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ASSESSMENT OF MOTHER KNOWLEDGE TOWARDS INTESTINAL PARASITE AMONG CHILDREN AT SCHOOL AGE

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ABSTRACT

Introduction: - Deterioration of the health situation and lack of health services has led to a rise the occurrence of intestinal parasites between school students and particularly among nursery school and kindergarten. **Objectives**: - to assess the mother's knowledge towards intestinal parasite among children at school age. **Materials & Methods**: - a cross - sectional study has been conducted in Imam Ali general hospital. The study period extended from 6/2/2016 to 31/7/2016. The sample size was 220 case. One stool specimen was collected from each child. The age, sex and mothers education were recorded where these parameters were included in the data analysis. Stool specimens were normally inspected by two techniques, a direct smear microscopy (wet mount) using saline and lugole's iodine and sedimentation technique using formal-ether according to the standard methods. The SPSS version 20 statistical software was used for data analysis. **Conclusion:**-in this study the *Giardia lamblia & Entamoeb histolyica* was more affected in males than female. Majority of cases was low education, unemployed and moderate economic status. High significant has been found between the types of parasite and gender. **Recommendation:** Epidemiological indication that enhancement of cleanliness and community hygiene, lengthwise with progresses in water source, have a sizable influence in reducing infectious diseases. Also control of the house flies by using pesticides. Taking attention of children specially males who are playing outside the home.

KEYWORD: Intestinal, parasite, Giardia, infection, mothers, age, school, children, knowledge.

INTRODUCTION

Deterioration of the health situation and absence of health services has led to increase the number of cases with intestinal parasites between school students and particularly among nurseries and kindergarten. During this study, it notes that there are several factors that increase the risk of infection, such as the source of infection and how the parasite spread and sewage disposal. In addition there are many studies on intestinal parasites especially in developing countries such as Iraq[1], in this field were done to see the effect of among factors such as socio –demographic and ecological factors, social habits, economic situations, also, the educated levels for the mothers**.** Average of infection with various intestinal parasite was increased because of lack in medical treatment and the poor sanitary precaution especially among the families with low levels of living. Globally, parasitic infection are most public infections and epidemiological research supported out in diverse nations has revealed that the public and financial situation of the people is an imperative reason in the occurrence of disease.[2] Moreover, unsanitary and ecological situations are known to be applicable in the disseminations of these infection.[3] These infections are sight as thoughtful community health problem, as they effects iron deficiency anemia, growth retardation in children and other bodily and psychological health problems.[3] **Our objective** was to assess the mother's knowledge towards intestinal parasite among children at school age.

MATERIALS AND METHODS

A cross - sectional study has been conducted in Imam Ali general hospital. The study period extended from 6/2/2016 to 31/7/2016. The sample size was 220 case. One stool specimen was collected from each child. The age, sex and mothers education were recorded where these parameters were included in the data analysis. Stool specimens were normally inspected by two techniques, a direct smear microscopy (wet mount) using saline and lugole's iodine and sedimentation technique using formal-ether according to the standard methods. The SPSS version 20 statistical software was used for data analysis.

RESULTS

Out of 220 case have been selected from the mothers with children who attended the hospital, range of mothers age was 15 to 50 years, 40% of cases located in the age 31-40 years, followed by 27.7% in the age 21-30 years. 30.5% of mothers was intermediate education level. 80.9% was housewife. Parasitic infection was increased by the family size equal or more than 7. According to moderate economic level, highly percentage was 52.3%, followed

by 32.2%, 15.5% respectively. Concerning to child age with range 6-12, 71.8% of children at the age 6-8, followed by 28.6% at 9-12 yrs. As well the percentage of male cases was 55.9% greater than female 44.1%. [Table 1].

Table (1): Distribution of studied sample according to demographic characteristic.

Demographic characteristic		No.(220)	%
Mothers Age yrs.	15-20	43	19.6
	21-30	61	27.7
	31-40	88	40
	40-50	28	12.7
Mothers Education	Illiterate	39	17.7
	Primary	24	10.9
	Intermediate	67	30.5
	Secondary	51	23.2
	Institute and higher	39	17.7
Mothers occupation	Housewives	178	80.9
	Employee	42	19.1
Family size	≤4	32	14.6
	4-6	59	26.8
	≥7	129	58.6
Economic status	Good	71	32.2
	Moderate	115	52.3
	Low	34	15.5
Child age	6-8	157	71.4
	9-12	63	28.6
Gender	Male	123	55.9
	Female	97	44.1

As for the mothers to know about the signs & symptoms of infection of intestinal parasites, 73.2% of them know that the gastroenteritis one of the signs of intestinal parasites, followed by blood in stool, fever, abdominal pain, appetite, anemia and pruritus, 50.5%, 65%, 31.8%, 14.5%, 77.8% and 7.7% respectively [Table 2].

Table (2): Knowledge of mothers towards of intestinal signs & symptoms.

Signs & Symptoms	Yes	No	Total
	No. %	No. %	No. %
Gastroenteritis	161 73.2	59 26.8	220 100
Blood in stool	111 50.5	109 49.5	220 100
Fever	143 65	77 35	220 100
Abdominal colic	70 31.8	150 68.2	220 100
Appetite	32 14.5	188 85.5	220 100
Anemia	171 77.8	29 13.2	220 100
Pruritus	17 7.7	203 92.3	220 100

Regarding the mode of parasite transmission, most of cases 82.3% know the eating of contaminated food was one of the ways to the spread the infection, followed by drink of contaminate water, insect bite, poor hygiene, not washing hand, 60.9%, 32.7%, 44.1%, 32.2% respectively[Table 3].

Table (3): Knowledge of mothers towards mode of parasite transmission.

Knowledge of mothers	Yes	No	Total
	No. %	No. %	No. %
Eating contaminated food	181 82.3	39 17.7	220 100
Drinking contaminated water	134 60.9	86 39.1	220 100
Insect bite	72 32.7	148 67.3	220 100
Poor hygiene	97 44.1	123 55.9	220 100
Not washing hand before & after eating food	51 23.2	169 76.8	220 100

More than half of mothers 83.2% know how to personal hygiene prevent the parasite infection while 16.8%% was not. Followed by sterilization, clean the food, wash the hand, isolate the child, saw the doctor and prevent the child from the play swamps, 30.5%, 86.8%, 74.1%, 40%, 86.4% and 55% respectively [Table 4].

Table 4: Knowledge of mothers towards method of prevention.

Knowledge of mothers	Yes	No	Total
	No. %	No. %	No. %
Personal hygiene	183 83.2	37 16.8	220 100
Continuous sterilization of baby clothes	67 30.5	153 69.5	220 100
Cleanliness of foods and drinks	191 86.8	29 13.2	220 100
Washing hand before eating & after defecation	163 74.1	57 25.9	220 100
Isolate infected child from others	88 40	132 60	220 100
Review for doctor to take treatment	190 86.4	30 13.6	220 100
Prevent children from playing in the swamps	121 55	99 45	220 100

Types of infection was classified according to gender. For both cases (male, female), *Giardia lamblia* was found in 31.8%, then *Ascaris lumbricoides*, *Hymenolepis nana*, *Entamoeba histolyica*, *Enterobious vermicularis*, *Ancylostoma duodenale*, 16.4%, 7.3%, 33.6%, 5.9% and 5% respectively.

Table (5): Distribution of cases according to types of intestinal parasite and gender.

Intestinal parasite	Gender		Total
	Male No. %	Female No.%	
Gairdia lambia	47 38.2	23 23.7	70 31.8
Ascaries lumbricoides	24 19.5	12 12.3	36 16.4
Hymenolepiasis nana	11 8.9	5 5.2	16 7.3
Entamoeba histolyica	32 26.0	42 43.3	74 33.6
Enterobious vermicularis	2 1.6	11 11.3	13 5.9
Ancylostoma duodenale	7 5.7	4 4.1	11 5
Total	123 100	97 100	220 100

X^2= 20.1, p. value <0.001.

DISCUSSION

Many studied was agreed out in diverse republics has shown that the societal and financial condition of the people is an important source in the incidence of intestinal parasites.[4]

Our study 40% of mothers still in the age groups 31-40 years old, followed by 27.7% in the age groups 21-30 years old compare with another result has been found in Nigeria by Nwalorizie[3], 49% of cases in the age 15-25 years, this reflect the similar tradition between the countries.

Poorer salary, elimination in open areas, occupation status and unformal education level of mothers were the major factors related to these infections. The occurrence of intestinal parasites was developed in groups where the mother in the domestic had less than a prime education, where the hand is routinely used for the washing of the anal area and where toilet paper is rarely or never used. Health indicators of kids whose mother's education level is lesser are constantly worse.[5] According to UNICEF[5] program, it was found that the main

rate of intestinal parasitic infection among children whose families suffering from poverty and low socio economic status. in this study 30.5%, 80.9% of mothers was intermediate education level and housewives, which compare with other results has been found in Nepal by Kunwar[6], but in Iran by Masoumeh.[7] This reflects that the housewives mothers had less education & knowledge about mode of transmission of infection and methods of disinfection of these materials due to ignorant and low education of the mothers. In this study was found 52.3% of cases has moderate economic and compare with results in Brazil by Silva 23.7%[8], this reflects that the Iraq suffering from the wars and conflicts, security unstable that leads to unstable economic status. Children age carry the heftiest burden of disease due to parasite infection. In this study we found out 71.4% of children in the age 6-8 years and the male cases was greater than female. Other results has been found in Nepal by Gyawali[9] while in Palestine by Rodina. This may state to the point that the children of older age started to play outdoor while the younger ones are fairly and secured by their paternities. Therefore this study was identified the mothers knowledge towards mode of parasite transmission (eat of contaminate food, drink water, insect bite, poor hygiene, not wash) respectively, among children at school age. These outcomes stayed in link with another comparable studies conducted in Nigeria.[3] The causes may be recognized to deprived ecological situations and individual cleanliness, an insufficient source of drinking water, and an excess clearance structure which does not match to approved values. This prevalent of infection of the school location with pathogenic beings underlines the status of right and suitable removal of waste in the defense and elevation of supportable health. *Giardia intestinalis* and *Entamoeba coli*, the initial and the additional furthermost communal protozoa in the current study, both can be spread orally through drinking water. *Entamoeba histolytica was* found to be more prevalent (33.6%) other results found by Freeman in Kenyan[10] %, in Lebanon by Osman.[11] This may be explained by the proliferation of street vendors and food and water contamination. Water source is actually a key of the hazard factor for the giardiasis. Most of the large giardiasis rates have occurred from the contamination of drinking water stores by human sewage. According to the outcomes of this study, the frequency of *Anclostoma duodenale* was less public (5%) and related to the results of present studies conducted in many parts of Iran in that year.[7] These results shows as the frequency of *Anclostoma duodenale* has been reduced a lot within the past 10-15 years.

CONCLUSION

IN this study the *Giardia lamblia & Entamoeb histolyica* was more affected in males than female. Majority of cases was low education, unemployed and moderate economic status. High significant has been found between the types of parasite and gender.

Recommendation

Epidemiological suggestion that the enhancement of cleanliness and community hygiene, lengthwise with advances in water source, have a sizable influence in dipping infectious diseases. Moreover regulator of the house flies by using pesticides. Taking attention of children especially males who were playing outside the home.

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