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Article

A Cross-Sectional Study on Mothers' Knowledge, Attitudes, and Practices Towards Nutrition of Malnourished Under-Five Children in a Kabul City Hospital, Afghanistan

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Abstract

Mothers play a crucial role in child nutrition, particularly in children under five. Their knowledge, attitudes, and practices significantly impact child health and development. Malnutrition can lead to severe health complications, making maternal understanding of nutrition necessary. **Objective:** This study aimed to assess mothers' knowledge, attitudes, and practices (KAP) toward under-five children's nutrition, considering age, education, and economic status, and to propose sustainable strategies for reducing malnutrition. **Methods:** A descriptive cross-sectional study was conducted on 99 mothers of malnourished children in a Kabul City hospital. Data were collected via structured questionnaires and analyzed using SPSS v25. Chi-square tests examined associations between maternal KAP and Sociodemographic factors. **Results:** Nearly half of the mothers had moderate to good knowledge of nutrition, the majority had moderate attitudes, and almost all demonstrated good nutritional practices. Significant associations were found between maternal knowledge and education, attitudes and age, and practices and economic status. **Conclusion:** Findings highlight the need to integrate sustainable nutrition education programs into maternal and child health policies. Strengthening maternal nutrition knowledge is a cost-effective and sustainable approach that contributes directly to achieving SDG 2 (Zero Hunger) and SDG 3 (Good Health and Well-being). These findings provide a baseline for developing culturally sensitive maternal nutrition education programs in resource-limited settings.

Keywords: maternal knowledge; attitudes; practices; child nutrition; under-five children; SDGs

1. Introduction

Proper nutrition is fundamental to human health and development. A well-balanced diet is essential for proper functioning of bodily systems, cognitive development, and overall well-being [1]. The nutrition of under-five children is of great importance because the foundation of our lifetime health, strength, intelligence, and vitality is established during this period [2]. According to the World Health Organization, nutrition is defined as the body's processing and use of food. The first pathological condition resulting from nutritional quality is malnutrition. Infant and young child feeding is critical for improving child survival and promoting healthy growth and development. Of the children under five, 52 million are wasted, 17 million are severely wasted 155 million are stunted, and 41 million are overweight or obese. An estimated 2.7 million children die annually from under nutrition, accounting for 45% of all child deaths [3]. During optimal complementary feeding (CF) programs, the quantity and quality of food, frequency and timeliness of feeding, food hygiene, and

feeding during or after illness are highly considered. In addition, inadequate complementary feeding practice is a major problem for children aged 6 months to 2 years. In low-income countries (LICs), improving the nutrition of infants and young children is a priority for human development [4]. According to the World Food Programme (WFP), over 3 billion people in 40 countries cannot afford a healthy diet, and 42 million people in 43 countries are at risk of severe famine. Malnutrition is a leading cause of childhood mortality, with United Nations International Children's Emergency Fund (UNICEF) reporting that 5.6 million children under five died in 2016 due to malnutrition and related diseases. [WHO,2021].

Malnutrition is defined as the deprivation of vital vitamins, minerals, and nutrients essential for the normal function of tissues and organs that can result from either undernourishment, over nourishment. Children are more susceptible to diseases and mortality due to malnutrition. Approximately 45% of deaths among children <5 years of age in lower- and middle-income countries are linked to under nutrition. According to the United Nations Children's Fund, the most important factors that cause child malnutrition are unsanitary household environments, food insecurity, and lack of proper healthcare, according to the United Nations Children's Fund (UNICEF). Acute malnutrition has been one of the key concerns of the health sector in Afghanistan, as the nation is one of the most resource-deprived countries in South Asia. Twenty years of war in Afghanistan has cost >1.5 million lives.¹ However, if the current deepening humanitarian crisis in Afghanistan is not adequately addressed, more people will die of starvation than in the past 20 y of war.² The history of political unrest along with inadequate economic opportunities has severely diminished the purchasing power of the public. Afghanistan has witnessed a sharp increase in poverty, with a population of >40 million in 2022, with levels increasing from <40% in 2007 to almost 60% in 2016. By the end of 2021, half of the population was living below [5]. Millions of children under five years of age in low- and middle-income countries fail to reach their potential in cognitive, language, and social-emotional development, which has implications for their educational attainment and adult functioning [6]. Early childhood malnutrition has a complicated, multivariate, and contextual aetiology. The direct cause of childhood malnutrition is a lack of protein and energy; however, behind these deficiencies, many other factors influence new-born feeding behaviors and, consequently, their nutritional status and health [7]. Mothers are the primary caregivers of their children, and the quality of care they provide is heavily reliant on their understanding of nutrition and health-related behaviors [7]. Complementary foods after six months of age are essential for feeding young children, as they support their growth, development, and overall health, enabling them to reach their full potential. Evidence suggests that children in developing countries often do not receive adequate nutritional supplementation. Studies in various developing countries, including Iran, India, Malaysia, Lebanon, and Ghana, have shown that maternal education and awareness significantly impacts children's nutritional outcomes.

Given the importance of maternal knowledge in combating malnutrition, this study aimed to assess the knowledge, attitudes, and practices of mothers regarding the nutrition of children under five years of age. By identifying the key factors influencing child nutrition, this study seeks to provide recommendations for improving maternal education and reducing malnutrition rates in Afghanistan.

2. Methodology

2.1. Study design, setting and period

This study employed a descriptive, cross-sectional, and questionnaire-based approach to assess mothers' knowledge, attitudes, and practices regarding the nutrition of children under five years of age. This study was conducted at a pediatric hospital in Kabul between November and December 2022. It is classified as a quantitative study, primary in nature, and original in terms of data collection. A total of 99 mothers of malnourished children under the age of five were included in the study. The sample size was not determined by statistical calculation; instead, a convenience sampling method

was used, and all eligible participants who attended the hospital during the study period were recruited.

2.2. Data Collection and Measurement

A structured questionnaire, adapted from a validated study by Dr. Josephine Kabura Imera (available on the WHO website), was utilized. The questionnaire consisted of four sections: (1) demographic information, (2) knowledge assessment, (3) attitude assessment, and (4) practice assessment. The inclusion criteria were mothers with malnourished children under five years of age, while mothers with older children or those without malnourished children were excluded.

The knowledge section consisted of eight multiple-choice questions, each assigned a score between one and three points. Knowledge levels were categorized as good (8–12 points), moderate (4–8 points), and poor (0–4 points). The attitude section included 12 questions scored between 1 and 1.5, with attitudes categorized as good (22–23 points), moderate (11–12 points), and poor (0–11 points). The practice section had 10 questions, with scores ranging from 1 to 2 points. The practices were classified into three levels: good (10–16 points), moderate (11–22 points), and poor (0–11 points).

After data collection, responses were carefully entered into SPSS v25 (analyzer software) to ensure accuracy and subsequently analyzed and interpreted.

2.3. Statistical Analysis

Descriptive statistics, including frequencies, percentages, and standard deviations, were used to summarize the data. Chi-square tests were conducted to examine associations between mothers' knowledge and education levels, attitudes and age, practices, and economic status. Statistical significance was set at $P < 0.05$. To minimize potential sources of bias, a standardized questionnaire was used and data collectors were trained before the study. However, as the data were self-reported recall bias cannot be entirely ruled out.

3. Results

3.1. Sociodemographic Characteristics of Participants

The findings of this study showed that almost (74.7%) of mothers were under 40 years of age, (24.2%) were younger than 20, and only (1.0%) of them were younger than 60 years of age. Moreover, (79.8%) of mothers had fewer than five children (while 20.1%) of them had more than five children. However, (74.7%) of the participating mothers were illiterate, (24.2%) of them finished elementary education, and only (1.0%) finished secondary education. Meanwhile, (95.9%) of mothers appeared to be housewives, and only a small percentage (4.0%) were employees. However, the age of malnourished children was surveyed based on months, and the majority of them (76.8%) were younger than 12 months, (19.2%) were younger than 36 months, and only (4%) were older than 36 months. Of (99) malnourished children whose mothers participated in this study, (51.5%) of them were males and (48.5%) were females. The majority of children (51.5%) were suffering from the Kwashikor type of malnutrition, (34.3%) of had Marasmus malnutrition, (9.1%) of were diagnosed as special cases, and only (5.1%) of them had Marasmu-kwashikor malnutrition. Among the participating mothers, (54.5%) had poor economic status (26.2%) of them had average economic status, and only (19.2%) of them had good economic status. a summary of the Sociodemographic findings is stated in Table 1.

Table 1. Sociodemographic Characteristics of Participants.

Characteristics	Percentage	Frequency
Mother's age	1-Younger than 20	24.2%
	2-Younger than 40	74.7%
	3-Younger than 60	1.0%
Children number	1-Less than five children	79.8%
	2-More than five children	20.1 %
Education level	1-Illiterate	74.7%
	2-Finished elementary school	24.2%
	3-Finished high school	1.0%
Occupation	1-Housewife	95.9%
	2-Employee	4.0%
Children's age based on month	1-Younger than 12 months of age	76.8%
	2-Younger than 36 months of age	19.2%
	3-Older than 36 months of age	4.0%
Child sex	1-Male	51.5%
	2-Female	48.5%
Types of malnutrition	1-Marasmas	34.3%
	2-Kwashikor	51.5%
	3-Marasmokwashikor	5.1%
	4-Special case	9.1%
Economic status	1-Good	19.2%
	2-Average	26.2%
	3-Poor	54.5%

Note: 1-Marasmas: Protein-energy under nutrition. 2-Kwashiokor: Protein deficiency malnutrition. 3-MarasmuKwashiokor: The type of malnutrition that combines Marasmus and Kwashikor symptoms. 4-Special case: Malnourished children admitted as special cases in the nutrition ward of Andera Gandhi Child Health Hospital lacked weight compared to their ages.

3.2. Outcome Data

The outcome of this study were the levels of mothers’ knowledge, attitudes, and practices (KAP) regarding child nutrition, along with the types of malnutrition observed in their under-five children. These outcomes were described as categorical variables and analyzed in relation to sociodemographic factors.

3.3. Mothers’ knowledge about nutrition of under-five children:

Based on the findings of this study, after scoring the questions shown in Table 2, which aimed to assess mothers' knowledge of nutrition for children under five, the collected data indicated that the majority of mothers—86 (86.9%)—had a moderate attitude, while six (6.0%) had a good attitude, and only seven (7.0%) had a poor attitude towards child nutrition. The results from the attitude survey suggest that most participating mothers held positive views about colostrum (first milk), recognizing its importance to their infants. Additionally, the majority strongly rejected the belief that malnutrition was caused by evil eyes. Furthermore, most mothers believed that their own breast milk could protect their children from illness and disease.

Table 2. Mothers' knowledge about nutrition of under-five children.

Question	Answer Choices	Frequency (n)	Percentage (%)
1. When did you breastfeed your child for the first time?	a. Half an hour after birth	43	43.4%
	b. One hour after birth	27	27.3%

2. How many times a day do you breastfeed your child?	c. I have forgotten	11	11.1%
	a. Based on child's requirement	81	81%
	b. Based on schedule	6	6.1%
	c. I don't know	8	8%
3. How long have you breastfed your child before adding complementary foods?	1. Until 4 months of age	33	33.3%
	2. Until 6 months of age	53	53.5%
4. When should you start giving complementary foods to your child in addition to your milk?	1. At 4 months of age	32	32.2%
	2. At 6 months of age	67	67.7%
5. What is your source of information about child nutrition?	a. Family members	67	67.7%
	b. Health workers	5	5.1%
	c. social media	22	22.2%
	d. Books	3	3.3%
6. What are symptoms of malnutrition?	a. The child cannot gain weight	28	28.3%
	b. Getting sick	36	36.4%
	c. Inflammation	33	33.3%
7. Does the first milk (colostrum) protect the child from diseases like measles and pneumonia?	a. Yes	72	71.8%
	b. No	14	14.1%
8. Should breastfeeding be stopped during diarrhea and constipation?	a. Yes	21	21.2%
	b. No	8	78.8%

3.4. Attitudes of mothers towards nutrition of under-five children

Based on the findings of this study, after scoring the responses shown in Table 3, aimed at assessing the attitudes of participating mothers regarding the nutrition of under-five children, the collected data indicated that the majority of mothers, 86 (86.9%), had a moderate attitude. Additionally, six (6.0%) exhibited a good attitude, while only seven (7.0%) had a poor attitude toward the nutrition of children under five.

The findings from the attitude survey suggest that most participating mothers had a positive perception of colostrum (first milk). Furthermore, the majority strongly rejected the belief that malnutrition was caused by the "evil eye." Finally, most mothers believed that their own breast milk could protect their children from illnesses and diseases.

Table 3. Attitude measurement of mothers towards nutrition of children under-five children.

Variables	Strongly agree	agree	Undecided	Strongly disagree	Disagree
	n (%)	n (%)	n (%)	n (%)	N (%)
1-First milk (colostrum) is very Nutritious for the baby	88 (88.9%)	6 (6.1%)	5 (5.1%)	0	1 (1.0%)
2-Can the first milk (colostrum) meet all nutrition needs of the baby?	75 (75.1%)	6 (6.1%)	5 (5.1%)	8 (8.1%)	5 (5.1%)

3-It not possible for the baby to survive on breastfeeding for six months.	13 (13.1%)	34 (34.3%)	28 (28.3%)	17 (17.2%)	6 (6.1%)
4-It is important to give the baby some water, honey and other solid foods during the first six months.	29 (29.3%)	12 (12.1%)	10 (10.1%)	46 (46.5%)	2 (2.1%)
5-Poor breast milk makes the child prone to malnutrition.	75 (75.8%)	14 (14.1%)	5 (5.1%)	2 (2.0%)	1 (1.0%)
6-Nutrition foods are expensive.	71 (71.7%)	9 (9.1%)	12 (12.1%)	7 (7.1%)	0
7-Malnutrition is caused by witchcraft and evil eye.	20 (20.2%)	8 (8.1%)	16 (16.2%)	52 (52.25%)	3 (3.0%)
8-Some foods are too heavy for the children to digest e.g. eggs.	64 (64.6%)	14 (14.1%)	4 (4.0%)	7 (7.1%)	0
9-When pregnant you should stop breastfeeding.	52 (52.5%)	5 (5.1%)	1 (1.0%)	38 (38.4%)	3 (3%)
10-Breast milk protect your child from illness.	83 (83.8%)	8 (8.1%)	2 (2.0%)	3 (3.0%)	3 (3.0%)
11-Feeding should be stopped during the illness.	56 (56.6%)	10 (10.1%)	10 (10.1%)	20 (20.2%)	3 (3.0%)
12- Does the first milk make the baby jaundice?	79 (79.8%)	1 (1.0%)	1 (1.0%)	17 (17.2%)	1 (1.0%)

Note: n (number), % (percentage).

3.5. Mothers’ practices regarding nutrition of under-five children

This study states for good and moderate practices of the majority of mothers towards nutrition among children under five, and surprisingly, no poor performance towards nutrition of children under five was shown among participating mothers. Almost all participating mothers admitted that they boil the water before giving it to their children and feed them with grains and vegetables. The questions and details on the practice of mothers toward nutrition of children under five are shown in Table 4.

Table 4. Mothers' practices regarding nutrition of under-five children.

Variables	Frequency	Percentage
1-When did you first breasted your baby?		
a-Half an hour after birth	47	47.5%
b-One hour after birth	32	32.3%
c-One day after birth	10	10.1%
2-Did you give something else to your baby before your first milk?		
a-Yes	26	26.3%
b-No	73	73.7%
3-Has your child eaten your first milk?		
a-Yes	56	56.6%
b-No	43	43.4%
4-Did you give your baby only your milk during the first six months?		
a-Yes	77	77.8%
b-No	16	16.2%
5-When did you start giving complementary foods to your child?		
a-At 4 months old	17	17.2%
b-At 6 months old	76	76.8%
6-If you started giving complementary foods to your baby before 6 months, what was the reason?		
a-The baby used to cry a lot	0	0

b-I had a job	1	1.0%
c-Not enough breast milk	88	88.8%
d-For some diseases	10	10.1%
7-When did you stopped breastfeeding your baby?		
a-At 1 to 1.5 years old	19	19.2%
b-At 2 to 2.5 years old	80	80.9%
8-Types of foods you give to your baby during 24 hours.		
a-Grains, cereals and fruits	34	34.3%
b-Grains and cereals	60	60.6%
c-Grains and fruits	5	5.0%
9-How many times a day do you breastfeed your child?		
a-5 times a day	27	27.3%
b-4 times a day	49	49.5%
c-3 times a day	21	21.1%
d-2 times a day	0	0%
10-What types of dishes you use for feeding your child?		
a-Bottle	1	1.0%
b-Spoon and plate	98	98.9%
11-How often do you boil the drinking water of your child?		
a-Always	80	80.8%
b-Sometimes	11	11.1%
c-Never	5	5.1%

3.6. Association between knowledge and education level

The chi-square analysis revealed a significant association between the education level of mothers and their knowledge of child nutrition ($\chi^2 = 78.19$, $p < 0.0001$, $df = 4$). Since the p-value is less than 0.05, this indicates that higher education levels are linked to greater knowledge of child nutrition.

3.7. Association between attitudes and age

A significant relationship was also found between the age of mothers and their attitudes toward child nutrition ($\chi^2 = 22.73$, $p = 0.0001$, $df = 4$). A p-value below 0.05 suggests that maternal age plays an important role in shaping attitudes about child nutrition.

3.8. Association between practice and economic status

The chi-square test showed a statistically significant association between the economic status of mothers and their practices regarding child nutrition ($\chi^2 = 12.91$, $p = 0.0243$, $df = 4$). As the p-value is less than 0.05, this indicates that economic stability influences the practical application of child nutrition knowledge.

All three analyses (education and knowledge, age and attitudes, and economic status and practices) demonstrated statistically significant associations. This suggests that education, age, and economic status are key factors influencing maternal knowledge, attitudes, and practices regarding childhood nutrition. These findings highlight the importance of educational programs, age-specific interventions, and economic support to promote better nutritional practices among mothers. Due to dataset restructuring, some Chi-square values were recalculated manually; however, significance patterns ($p < 0.05$) remained consistent. A summary of the results of the chi-square test is shown in Table 5.

Table 5. Association Analysis with Chi-Square Tests.

Variable	Category	<20 / Illiterate	20-40 / Elementary	40-60 / High School
Knowledge and Education Level	Good Knowledge	22	75	2
	Moderate Knowledge	27	72	0
	Poor Knowledge	0	3	0

	Chi-Square	78.19	p-value	0.0001
Attitudes and Age	Good Attitude	23	33	22
	Moderate Attitude	75	66	77
	Poor Attitude	1	0	0
	Chi-Square	22.73	p-value	0.0001
Practice and Economic Status	Good Practice	19	23	54
	Moderate Practice	10	20	30
	Poor Practice	5	10	25
	Chi-Square	12.91	p-value	0.024

4. Discussion

This study was conducted among mothers of malnourished children in a hospital in Kabul City to investigate their knowledge, attitudes, and practices regarding the nutrition of children under five years of age. Highlighting the main findings of this study contributes significantly to its comparison with similar cross-sectional studies. A total of 99 mothers with malnourished children were surveyed, and the majority demonstrated moderate-to-good knowledge. This study indicates that age plays a significant role in mothers' attitudes toward child nutrition, as older mothers tend to have more positive attitudes regarding the nutrition of children under five. Furthermore, a significant association was observed between mothers' practices and their economic status as well as between mothers' knowledge and their level of education, which are noteworthy findings.

A similar study was conducted in Kampala, Africa A similar cross-sectional study was conducted in Africa. This study found that 57% of participating mothers knew the importance of adding complementary foods after six months of age, and 85% had positive attitudes towards a balanced diet for children. It also showed that 68% of women had stopped breastfeeding at 2 years of age. Similarly, our study showed that 67% of mothers started giving complementary foods at six months of age. This study reported good knowledge and attitudes but poor practices regarding the nutrition of under-five children. By contrast, our study showed good knowledge, moderate attitudes, and moderate practices. This study found that half of the respondents had obtained information about child nutrition from health facilities, whereas in our study, the majority of mothers had obtained information from family members, and only a small percentage had received nutritional information from health facilities. This study also indicated that 83% of mothers considered fruits and vegetables essential for a balanced diet for their children, whereas our study found that mothers focused primarily on cereals and grains as the main diet for their children. Additionally, this study reported that 82% of mothers fed their children three times a day, whereas our study showed that the majority of mothers fed their children four times a day [8].

Another similar cross-sectional study was conducted in Terengganu, Malaysia, among 60 mothers with under five children. This study evaluated the Body Mass Index (BMI) of children under five, while our study focused on mothers whose children had already been diagnosed with malnutrition. A Malaysian study found that nearly 85% of mothers had completed secondary education, and 10% had completed tertiary education. In contrast, our study showed that 74.7% of the mothers were illiterate, 24.2% had completed elementary school, and only 7% had finished high school. Furthermore, 85% of the mothers in the Malaysian study were housewives, while our study found that 95.9% of the mothers were housewives. A Malaysian study reported that the majority of mothers had positive nutritional attitudes and found a positive but weak relationship between mothers' knowledge and attitudes towards child nutrition. A significant relationship was also found between mothers' knowledge, attitudes, and practices regarding their children's BMI for age and height. However, our study shows a significant relationship between mothers' knowledge, attitudes, and practices and other variables, such as level of education, age, and economic status [9].

Another cross-sectional study was conducted in Lebanon among mothers with under five children to investigate their knowledge, attitudes, and practices regarding child nutrition. This study found that 78.3% of the mothers had good knowledge, 21.7% had poor knowledge, 69% had good

attitudes, and 31% had poor attitudes. Similarly, our study showed that 48.5% had good or moderate knowledge, but only 3% had poor knowledge. This study reported a high percentage (86.9%) of mothers with positive attitudes, while our study found that only 7% of mothers had poor attitudes towards the nutrition of under-five children. This study found a significant association between mothers' knowledge and attitudes, but in contrast, our study showed significant associations between mothers' knowledge, attitudes, and practices and other variables such as education level, age, and economic status. Moreover, this study found another significant association between mothers' practices and factors, such as religion and family income. Similarly, our study showed a significant association between mothers' practices and economic status [10].

A self-report study was conducted in Qom, Iran to investigate mothers' knowledge, attitudes, and practices. This study found that 68.3% of the mothers had good knowledge, 58.3% had good attitudes, and 40% had good practices. Similarly, our study reported that 48.5% of mothers had good knowledge, and 86.9% had moderate knowledge. In contrast to this study's findings, our study shows that only 6% of mothers had positive attitudes towards child-feeding. This study selected participants through random sampling from 28 health centers in low-middle- and upper-class areas, with a total of 120 mothers surveyed. In contrast, our study was conducted at a single hospital with a limited number of participants. However, this study found a significant relationship between mothers' knowledge and their level of education, which is consistent with our findings of a similar significant association [11]. This study emphasizes the critical role that maternal knowledge, attitudes and practices (KAP) play in addressing childhood malnutrition. The significant associations found between knowledge and education, attitudes and age, and practices and economic status suggest that interventions to improve child nutrition should be multidimensional _focusing not only on providing information but also addressing socio-economic and demographic barriers. The fact that most mothers had moderate to good knowledge and practices, yet moderate attitudes, highlights a potential gap between awareness and motivation or belief systems, which future interventions should consider.

Unlike previous studies conducted in more stable settings, this research provides unique evidence from Afghanistan's post-2021 humanitarian crisis, where child malnutrition has intensified. The association between mothers' KAP and Sociodemographic factors demonstrates that education, age, and economic stability are key leverage points for interventions. This makes the findings particularly relevant for low-resource and conflict-affected settings, where sustainable and community-based strategies are required.

Moreover, while similar studies in Africa, Malaysia, and Lebanon emphasize general awareness, our study highlights the critical gap between moderate knowledge and limited positive attitudes among Afghan mothers. Addressing this gap through sustainable educational interventions (peer education, culturally tailored health workshops, and digital awareness tools) can generate long-term improvements in maternal practices, even in fragile systems. This study contributes novel evidence from a post-conflict and resource-limited setting, which is often underrepresented in global nutrition literature. The results underline the importance of culturally tailored interventions that address both informational and socioeconomic barrier to child nutrition. Future studies with larger and more diverse samples are recommended to validate and expand upon these findings.

Limitations of the research

This study had several limitations. First, the research was conducted in a single hospital in Kabul City, which may not represent the broader population or healthcare settings in Afghanistan. Second, owing to limited resources and time constraints, the sample size was relatively small, potentially affecting the generalizability of the findings. Third, as the data were self-reported by mothers, the study was subject to recall and social desirability biases. To minimize potential sources of bias, a standardized questionnaire was used and data collectors were trained before the study. However, as the data were self-reported recall bias cannot be entirely ruled out. Despite these limitations, our findings provide valuable insights into maternal knowledge and practices related to child nutrition in a critical context.

5. Conclusions

This study confirms that mothers' knowledge, attitudes, and practices (KAP) are crucial in shaping the nutritional health of under-five children in Afghanistan. By identifying significant associations between maternal education and knowledge, age and attitudes, and economic status and practices, this research emphasizes the need for multi-dimensional interventions.

Policy recommendations:

1. Integrate maternal nutrition education into Afghanistan's national health programs and routine maternal-child healthcare.
2. Promote community-based workshops and peer-to-peer education for long-term sustainability.
3. Align maternal education initiatives with SDG 2 (Zero Hunger) and SDG 3 (Good Health and Well-being) to ensure both immediate health benefits and sustainable development outcomes.

By embedding maternal nutrition education into health policies, Afghanistan can not only reduce current malnutrition but also ensure resilient, healthier future generations

Author Contributions:

- Husnia Hossainy: Conceptualization, Methodology, Data Collection, Data Analysis, Writing Original Draft, Writing Review and Editing.
- Rohina Amel: Guidance and Supervision.
- Rohullah Sakhi: Guidance and Supervision.

Disclosure: The authors declare no conflict of interest.

Ethics and Consent: This study was conducted at Indira Gandhi Children's Hospital, with formal authorization from the Kabul Medical University, Department of Child Health Research and Programs (letter no. 1759, dated 19 November 2022). The research was supervised and approved internally by the university and relevant hospital authorities. All participants were informed about the objectives of the study and provided verbal consent prior to participation. However, the research was conducted in accordance with the ethical principles of the Declaration of Helsinki. Written consent was not obtained due to cultural sensitivities and literacy limitations among participants. Participation was entirely voluntary, and all collected data were kept anonymous and confidential.

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Paper Context:

- This study highlights the poor maternal knowledge and practices regarding nutrition of malnourished under-five children in one of the hospitals in Kabul City.

- This adds to the limited evidence on maternal nutritional behavior in conflict-affected health systems.
- This finding emphasizes the need for culturally tailored health education policies to improve child nutritional outcomes in low-resource settings.

Data Availability Statement: The data generated and analyzed during this study are not publicly available because of cultural and social sensitivity. However, the data are available upon reasonable request, subject to ethical approval, and confidentially.

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