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Original Article

Knowledge, Attitudes, and Practices of Mothers Regarding the Prevention and Control of Intestinal Parasitic Infections Among Children Aged 2–6 Years in Rural Lahore, Punjab, Pakistan

Muhammad Bilal Hussain[1], Nasir Khan[1], Mushraf Hussain[1], Nazir Ahmad[1], Samina Farooqi[2], Ayesha Siddiqua[3], Muhammad Danish[4]

[1] BSN-Generic Student, Saida Waheed FMH College of Nursing, Lahore, Punjab, Pakistan
[2] Assistant Professor, Saida Waheed FMH College of Nursing, Lahore, Punjab, Pakistan
[3] Nursing Instructor, Saida Waheed FMH College of Nursing, Lahore, Punjab, Pakistan
[4] Nursing Supervisor, Shaida Islam Teaching Hospital, Lodhran, Punjab, Pakistan

*** Corresponding author: Muhammad Bilal Hussain, hussainmuhammadbilal100@gmail.com**

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ABSTRACT

Background: Intestinal parasitic infections remain an important public health concern among young children in rural communities, where prevention depends strongly on caregiver awareness, hygiene behavior, safe water use, food hygiene, and timely preventive care. Objective: To assess mothers' knowledge, attitudes, and practices regarding the prevention and control of intestinal parasitic infections among children aged 2–6 years in rural Lahore, Punjab, Pakistan. Methods: A community-based cross-sectional descriptive study was conducted among 265 mothers selected through convenience sampling. Data were collected using a structured questionnaire covering demographic characteristics, knowledge-domain items, attitudes, and reported preventive practices. Data were analyzed using SPSS version 20, and categorical variables were summarized as frequencies and percentages, while the overall attitude score was reported as mean ± standard deviation. Results: Most mothers were married 243 (91.7%), unemployed 191 (72.1%), and had limited formal education, with 87 (32.8%) reporting no formal education. Bacteria were reported as the known cause/type by 116 (43.8%) mothers, while contaminated soil contact was identified as a transmission route by 129 (48.7%). The mean attitude score was 15.64 ± 4.13, and 210 (79.2%) mothers were classified as having a positive attitude. Favorable practices included washing fruits and raw vegetables 214 (80.8%), cleaning utensils with soap 205 (77.4%), nail trimming 200 (75.5%), and handwashing before meals 198 (74.7%). Stool examination history 78 (29.4%) and preventive medication use 118 (44.5%) were less frequent. Conclusion: Mothers reported several favorable hygiene-related preventive practices and generally positive attitudes, but misconceptions regarding intestinal parasitic infections and limited use of stool examination and deworming indicate the need for targeted community-based health education in rural Lahore. Keywords: Knowledge, attitude, practice, intestinal parasitic infection, prevention, rural community, mothers, children.

INTRODUCTION

Intestinal parasitic infections remain a major neglected public health problem in low- and middle-income countries, particularly among young children living in rural and socioeconomically disadvantaged communities. These infections are commonly associated with unsafe drinking water, inadequate sanitation, poor hygiene practices, contaminated soil exposure, and limited access to preventive health education. Preschool children are especially vulnerable because of frequent hand-to-

mouth activity, immature hygiene behavior, close contact with contaminated environments, and dependence on caregivers for food safety, sanitation, and early health-seeking decisions. Intestinal parasitic infections may contribute to recurrent gastrointestinal symptoms, malnutrition, impaired growth, iron-deficiency anemia, and reduced cognitive and physical development, making prevention and early control important priorities for maternal and child health programs (1).

The burden of intestinal parasitic infections is closely linked with household-level hygiene, environmental sanitation, and caregiver awareness. Soil-transmitted helminths and other intestinal parasites are transmitted through contaminated food, water, soil, and poor hand hygiene, and their persistence in rural communities is often sustained by inadequate sanitation infrastructure and insufficient preventive practices. Children in rural settings may be exposed repeatedly through contaminated play areas, unwashed fruits and vegetables, unsafe water sources, and delayed deworming or stool examination. Evidence from resource-limited settings indicates that low parental awareness, poor recognition of transmission routes, and inconsistent preventive practices increase the risk of infection and reinfection among children (2).

Mothers play a central role in preventing intestinal parasitic infections in children because they are usually responsible for daily caregiving practices, including handwashing, nail trimming, food hygiene, drinking-water safety, toilet hygiene, and seeking medical care when symptoms occur. Maternal knowledge can influence recognition of risk factors and symptoms, while maternal attitudes may shape acceptance of preventive behaviors, deworming, and health education. Preventive practices such as regular handwashing with soap, washing fruits and vegetables, use of safe drinking water, cleaning utensils properly, trimming children's nails, and timely deworming are practical measures that can reduce exposure to intestinal parasites. Studies from different low-resource settings have shown that caregiver knowledge and preventive behavior are important determinants of intestinal parasite prevention among children, although gaps often remain in understanding specific causes, transmission routes, complications, and the role of routine deworming (3).

Despite the public health relevance of intestinal parasitic infections, community-level evidence on maternal knowledge, attitudes, and practices remains limited in rural areas of Lahore, Punjab. Existing studies from Pakistan and comparable settings suggest that parental knowledge and preventive behaviors may be inadequate, particularly where maternal education is low and access to structured health education is limited. However, local data are needed to identify specific misconceptions, behavioral gaps, and preventive practices among mothers of preschool-aged children. Such evidence can help guide targeted community health education, deworming awareness, sanitation counseling, and primary healthcare interventions in rural communities (4).

Therefore, this study was conducted to assess mothers' knowledge, attitudes, and practices regarding the prevention and control of intestinal parasitic infections among children aged 2–6 years in a rural community of Lahore, Punjab, Pakistan. The study specifically aimed to describe maternal awareness of intestinal parasites, perceived modes of transmission, recognized symptoms and complications, attitudes toward prevention and treatment, and reported household-level preventive practices. The research question was: what are the existing levels and patterns of knowledge, attitudes, and preventive practices among mothers regarding intestinal parasitic infections in children aged 2–6 years in rural Lahore, Punjab, Pakistan?

MATERIAL AND METHODS

A community-based cross-sectional descriptive study was conducted to assess mothers' knowledge, attitudes, and practices regarding the prevention and control of intestinal parasitic infections among children aged 2–6 years in a rural community of Lahore, Punjab, Pakistan. The study was carried out over a six-month period from December to May in Naain Sukh, a rural area of Lahore. A cross-sectional design was selected because the objective was to describe maternal knowledge, attitudes, and reported

preventive practices at a single point in time rather than to determine causality or measure intervention effects.

The study population comprised mothers residing in the selected rural community who had at least one child aged 2–6 years. Mothers were eligible for inclusion if they were permanent residents of the study area, had a child within the specified age range, and were able to provide informed consent and respond to the questionnaire. Mothers who were unable to communicate adequately during data collection or who had specialized professional knowledge related to prevention and control of intestinal parasitic infections were excluded to reduce response distortion from unusually high prior technical knowledge. Participants were selected using a non-probability convenience sampling technique from the accessible community population.

The sample size was calculated using the Dobson formula, and a total of 265 mothers were included in the final analysis. Eligible mothers were approached in the community, informed about the study purpose, procedures, voluntary participation, confidentiality, and their right to withdraw, and written informed consent was obtained before data collection. Data were collected using a structured questionnaire adapted from a previously validated tool assessing knowledge, attitudes, and practices related to intestinal parasitic infections. The questionnaire contained four sections: demographic characteristics, knowledge regarding intestinal parasitic infections, attitudes toward prevention and treatment, and reported preventive practices. Demographic variables included marital status, education level, and occupation. Knowledge items assessed awareness of intestinal parasites, hygiene-related prevention, possible transmission routes, symptoms, and complications. Attitude items assessed beliefs regarding hygiene, preventability and treatment, health education, complications, soap use, and raw food consumption. Practice items assessed stool examination history, handwashing before and after meals, nail trimming, deworming medication use, filtered water use, handwashing after defecation, previous diagnosis of intestinal parasitic infection, washing utensils with soap, and washing fruits and raw vegetables before eating.

The main study variables were maternal knowledge, attitudes, and practices regarding intestinal parasitic infection prevention and control. Knowledge and practice responses were summarized item-wise using frequencies and percentages because the manuscript data were based on categorical responses for individual questionnaire items. Attitude was measured using six Likert-type items, each scored from 1 to 5, giving a possible total attitude score range of 6–30. The total attitude score was also converted into a percentage score, and attitude classification was based on the predefined percentage cut-off used in the study, where scores above 40% were classified as positive and scores below 40% were classified as negative. Higher attitude scores indicated a more favorable attitude toward prevention and control of intestinal parasitic infections.

To improve consistency during data collection, the same structured questionnaire format was used for all participants, and responses were recorded in a standardized manner. Completed questionnaires were reviewed for completeness before data entry. Data were entered and analyzed using SPSS version 20. Descriptive statistics were used because the study objective was to describe KAP patterns rather than test causal associations. Categorical variables were summarized as frequencies and percentages, while the overall attitude score was summarized using mean, standard deviation, range, and percentage score. No inferential association testing was reported in the primary analysis.

Ethical approval was obtained from the Institutional Ethical Review Committee of the FMH system. The study was conducted in accordance with the ethical principles of the World Medical Association Declaration of Helsinki. Written informed consent was obtained from all participants before data collection. Participants' privacy and confidentiality were maintained throughout the study, and collected data were used only for research purposes.

RESULTS

A total of 265 mothers of children aged 2–6 years from a rural community of Lahore, Punjab, Pakistan, were included in the analysis. The results are presented descriptively as frequencies and percentages for categorical variables and mean ± standard deviation for the overall attitude score.

Table 1. Demographic Characteristics of Participating Mothers

Variable	Category	n (%)
Marital status	Married	243 (91.7)
	Divorced	12 (4.5)
	Widowed	10 (3.8)
Education level	Illiterate	87 (32.8)
	Primary	70 (26.4)
	Matriculation	68 (25.7)
	Graduate	40 (15.1)
Occupation	Employed	74 (27.9)
	Unemployed	191 (72.1)

The majority of participants were married, accounting for 243 (91.7%) of the sample, while 12 (4.5%) were divorced and 10 (3.8%) were widowed. Regarding education, 87 (32.8%) mothers were illiterate, followed by 70 (26.4%) with primary education, 68 (25.7%) with matriculation, and 40 (15.1%) with graduation-level education. Most participants were unemployed, 191 (72.1%), while 74 (27.9%) were employed.

Table 2. Responses to Knowledge-Domain Items Regarding Intestinal Parasitic Infections

Knowledge-domain item	Response category	n (%)
Reported cause/type known by mother	Virus	98 (37.0)
	Bacteria	116 (43.8)
	Insect	51 (19.2)
Reported method by which washing prevents germ spread	Washing hands	94 (35.5)
	Washing dishes	69 (26.0)
	Washing vegetables	68 (25.7)
	Washing latrine	34 (12.8)
Reported mode of transmission	Contaminated fruit	26 (9.8)
	Contaminated soil contact	129 (48.7)
	Contaminated food	72 (27.2)
	Uncooked vegetables	38 (14.3)
Reported symptom	Weakness	68 (25.7)
	Vomiting	81 (30.6)
	Fever	56 (21.1)
	Cramps	60 (22.6)
Reported complication	Weakness	70 (26.4)
	Weight loss	88 (33.2)
	Growth retardation	54 (20.4)
	Anemia	53 (20.0)

Responses to knowledge-domain items showed variable awareness and several misconceptions regarding intestinal parasitic infections. The most frequently selected response for the reported cause/type known by mothers was bacteria, reported by 116 (43.8%) participants, followed by virus in 98 (37.0%) and insect in 51 (19.2%). Washing hands was selected by 94 (35.5%) mothers as the main washing-related preventive behavior. Contaminated soil contact was the most frequently reported transmission route, identified by 129 (48.7%) mothers, while contaminated food was reported by 72 (27.2%). Vomiting was the most commonly reported symptom, selected by 81 (30.6%) mothers. Weight loss was the most frequently reported complication, identified by 88 (33.2%) participants.

Table 3. Maternal Attitudes Toward Prevention and Control of Intestinal Parasitic Infections

Attitude item	Response category	n (%)
Lack of hygiene is a cause of intestinal parasitic infections	Extremely agree	27 (10.2)
	Agree	91 (34.3)

Attitude item	Response category	n (%)
	Neutral	38 (14.3)
	Disagree	93 (35.1)
	Extremely disagree	16 (6.0)
Intestinal parasitic infections can be prevented and treated	Extremely agree	35 (13.2)
	Agree	168 (63.4)
	Neutral	32 (12.1)
	Disagree	23 (8.7)
	Extremely disagree	7 (2.6)
Health education can reduce the prevalence of intestinal parasitic infections	Extremely agree	30 (11.3)
	Agree	129 (48.7)
	Neutral	36 (13.6)
	Disagree	54 (20.4)
	Extremely disagree	16 (6.0)
Growth retardation is a complication of intestinal parasitic infection	Extremely agree	29 (10.9)
	Agree	139 (52.5)
	Neutral	38 (14.3)
	Disagree	45 (17.0)
	Extremely disagree	14 (5.3)
Use of soap while washing hands or face can prevent intestinal parasitic infection	Extremely agree	39 (14.7)
	Agree	128 (48.3)
	Neutral	28 (10.6)
	Disagree	48 (18.1)
	Extremely disagree	22 (8.3)
Raw food consumption can cause intestinal parasitic infection	Extremely agree	23 (8.7)
	Agree	117 (44.2)
	Neutral	48 (18.1)
	Disagree	53 (20.0)
	Extremely disagree	24 (9.1)

Maternal attitudes showed mixed but generally favorable responses toward prevention and treatment. A total of 168 (63.4%) mothers agreed that intestinal parasitic infections can be prevented and treated, while 35 (13.2%) extremely agreed. Health education was considered useful by 129 (48.7%) mothers who agreed and 30 (11.3%) who extremely agreed. Growth retardation was recognized as a complication by 139 (52.5%) mothers who agreed and 29 (10.9%) who extremely agreed. Soap use was supported as a preventive measure by 128 (48.3%) mothers who agreed and 39 (14.7%) who extremely agreed. However, 93 (35.1%) mothers disagreed that lack of hygiene is a cause of intestinal parasitic infections, indicating an important attitude-related gap.

Table 4. Maternal Preventive Practices Regarding Intestinal Parasitic Infections

Practice item	Response category	n (%)
Child has previous stool examination history	Yes	78 (29.4)
	No	187 (70.6)
Washes child's hands before meals	Yes	198 (74.7)
	No	67 (25.3)
Washes child's hands after meals	Yes	172 (64.9)
	No	93 (35.1)
Cuts child's nails	Yes	200 (75.5)
	No	65 (24.5)
Gives medication for prevention of intestinal parasites	Yes	118 (44.5)
	No	147 (55.5)
Uses filtered drinking water	Yes	179 (67.5)
	No	86 (32.5)
Washes child's hands after defecation	Yes	192 (72.5)
	No	73 (27.5)
Child ever diagnosed with intestinal parasitic infection	Yes	98 (37.0)
	No	167 (63.0)
Uses soap to clean utensils	Yes	205 (77.4)
	No	60 (22.6)
Washes fruits and raw vegetables before eating	Yes	214 (80.8)
	No	51 (19.2)

Reported preventive practices were strongest for food and household hygiene behaviors. Washing fruits and raw vegetables before eating was reported by 214 (80.8%) mothers, use of soap to clean utensils by 205 (77.4%), nail trimming by 200 (75.5%), handwashing before meals by 198 (74.7%), and handwashing after defecation by 192 (72.5%). Filtered drinking water use was reported by 179 (67.5%) participants. In contrast, only 78 (29.4%) mothers reported previous stool examination history for their child, and 118 (44.5%) reported giving medication for prevention of intestinal parasites. A previous diagnosis of intestinal parasitic infection was reported for 98 (37.0%) children.

Table 5. Overall Attitude Score and Attitude Classification

Measure	Value
Possible score range	6–30
Observed score range	6–30
Mean ± SD	15.64 ± 4.13
Mean percentage score ± SD	52.15 ± 13.79
Classification	**n (%)**
Positive attitude	210 (79.2)
Negative attitude	55 (20.8)

The overall attitude score was 15.64 ± 4.13 on a possible range of 6–30, corresponding to a mean percentage score of 52.15 ± 13.79. Based on the study's predefined attitude classification, 210 (79.2%) mothers were classified as having a positive attitude, while 55 (20.8%) were classified as having a negative attitude toward prevention and control of intestinal parasitic infections.

Overall, the results indicate that mothers reported several favorable hygiene-related preventive practices, particularly washing fruits and vegetables, cleaning utensils with soap, nail trimming, and child handwashing. However, knowledge-domain responses showed misconceptions regarding the nature of intestinal parasitic infections, and preventive healthcare practices such as stool examination and deworming medication use were less frequently reported. No inferential association testing was performed in the supplied analysis; therefore, the results should be interpreted as descriptive estimates of maternal knowledge, attitudes, and practices in the study population.

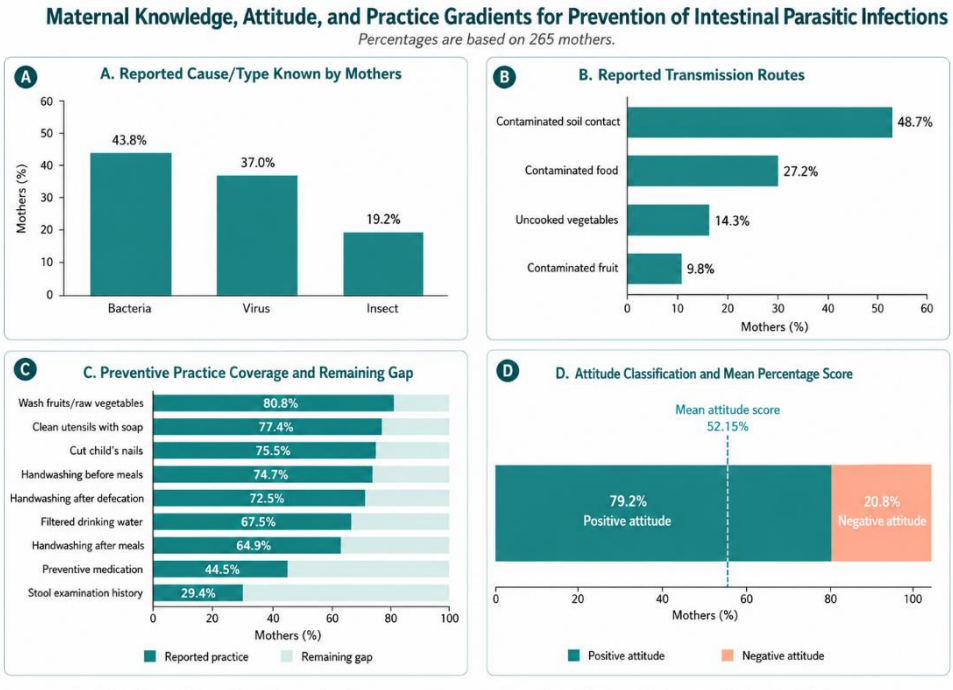

Figure 1 Panelled visualization of maternal knowledge, attitude, and preventive practice patterns among mothers of children aged 2–6 years in rural Lahore, Punjab, Pakistan. Panel A shows that the most frequent reported cause/type known by mothers was bacteria (43.8%), followed by virus (37.0%) and insect (19.2%), indicating substantial misconception regarding intestinal parasitic infections. Panel B shows that contaminated soil contact was the most commonly identified transmission route (48.7%), followed

by contaminated food (27.2%), uncooked vegetables (14.3%), and contaminated fruit (9.8%). Panel C demonstrates strong hygiene-related practices, particularly washing fruits/raw vegetables (80.8%), cleaning utensils with soap (77.4%), nail trimming (75.5%), and handwashing before meals (74.7%), but much lower uptake of stool examination history (29.4%) and preventive medication use (44.5%). Panel D shows that 79.2% of mothers were classified as having a positive attitude, although the mean attitude percentage score was 52.15%, suggesting that favorable attitude classification coexisted with only moderate overall attitude intensity.

DISCUSSION

This community-based cross-sectional study assessed maternal knowledge, attitudes, and preventive practices regarding intestinal parasitic infections among children aged 2–6 years in a rural community of Lahore, Punjab, Pakistan. The findings show that mothers reported several favorable household-level hygiene practices, including washing fruits and raw vegetables, cleaning utensils with soap, trimming children's nails, handwashing before meals, handwashing after defecation, and use of filtered drinking water. However, knowledge-domain responses also revealed important misconceptions regarding the nature of intestinal parasitic infections, and preventive healthcare behaviors such as routine stool examination and deworming medication use were less frequently reported. This pattern suggests that although practical hygiene behaviors were relatively common, understanding of disease etiology, transmission, complications, and biomedical prevention remained incomplete.

The demographic profile of the participants provides an important context for interpreting the findings. Most mothers were married, unemployed, and had limited formal education, with 32.8% reporting no formal education and only 15.1% reporting graduation-level education. Maternal education is an important determinant of health literacy and preventive behavior, particularly in conditions where prevention depends heavily on household hygiene, safe water, food handling, and early recognition of infection risk. Similar studies from low-resource settings have reported that limited caregiver education is associated with lower awareness of intestinal parasite transmission and weaker preventive practices among parents of young children (5). In the present study, the descriptive design did not test statistical associations between education and KAP responses; however, the high proportion of mothers with limited education highlights the need for locally understandable and culturally appropriate health education.

Knowledge responses showed that a substantial proportion of mothers did not correctly identify intestinal parasitic infections as parasitic conditions. Bacteria were reported by 43.8% of mothers, viruses by 37.0%, and insects by 19.2% as the known cause or type of intestinal infection. This finding indicates conceptual confusion between parasites and other infectious agents. Such misconceptions are important because inaccurate understanding of disease causation may reduce attention to specific parasite-prevention strategies such as deworming, safe disposal of feces, avoiding soil contamination, and timely stool examination. Prior studies from Ethiopia, Bangladesh, and Pakistan have similarly shown that caregivers often possess partial awareness of intestinal infections but may lack accurate knowledge of causative agents and transmission routes (7,16,19).

Awareness of transmission routes was also incomplete. Contaminated soil contact was the most frequently reported transmission route, identified by 48.7% of mothers, followed by contaminated food in 27.2%, uncooked vegetables in 14.3%, and contaminated fruit in 9.8%. Recognition of contaminated soil is relevant because soil-transmitted helminths can spread through contact with contaminated environments, particularly where sanitation is inadequate and children play outdoors. However, lower recognition of contaminated food, fruits, and uncooked vegetables suggests that food hygiene education remains necessary. Similar findings have been reported in studies where caregivers recognized some hygiene-related risks but lacked comprehensive understanding of multiple transmission pathways (11,15). For rural communities, educational interventions should therefore emphasize the full transmission cycle, including contaminated hands, soil, water, utensils, fruits, vegetables, and unsafe food handling.

The attitude findings showed that most mothers agreed that intestinal parasitic infections can be prevented and treated, and many recognized the role of health education, soap use, and growth retardation as a potential complication. The overall attitude score was 15.64 ± 4.13 out of 30, corresponding to a mean percentage score of 52.15 ± 13.79. Based on the study's predefined cut-off, 79.2% of mothers were classified as having a positive attitude. This finding is encouraging because positive attitudes can support adoption of preventive behaviors when adequate knowledge, resources, and access to services are available. However, the mean percentage score also suggests that attitude intensity was moderate rather than strongly favorable. In addition, 35.1% of mothers disagreed that lack of hygiene is a cause of intestinal parasitic infections, indicating that attitude-related misconceptions persisted despite generally favorable classification. This discrepancy suggests that positive attitude classification should be interpreted cautiously and supported with item-level interpretation rather than treated as uniformly strong preventive orientation.

Reported preventive practices were strongest for routine hygiene behaviors. Washing fruits and raw vegetables was reported by 80.8% of mothers, cleaning utensils with soap by 77.4%, cutting children's nails by 75.5%, handwashing before meals by 74.7%, handwashing after defecation by 72.5%, and using filtered drinking water by 67.5%. These practices are directly relevant to reducing exposure to intestinal pathogens and reflect useful household-level preventive behavior. Similar studies have reported that caregivers may adopt visible hygiene practices such as handwashing and food washing even when biomedical knowledge of intestinal parasites remains incomplete (12,15). In the current study, this gap between practical hygiene behavior and conceptual knowledge suggests that mothers may follow general cleanliness practices without fully understanding parasite-specific prevention.

In contrast, preventive healthcare practices were less common. Only 29.4% of mothers reported a previous stool examination history for their child, and 44.5% reported giving medication for prevention of intestinal parasites. These findings are clinically important because hygiene alone may be insufficient in settings where environmental contamination and reinfection risks persist. Low stool examination uptake may reflect limited access to diagnostic services, low perceived need, cost barriers, lack of symptoms, or limited counseling by healthcare providers. Similarly, suboptimal deworming practice may reflect limited awareness of recommended deworming schedules, uncertainty about medication safety, or inadequate community-based deworming education. Public health programs should therefore combine hygiene promotion with clear guidance on when and how children should receive deworming and when stool examination is appropriate.

The finding that 37.0% of children had reportedly been diagnosed with intestinal parasitic infection indicates that the problem is familiar within the study community, although the present study relied on maternal report rather than laboratory confirmation. This self-reported diagnosis should be interpreted cautiously because recall bias and misclassification are possible. Nevertheless, the proportion reporting previous diagnosis supports the practical relevance of strengthening maternal education and routine preventive care in the selected rural setting. Community health workers, primary healthcare providers, and maternal-child health programs can use these findings to target messages around hand hygiene, nail hygiene, safe water, food washing, environmental cleanliness, stool examination, and appropriate deworming.

The study has several strengths. It addresses a relevant child health issue in a rural community and includes a sample of 265 mothers of preschool-aged children. The focus on knowledge, attitudes, and practices provides a useful descriptive picture of both cognitive and behavioral dimensions of prevention. The findings also identify specific gaps that are directly actionable for community health education, including misconceptions about disease causation, incomplete knowledge of transmission routes, and low uptake of stool examination and deworming medication.

However, the findings should be interpreted in light of important limitations. The cross-sectional design does not permit causal inference, and the convenience sampling technique limits generalizability

beyond the selected rural community. Data were self-reported, which may introduce recall bias and social desirability bias, particularly for hygiene-related practices. The study did not include stool testing or parasitological confirmation, so reported diagnosis cannot be treated as measured infection prevalence. Knowledge and practice were reported item-wise, and no validated overall knowledge or practice score was available in the supplied analysis. The attitude classification was based on a predefined cut-off, but the relatively low threshold should be clearly justified in the final manuscript. Future studies should use probability sampling where feasible, include validated and reliability-tested KAP instruments, examine associations between maternal education and KAP scores, and consider laboratory confirmation of intestinal parasitic infections in children.

Overall, this study suggests that mothers in the rural community of Lahore demonstrated several favorable hygiene-related practices and a generally positive orientation toward prevention and treatment, but important knowledge gaps and preventive healthcare gaps remained. The findings support the need for targeted, community-based health education focusing on accurate understanding of intestinal parasites, transmission pathways, complications, stool examination, and safe deworming practices. Integrating these messages into primary healthcare visits, maternal-child health services, and community outreach programs may help improve prevention and control of intestinal parasitic infections among young children in rural settings.

CONCLUSION

Mothers of children aged 2–6 years in rural Lahore reported several favorable hygiene-related practices for the prevention of intestinal parasitic infections, including washing fruits and raw vegetables, cleaning utensils with soap, trimming children's nails, handwashing before meals and after defecation, and using filtered drinking water. However, knowledge-domain responses showed important misconceptions regarding the nature and transmission of intestinal parasitic infections, while preventive healthcare behaviors such as stool examination and deworming medication use were comparatively limited. Although most mothers were classified as having a positive attitude based on the study's predefined cut-off, the moderate mean attitude percentage score and item-level misconceptions indicate the need for stronger community-based health education. Public health interventions in rural Lahore should focus on accurate parasite-specific knowledge, safe hygiene practices, routine deworming awareness, and timely diagnostic evaluation to improve prevention and control of intestinal parasitic infections among preschool-aged children.

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