

Survey of knowledge, attitudes and practices of primary school students on the health aspects in Mosul City for the academic year 2013-2014

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ABSTRACT

A cross sectional study was conducted in order to survey the knowledge, attitudes and practices of primary school pupils in the city of Mosul towards the health aspects. The study was conducted for the period of November - December 2013. The study included 521 students, 186 males, 335 females, 35.7%, 64.3% respectively from the sixth grade elementary level, (4) schools for boys and (6) schools for girls, (5) schools on each side of the city (right and left) of Mosul. A special questionnaire form that included five sections was used, which are identification data, hygiene, school hygiene, physical health and finally food behavior. The study showed the results of the research through the statistical analysis of the information collected. It was found that the compatibility of the best health aspects among the Mosul students in terms of their knowledge, practices and attitudes was in the cleanliness of the school. And hand washing, 97.2%, 92%, 90.2% and 92%, 97.7%, 88.5%, respectively. This reflects the high level of health education among Mosul students. The research shows that all the variables of the practice axis were high, Mosul pupils who eat sweets Olympics and Olympic analogy with students in Iraq, Syria and Oman 25.9%, 77.4%, 30.8% and 33.4%, respectively, which enhances the high level of health education of primary school students in Mosul. The results also revealed that gender has a significant effect on most of the variables adopted in the study. The moral superiority of females has clearly emerged in many knowledge, practices and attitudes on males. The researcher recommended the permanence of educational programs and the intensification of training on health education and the promotion of healthy food and physical activity among school students. Add to the attention of the curriculum and the role of the teacher and the media in the dissemination of health awareness in the educational environment.

Keywords: knowledge, attitudes, practices, sixth grade, food behavior, hygiene.

INTRODUCTION

The Ottawa Health Promotion Charter⁽¹⁾ recognizes that people create and live health within their daily lives, where they learn, work, play and love. Schools are now recognized as an essential setting for the promotion of healthy environments, health and nutrition and physical activity among school-age children and adolescents⁽²⁾. Poor dietary quality and insufficient physical activity are key risk factors for non-communicable diseases development⁽³⁾, as well as the importance of food in determining human ability⁽⁴⁾. Modern education seeks to build the character of the student and seeks to form a human being of knowledge and practices of his having a true body and a sense of humor and the creation high professional capabilities⁽⁵⁾. This requires the preparation of multiple educational experiences aimed at the good impact on the habits of the individual and his behavior, trends and knowledge, which helps to raise the level of health and health of the society in which he lives⁽⁶⁾. These knowledge and practices that promote the public health and personal hygiene habits of students are represented by hand washing and toothbrushes And physical activity⁽⁷⁾. In addition to abstaining from eating foods rich in calories such as gypsum and soft drinks⁽⁸⁾, and lighting is an environmental factor that inspires activity and movement, Lost of it cause headaches and lack of ability to perform mental work⁽⁹⁾. This research was carried out in a survey of the knowledge, attitudes and practices of primary school students on the health aspects of the city of Mosul for the academic year 2013-2014. The sample of students from the sixth grade of primary school was chosen as Late childhood is a very important stage in an individual's life. Because it precedes adolescence, and begins to prepare to take responsibility, control emotions and learn the skills necessary for social interaction⁽¹⁰⁾.

Definitions:

1. Definition of knowledge:

A-Knowledge is facts and information gained from experience ⁽¹¹⁾.

B-Knowledge is knowledge, understanding, experience, perception, intuition, and contextual information ⁽¹²⁾.

C- Knowledge is all mental processes in the individual; from perception, learning, thinking, and judgment issued by the individual as he interacts with his own world ⁽¹³⁾.

2. Definition of practices:

They do something over and over to get better⁽¹⁴⁾.

3. Definition of Attitudes:

A - Is one of the states of mental and nervous alertness that Include experience, and has an act of directing the responses of individuals to different things and situations⁽¹⁵⁾.

B-A psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor⁽¹⁶⁾.

C-Attitude is a relatively enduring organization of beliefs, feelings, and behavioral tendencies towards socially significant objects, groups, events or symbols⁽¹⁷⁾.

Aim of study:

Studying the knowledge, attitudes and practices of primary school students in Mosul city towards health aspects, both sexes, with analysis of results and recommendations aimed at enhancing the health of students, family and the health of a better society.

Search methods

Study settings:

The information was collected using questionnaire forms specifically designed for this study conducted in Mosul city, the center of Ninewa Governorate, which is located in northern Iraq, using the nearest primary school to (5) primary health care centers on the right side and (5) on the left side, the PHCCs selected randomly from a list of all PHCCs in Mosul. The field survey included 6 primary schools for girls and 4 for boys. The study was conducted in the classroom

Study Design

A cross sectional study carried out to implement the study objectives.

The study period:

Information was collected during November 2013 in normal school days.

The study sample:

The sample size of the research sample was (521) students, of which 186 were boys and 335 were girls, 35.7 and 64.3 respectively for 4 boys schools and 6 for girls as shown in (Table 1);

Table 1: Individual characteristics of the questionnaire sample

Characteristics	Categories	Repetition	%
Boys schools	Abu Dhar Al - Ghafari for Boys	35	6.7
	Al-Sadiq Alamen boys	43	8.3
	Al-Abttal for boys	50	9.6
	Al- Qaqaa for Boys	58	11.1
Grand total of sample for boys		186	35.7
Girls schools	Al- Rahma for girls	46	8.8
	Al - Nu'maniyah for Girls	49	9.4
	Saqr Quraish for Girls	85	16.4
	Agadir for Girls	58	11.1
	Ezzedine Al Qassam for Girls	72	13.8
	Al-Abrar of girls	25	4.8
Grand total of sample for girls		355	64.3
Grand total of the study sample		521	100

Case Definition:

All sixth graders who are on the day of the visit and their schools selected in the research sample.

Collection and source of data:

The questionnaire was distributed by the researcher to all sixth graders. The questionnaire includes five sections: the first section included the identification data, the second part dealt with hand washing, the third dealt with the cleanliness of the school and the fourth dealt with sports, lighting, dental hygiene, friendship as well as the phenomenon of smoking. Finally, the fifth section dealt with food behaviors such as breakfast, fruits and vegetables, gypsum, pepsin and sweets. The student responded according to what he knows and works without the intervention of the school administration and cadres. Questions were collected after the students had finished answering. After that, the participants' forms were set for each school and placed in a paper envelope and wrote the school code (1-10).

Statistical means

The data were analyzed using the Statistical Analysis System (SAS) to describe the characteristics of the respondents in the number, frequency and extraction of the weighted arithmetic averages for each paragraph for their order, percentages, Duncan multiple range at a significant level of 5%, and correlation analysis (Pearson correlation) between the independent variables (characteristics) and the dependent variables (paragraphs, which were grouped into (12) groups, 3 axes (knowledge, practices, behaviors)(4) Types of trends (general hygiene, school environment, physical health, food behaviors) = 12 treatments.

RESULTS

Table 2: shows a description of the variables of the study on knowledge

Variables	Levels		
	Yes	No	Do not know
School cleanliness important for students' health?	97.9	1.0	1.1
Eating fruits and vegetables is important to our bodies	95.4	2.5	1.9
It is said that washing hands before and after eating prevents the spread of diseases	92.0	5.0	3.1
Does dental cleaning prevent tooth decay?	90.0	7.1	2.9
Is friendship important among students?	90.0	2.9	7.1
Is it important to have breakfast in the morning?	88.3	7.9	3.8
It is said that Kleenex during sneezing prevents the spread of diseases	83.1	5.0	11.9
Do you think that being next to a smoker and exposure to tobacco smoke is harmful to your health	80.3	8.4	11.3
Physical activity (sport) protects against obesity and disease	79.9	9.4	10.5
Providing adequate lighting for reading is important for safety consideration	76.2	9.8	14.0
Whether ingestion of gypsum or sweets or pepsin causes obesity	61.7	19.5	18.8

Table 3: shows a description of the study variables of practice

Variables	Levels	
	Yes	No
Do you use soap and water to wash your hands before eating and after leaving the health facilities?	97.7	2.3
do you have friends?	96.9	3.1
Are you worried about the safety of your eyes from dust, dangerous games, etc.?	96.3	3.7
Waste materials are thrown into the trash.	92.0	8.0
When you clean your teeth?	90.8	9.2
Do you use Kleenex when you cough?	82.4	17.6
Do you have breakfast in the morning?	82.0	18.0
How many times a week do you exercise in or out of school?	78.3	21.7
Do you eat fruits and vegetables between meals?	72.2	27.8
Do you ask someone who smokes in the car to turn off his cigarette?	71.3	28.7
Do you eat candy, gypsum or pepsin	25.9	74.1

Table4: shows a description of the study variables of attitudes

Variables	Levels	
	Yes	No
Do encourage your colleagues to keep the school clean?	90.2	9.8
Do you advise your colleagues to wash your hands before eating and after leaving the health facilities with soap and water?	88.5	11.5
Do you interfere in solving problems among friends?	83.7	16.3
Do you recommend your colleagues to use Kleenex during coughing or sneezing?	81.4	18.6
Do urge your colleagues to eat fruits and vegetables?	77.0	23.0
Do you recommend cleaning your teeth after each meal?	75.3	24.7
Do you advise your colleagues not to play with substances harmful to the eyes?	74.0	26.0
Do you advise others not to sit with a smoker?	72.6	27.4
Do urge your colleagues to have breakfast	71.1	28.9
Do encourage your colleagues not to eat candy, gypsum or pepsi?	56.3	43.7
Do you recommend your colleagues to exercise during the day?	50.9	49.1

Table 5: The effect of sex in some of the adopted changes and the correlation between the factor and the variables

Multiple variables		the father		
		Weighted average		Link value
		Female	Male	
Knowledge	Hygiene	5.58 ^a	5.63 ^a	-0.027
	school environment	2.99 ^a	2.92 ^b	0.135 **
	Physical health	13.67 ^a	13.6 ^a	0.043
	Food behaviors	8.34 ^a	7.97 ^b	0.159**
Practices	Hygiene	3.86 ^a	3.71 ^b	0.172**
	school environment	1.94 ^a	1.89 ^b	0.086*
	Physical health	9.38 ^a	9.23 ^a	0.085
	Food behaviors	4.84 ^a	4.74 ^a	0.062
Attitudes	Hygiene	3.77 ^a	3.56 ^b	0.162**
	school environment	1.94 ^a	1.83 ^b	0.177**
	Physical health	8.75 ^a	8.08 ^b	0.221 **
	Food behaviors	5.14 ^a	4.87 ^b	0.168**

The numbers of the averages that carry any similar letters are not significantly different from the significance level of 0.05 and by the choice of Duncan polynomial.

Table 6: A comparison between the responses of students of Mosul and the students of Iraq and Arab countries on some of their practices

Variables	Mosul%		Iraq%		Syria%		Oman%	
	Yes	No	Yes	No	Yes	No	Yes	No
Do you use soap and water to wash your hands before eating and after leaving the health facilities?	97.7	2.3	97.8	2.2	96.2	3.8	93.8	6.2
do you have friends	96.9	3.1	97.7	2.3	94.8	5.2	-	-
Do you clean your teeth?	90.8	9.2	91.6	6	33.5	66.5	94.6	5.4
Do you have breakfast in the morning?	82.0	18.0	88.1	11.9	-	-	50.3	49.7
More than once a week you exercise in or out of school	78.3	21.7	62.6	37.4	-	-	61	39
Do you eat fruits and vegetables between meals?	72.2	27.8	83.3	16.7	-	-	77.2	22.8
Do you eat candy, gypsum or Pepsi	25.9	74.1	77.4	22.6	30.8	69.2	33.4	66.6

DISCUSSION

The study showed the results of the research by analyzing the information collected through the field survey of 10 primary schools. Show from:

(Table 2), which includes the Arrangement of knowledge variables by percentage of students, shows that 97.9% of students know that school cleanliness is important for their health. 95.4% of them know that eating fruits and

vegetables is important for their bodies, followed by 92.0% who know that washing hands before and after eating prevents the spread of diseases. On the other hand, knowledge about whether physical activity (sport) protects against obesity and diseases, is the availability of lighting suitable for reading is important for the safety of vision, whether eating gypsum, sweets or pepsi causes obesity in the last three Arrangements which was 79.9%, 76.2% and 61.7%, respectively

(Table3) shows the Arrangements of the variables of the practices according to their percentage in the students. 97.7% of students use soap and water to wash their hands before eating and after leaving the health facilities. 96.9% of them have friends and 96.3% are concerned about the safety of their eyes from dust or dangerous games. Only 25.9% of the students eat sweets, gypsum or pepsi, while 74.1% did not. Compared with students in Saudi schools, 86% of them drink soft drinks three times or more per week⁽¹⁸⁾, while 18% of Mosul students did not eat breakfast, compared with 49.7% of Amman students⁽¹⁹⁾. As for the study of the nutritional status of primary school students (age 9-12) in Riyadh, it was found that the main meal that is neglected is the breakfast meal, which was neglected in 76% of the boys and 20% of the girls⁽²⁰⁾. Our research result show 21.7% of Mosul; students do not exercise physically in or out of school, this is Less than what found (45.7%) of those who do not exercise any sport in Iraq (10-24 years)⁽²¹⁾, and less than Amman students 39%⁽¹⁹⁾.

When comparing the practices of Mosul students with students in Iraq, Syria and Oman in Table (6), it is generally found that all the variables of the practice axis were high and the percentage of students in Mosul who eat sweets, gypsum and beans compared with Iraq, Syria and Oman was 25.9% 77.4%, 30.8%, 33.4% respectively,⁽²²⁾⁽¹⁹⁾⁽²³⁾⁽²⁴⁾ reflecting the high level of health education of primary students in Mosul schools.

(Table 4) includes the order of the variables of the attitude according to their percentage in the students. 90.2% of the students answered yes to urge your colleagues to keep the school clean, followed by the advice of washing hands before eating and after leaving the sanitary facilities with soap and water in the second order by 88.5% and try to interfere in solving problems among friends third order by 83.7%, in return came advice or Students were encouraged to eat breakfast in the third place with 71.1%, and 56.9% of the students did not eat sweets, gypsum or pepsi, and 50.9% of the students advised their colleagues to exercise.

A comparison of the results in the (Tables 2,3,4) showed that the compatibility of the best health aspects among the Mosul students in terms of their knowledge, practices and attitudes was in the cleanliness of the school and hand washing, where 97.2%, 92%, 90.2% and, 92%, 97.7% , 88.5% respectively this Suggest a high level of awareness in Mosul students as well as the good role of health education programs in the governorate schools.

Finally, the results of (Table 5) include the effect of sex in some dependent variables. Gender has a significant effect on most of the variables adopted in the study. The moral superiority of females in the knowledge of the school environment and the nutritional behavior of males was clearly observed. The weighted average of these variables was 2.99 and 8.84 for females vs 2.92 and 7.97 for males and for both variables respectively. The hygiene and school environment showed a significant female superiority over males and gave averages of 3.86 and 1.94 for females vs 3.71 and 1.89 for males, respectively. Attitudes (providing advice and guidance to others) were superior to females in all variables studied Moral increase in knowledge and practice variables for hygiene and behavior, respectively, can be explained by the positive correlative values of sex with these variables which reached ($r = 0.135$ and $r = 0.159^{**}$ And 0.172 and $r = 0.086^{*}$), respectively, As well as in Attitudes that could have increased significantly as a result of the positive correlation relationship and the four variables as in (Table 5).

CONCLUSIONS

- 1 - The best health aspects of Mosul students in terms of their knowledge, practices and attitudes were in the cleanliness of the school and hand washing this suggest a high level of awareness in Mosul students as well as the good role of health education programs in the governorate schools
- 2 - All the variables specific to the axis of practice the response rate was high, as well as lower percentage of Mosul students who eat sweets, gypsum and pepsi compared to students in Iraq, Syria and Oman suggesting high level of health education for students in Mosul.
- 3 - Sex has a significant effect in most of the variables adopted in the study, where clearly demonstrated the moral superiority of women in many knowledge, practices and attitudes on males.

RECOMMENDATIONS

1. Organize educational education programs with the aim of increasing the student's awareness of the importance of healthy food.
- 2 - Pay attention to the role of the teacher to physical activity.
- 3 - Attention to curriculum and its coverage with issues related to public health.
- 4 - Training courses for educational staff concerned with public health and proper food behavior.

5. Emphasize the importance of the role of the media in spreading health awareness in the educational sector.

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