

Awareness and Practices of Preventive Behaviors Toward Intestinal Parasitic Infection among Mothers of Preschool Children

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Abstract: Intestinal parasite infections are one of the most common diseases in the world, particularly in developing nations. Approximately 150 million people, predominantly children. Up to 300 million preschool children became afflicted with intestinal parasites. **Aim:** Determine the awareness and practice of preventative behaviors against intestinal parasite infection among moms of preschool children. **Design:** A descriptive correlational design. **Sample:** A purposive sample of 300 moms with preschool-aged children from Menoufia Governorate. **Instruments:** A self-administered questionnaire with three parts. **Part 1: Sociodemographic features of mothers; Part 2: Assessment of maternal awareness of intestinal parasite diseases, Assessment of the mother's activities for preventing and controlling intestinal parasite infections. Results:** The majority of the studied mothers had low levels of good awareness about intestinal parasites; most of them did not practice the measures to prevent intestinal parasitic infections. Mother education, mother occupation, and father education were factors affecting the mother's awareness and practice of preventive behaviors of intestinal parasitic infection. Mother's education, career, and father's education all had an impact on her awareness and practice of intestinal parasite infection prevention activities. There was a positive relationship between total awareness score and total practice score of preventative behaviors against intestinal parasite infection among moms of preschool children. **Conclusion:** Lack of excellent understanding and practices among mothers of preschool children for the prevention and control of intestinal parasite infections, **Recommendation:** Planning and implementing health education programs in various community health care settings and through mass media for the general public, particularly mothers, is highly recommended because it can have a significant impact on improving their awareness and practices for preventing intestinal parasitic infections in their children.

Keywords: Gastrointestinal parasitic infections, preschool children, awareness

1. Introduction

Intestinal parasite infections (IPIs) pose a serious global public health risk in both developing and wealthy countries, resulting in high morbidity and mortality. (Singer et al., 2020). Protozoal and helminth infections cause misery, economic loss, and even mortality (Candela et al., 2021; Igor et al., 2020). Intestinal parasitic infections occur when parasites infect the gastrointestinal tracts of humans and other animals. These parasites can survive anywhere in the body, although the majority prefer the intestinal wall (Wiser, 2021; Hailu, 2020). Intestinal parasites include both unicellular protozoa and multicellular helminths. Helminthes are worms such as tapeworms, pinworms, and roundworms that exist but do not reproduce in the human intestine. Unicellular protozoa, like Giardia and Cryptosporidium, can proliferate within the human body (Braseth et al., 2021; Bhunia, 2018). Intestinal parasite diseases can be transferred through fecal-oral routes, beginning with contaminated water, food, or hands (Alemu et al., 2020). Drinking contaminated water, eating raw shellfish, consuming irrigated or washed fruits and vegetables, and swimming in poorly disinfected pools or lakes are all major sources of infection (Alemu). The most significant risk factors for IPIs include:

Overcrowding, lack of environmental sanitation. Challenges include limited access to safe water, unsanitary living conditions, acute malnutrition, a warm and humid climate, and low income. academic background and lack of

personal hygiene (Igor et al., 2020). Children of all ages. includes infants, toddlers, and preschool children are susceptible to receiving IPIs (Centers for Disease Control and prevention ("CDC", 2020), particularly Preschool children. They considered the most. Group at risk of IPIs due to regular exposure to unsanitary surroundings, insufficient hand washing afterwards Defecation, finger sucking, and playing with soil in addition, underdeveloped immune systems (World Health Organization ("WHO", 2022). Intestinal parasite infections in children can produce symptoms such as diarrhea, abdominal pain, malnutrition, weakness, and decreased physical development. IPI can cause several symptoms, including nausea, vomiting, mal-absorption, weight loss, and fever (Hernández et al., 2019). These symptoms can have a severe impact on nutrition, including poor micronutrient absorption, loss of appetite, weight loss, and intestinal blood loss, leading to anemia. It can lead to physical and mental impairments, delayed growth, and skin irritation in the anus and vulva (Barati et al., 2021). IPI can lead to dietary deficiencies, cell and tissue degradation, weakened immune systems, developmental delays, school absences, and poor academic performance.2021).

IPI can lead to dietary deficiencies, cell and tissue degradation, weakened immune systems, developmental delays, school absences, and poor academic performance. High-intensity infections can lead to intestinal obstruction, which requires surgical treatment (Allain & Buret, 2020; Anantha Krishnan & Xavier, 2020). Neglected or untreated

Volume 13 Issue 8, August 2024

Fully Refereed | Open Access | Double Blind Peer Reviewed Journal

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IPIs can lead to major health implications for children, including hepatomegaly, pancreatitis, liver abscesses, pleuropulmonary abscesses, brain abscesses, and esophageal varices (USAID's Neglected Tropical Disease Program, 2019). Anantha Krishnan & Xavier (2020). Untreated IPIs can cause major health issues in children, including hepatomegaly, pancreatitis, liver abscesses, pleuropulmonary abscess, brain abscess, and esophageal varices (USAID's Neglected Tropical Diseases Program, 2019). To prevent IPI, practice good personal hygiene, avoid contact with contaminated water or soil (Shane et al., 2017), practice frequent hand hygiene after using the toilet, preparing food, eating, caring for sick people, touching animals or animal waste, and trim fingernails regularly. Encourage children to practice proper food hygiene and discourage finger licking and scratching (Thomas et al., 2020). Mothers are the primary caregivers for preschool children and have a significant impact on their health. It is important for mothers to be aware of IPI detection and prevention to protect their children's health (Aula et al., 2021; Ismail, 2018). Maternal education is the most critical factor influencing child health and survival. Maternal awareness can positively impact the prevention of IPIs. To prevent IPIs, WHO recommends promoting hygiene, supporting healthy behaviors, and creating a hygienic environment (WHO, 2022). Community health nurses play a key role in preventing IPIs and assist them in changing their health-related behaviors. Furthermore, community nurses can establish programs to modify community health habits. centered on the prevention and reinfection of.

2. Significance of the Study

Intestinal parasitic infections (IPIs) are a neglected tropical disease (NTD) that cause over 33% of deaths worldwide (Singer et al., 2020). Over 24% of the world's population is infected with IPIs, and over 267 million preschool-age children live in developing countries where these parasites are widely transmitted (WHO, 2022). Diarrheal infections caused by IPIs are the second biggest cause of death in children under 5 years globally, killing around 525,000 children each year (Fenta & Nigussie, 2021). In Africa, the frequency of IPI was 48% (Mekonnen & Ekubagewargies, 2019). *Entamoeba histolytica* and *Ascaris lumbricoides* were the most prevalent parasites in Egypt's preschool children (12.7% each), followed by *Enterobius vermicularis* (8.6%), *Giardia lamblia* (7.1%), *Cryptosporidium parvum* (1.5%), *Heterophyes heterophyes* (1.4%), and *Hymenolepis nana* (0.7%) (Elmonir).

Gabbad and Elawad (2018) report that intestinal parasite infections can now be prevented and controlled more effectively than previously. Simple preventative approaches, including raising maternal understanding of parasitic disorders, can protect children against intestinal parasite infections and their effects. This study aims to identify characteristics that influence awareness and practice of preventive behaviors toward IPI among mothers of preschool children.

Aim

Assess the awareness and practice of preventative behavior toward intestinal parasites Infection in mothers of preschool.

Methods:

Design: A descriptive correlational design.

Settings: Two urban MCHs, rural health unit rewari Haryana

2. Three samples: A purposive sample of 300 moms with preschool children was recruited from previously indicated settings. The sample size and power of the study Calculate the sample size needed to accomplish study objectives. The sample size was Where: N = population size, n = sample size, $DEFF$ stands for Design Effect. P = percentage frequency of maternal preventative behaviors for intestinal Parasite infection in preschool toddlers = 28. % (Based on a pilot research). d = confidence limits as percentage. of 100, $Z = 1.96$, and $\alpha = 0.05$. Confidence interval 95% was used with a sample size of 297. The self-administered interviewing questionnaire was This study relied on an instrument. The questionnaire included the following parts: component 1: This component was developed by researchers. deals with socio-demographic characteristics of mothers with preschool children. include: age, marital status, occupation, level of education, monthly income, residency, and age of Children and the number of family members, of children in the preschool stage and data on infected with intestinal parasites. Part 2: This section was adapted from Kassaw et al. (2020), as updated by the researcher. It was used. to assess mother's awareness regarding preventive. and control of IPIs, which was divided into five categories; The questions were written in the form of yes. There are no questions; Section 1 focuses on assessing mothers' awareness of common IPIs. There were eight sorts of parasites with yes/no replies (1=yes, 0=no). The total score varied from 0 to 8, with low awareness being less than 50%, fair awareness being 50-75%, and good awareness being more than 75%. Section 2 assesses mothers' awareness of IPI preventative measures. The report includes 12 assertions indicating IPI preventative measures. The responses to these statements were yes or no, with yes = 1 and no = 0. The overall score for this part ranged from 0 to 12. Assessing mothers' awareness of the mode of transmission of IPIs. It included twelve. Statements indicated the manner of transmission of IPIs. The responses to these statements were yes or no. where yes means one and no means zero. The overall score for this part ranged from 0 to 12, and was classified as poor awareness if the score was less than 50% of the total score, fair awareness if the score was 50 to 75% of the total score and good awareness the score was above 75% of the total score Section 4: This section dealt with the assessment of Mother's awareness of the signs and symptoms IPIs. It included ten statements with yes or no. Responses with yes=1 and no=0. The overall score the scale for this portion was 0-10, with a score below 50% indicating insufficient awareness. from the overall score, fair awareness if the score was 50 to 75% of the total score, with strong

awareness The score exceeded 75% of the overall score. Section 5: This part was focused with the assessment Mother's awareness of IPI problems. Included 10 statements with yes or no responses. where yes means one and no means zero. The overall score for this part Ranged from 0 to 10 and was classified as poor. Awareness if the total score for awareness part 3 (the five components) ranged from 0-52 and was classified as low. awareness if the score was less than 50%. Total score, fair awareness if the score is 50-75%. of the overall score and strong awareness if the score was more than 75% of the total score. Part 3: Adapted from Kassaw et al. (2020) and amended by the researcher. The survey asked 18 questions about mothers' behaviors for preventing and controlling IPIs, such as washing their children's hands after defecation, washing their hands before meals, and shortening their nails. The questions were answered using a forced choice likert-type format, with options of never, sometimes, or always. The overall score varied from 18 to 54 and was divided into three categories: poor practices (less than 50%), fair practices (50-75%), and good practices (more than 75%).

Statistical analysis

Data from the study was coded and organized in a computer-friendly format. Data was analyzed using SPSS (Statistical Package for the Social Sciences), version 24. Graphics were created using the Excel application. Data was presented using descriptive statistics such as frequencies and percentages. Nominal and ordinal variables were displayed as numbers and percentages. Numerical data were reported as means (x) and standard deviations (SD).

Non-parametric variables were compared using an independent T test for two categories and an ANOVA test

for three or more categories. Person r was employed to examine the correlation between two variables.

3. Result

The study aimed to assess the awareness and implementation of preventive behaviors for intestinal parasite infection among mothers of preschool children. Table 1. The study found that 54% of mothers were between 20 and 30 years old, with a mean age of 27.21± 6.69. 72% were married, with 49% having secondary education and only 16% having university or higher education. The majority of fathers (62.3%) had secondary education, whereas only 5% had further education. Over 34% of mothers in the study did not have enough monthly income to save, whereas only 8% did. As regarded Table (2) demonstrates that the majority of the analyzed.

Mothers were unaware of the many forms of Intestinal parasites had a mean score of 3.62 ± 0.87 out of 8. Furthermore, most of them were not aware of Different techniques of preventing intestinal parasite except washing the mother's hands before Eating and cleaning hands after changing a child. Dipper has a mean score of 4.61 ± 1.13 out of 12. Concerning mode of transmission, the bulk of the study mothers were unaware of forms infection The average transmission score for IPIs was 5.42±0.83. Out of twelve. Furthermore, most of them were not understand the signs and symptoms of IPIs except abdominal pain and itching in the anal area with score. The mean was 4.93 ± 1.37 out of 10. Concerning The most of the difficulties two thirds of the studied mothers (62.8%) had fair awareness, while only 18.8% had good awareness. This table answers research question number one

Variables	No	%
Age		
less than 20	51	17.0
20 to less than 30	162	54.0
30 to less than 40	81	27.0
40 and up	6	2.0
Mean ± SD	27.21± 6.69	
Mother's		
Marital status		
Married	216	72.0
Divorced	48	16.0
Widow	36	12.0
Mother's education		
Primary	33	11.0
Preparatory	72	24.0
Secondary	147	49.0
University or higher	48	16.0
Mother's Occupation		
Housewife	126	42.0
Employee	54	18.0
Seller	72	24.0
Farmer	48	16.0
Father's Education		

Unable to write / read	72	24.0
Primary	14	4.7
Preparatory	12	4.0
Secondary	187	62.3
University or higher	15	5.0
Father's Occupation		
Employee	125	41.7
Skilled work	175	58.3

Monthly Income		
Not enough	102	34.0
Enough only	174	58.0
Enough and can save	24	8.0
Number of Family Members		
5 or less	191	63.67
More than 5	109	36.33
Number of Newborn		
None	282	94.0
1.00	15	5.0
2.00	3	1.0
Number of Preschool Children		
1.00	141	47.0
2.00	141	47.0
3.00	12	4.0
More than 3	6	2.0
Type of Family		
Nuclear	96	32.0
Extended	204	68.0
Residence		
Urban	72	24.0
Rural	228	76.0

Methods of proper prevention of IPL. (Total Score=12)				
Washing mother's hands before eating.	300	100.0	0	0
Washing child's hands before eating.	105	35.0	195	65.0
Wearing shoes outside.	15	5.0	285	95.0
Cutting nails.	81	27.0	219	73.0
Using clean toilet.	108	36.0	192	64.0
Washing mother's hands after defecation.	225	75.0	75	25.0
Washing hands after changing child dipper.	207	69.0	93	31.0
Washing child's hands after defecation.	54	18.0	246	82.0
Avoiding the child from playing outside.	24	8.0	276	92.0
Cleaning child's hands thoroughly after playing.	54	18.0	246	82.0
Washing mother's hands after handling birds and pets.	27	9.0	273	91.0
Washing the child's hands after playing with birds and pets.	12	4.0	288	96.0
Mean ± SD	4.61 ± 1.13			
The mode of transmissions of IPLs. (total score=12)				
Eating contaminated food	228	76.0	72	24.0
Eating under cooked meat	36	12.0	264	88.0
Drinking contaminated water	87	29.0	213	71.0
Playing with soil	81	27.0	219	73.0

4. Discussion

Intestinal parasite infections remain a serious health problem and a leading source of morbidity and mortality worldwide, particularly in developing nations (Eyayu et al., 2021). Intestinal parasite infections have major effects for child health, such as hepatomegaly, splenomegaly, and esophageal varices. Preschoolers may experience delays in their physical development (Giorgio & D'Antiga, 2022; Duffy et al., 2021). According to Mutapi et al. (2021), it also has negative effects on the immune system, IQ, and labor productivity. The current study aimed to assess mothers' awareness and practice of preventative actions for IPIs in preschool children. In the current study, most mothers were unaware of the various types of intestinal parasites, prevention methods, and modes of transmission. They were also unaware of IPI modes of transmission, such as eating undercooked meat, drinking contaminated water, playing with soil or animals, and eating unwashed vegetables and fruits. The majority of mothers surveyed were unaware.

In terms of mother's IPIs prevention and control practices, the current study found that the majority of the studied mothers never take their children for a stool examination on a regular basis, never repeat the treatment two weeks after the end of the first dose, never boil water before use, never wash their children's hands after playing with birds and pets, and more than half of them did not wash their children's hands before any meal. Furthermore, more than one-quarter of the moms tested did not fully wash fruits and fresh vegetables before eating, and the majority of them occasionally kept their children's nails short and clean. However, the majority of the mothers surveyed washed their hands and food items before cooking. Furthermore, the current study found that more than two-thirds of the mothers. This conclusion could be attributed to the mother's lack of knowledge about IPIs. Curico et al. (2022) also observed that reinfection with IPIs increased the duration of treatment by four months in children who did not repeat the treatment after two weeks from the end of the first dosage. Furthermore, Habiyaemye et al. (2021) found that the majority of their samples did not boil tap water. Ahmed and Abu-Sheishaa (2022) also discovered that slightly less than half of the children did not wash their hands before meals, and two-thirds of the studied children who came into touch with pets did not wash their hands on a consistent basis. The results of the current study reveal the reason why youngsters did not practice hand washing while they grew up because they were not accustomed to washing their hands. Demonstrated that there were substantial positive connections between awareness and hygiene practice. This demonstrates that increasing awareness leads to improved practice. On the other hand, the current study's findings contradicted the conclusions of a study conducted by Kassaw et al., (2020), who discovered no association between total score of awareness and total score of practice. This could be related to the fact that awareness and knowledge about a disease are essential factors in its prevention.

5. Conclusion

The current study concluded that there was a lack of good awareness and practices among mothers of preschool children regarding IPI prevention and control, with mother education, mother occupation, and father education being the most significant factors influencing mother's awareness and practice of IPI preventive behaviors.

6. Recommendation

Planning and implementing health education programs in various community health care settings and through mass media for the general public, particularly mothers, is highly recommended because it can have a significant impact on improving their awareness and practices for IPI prevention among their children and protecting them from the health consequences of IPIs.

Reference

- [1] Ahmed, H.M., and Abu-Sheishaa, G.A. (2022). A cross-sectional study of intestinal parasite infection among schoolchildren in Egypt's Dakahlia province. *Egyptian Pediatric Association Gazette*, 70(1), 1–8.
- [2] G. Alemu, M. Nega, and M. Alemu (2020). Parasitic contamination of fruits and vegetables taken from local marketplaces in Bahir Dar, northwest Ethiopia. *Research and Reports in Tropical Medicine*, 11-17.
- [3] Allain, T., and Buret, A. G. (2020). Giardiasis pathogenesis and consequences after infection. *Advances in parasitology*, 107, 173–199.
- [4] Ananthakrishnan, A. N., and Xavier, R. J. (2020). Gastrointestinal illnesses. In *Hunter's Tropical Medicine and Emerging Infectious Diseases* (pages 16-26). Elsevier.
- [5] Asai T., Córdova Vidal C., Strauss W., Ikoma T., Endoh K., and Yamamoto M. (2016). The impact of mass stool screening and mass treatment on reducing intestinal helminth.