطاء رسالة غذائية بسيطة لأطفالهم.

الكلمات المفتاحية: المعرفة التغذوية، الحالة التغذوية، الاستبيان، السلوك الغذائى والمدارس الإبتدائية