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Original Research

Assessment of Mothers' Knowledge and Attitudes Toward Weaning at Maternity and Raparin Teaching Hospitals: A Cross-Sectional Study in Erbil, 2024-2025

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Abstract

Background and Aim In Erbil, Iraq, weaning practices play a critical role in early childhood nutrition and maternal decision-making. This study aimed to assess the levels of knowledge and attitudes regarding weaning among mothers attending Maternity Teaching Hospital and Raparin Teaching Hospital.

Methods This cross-sectional study was conducted at Maternity Teaching Hospital and Raparin Teaching Hospital from September 15 to November 5, 2024, using purposive sampling. The questionnaire consisted of three sections: the first included demographic data, while the second and third were self-structured tools developed to assess mothers' knowledge and attitudes toward weaning. Chi-square tests, Pearson correlation, and ordinal regression were used to examine associations between the main variables and potential confounding factors. Data were analyzed using SPSS version 27, with a significance level set at $p < 0.05$.

Results A total of 235 mothers participated in the study. The findings showed that most mothers demonstrated fair levels of both knowledge and attitude toward weaning, with mean scores of 33.99 ± 2.89 and 30.48 ± 3.76, respectively. There was a significant positive correlation between knowledge and attitude ($r = 0.31$, $p < .001$), indicating that greater knowledge was associated with a more favorable attitude. Ordinal regression analysis identified the number of children as a significant predictor of both knowledge and attitude levels, while other socio-demographic variables showed no significant associations.

Conclusion The study concluded that mothers in Erbil generally have fair knowledge and attitudes toward weaning. Policymakers and healthcare providers are recommended to implement targeted educational programs to enhance maternal awareness and promote positive weaning practices.

Keywords Weaning · Maternal Knowledge · Maternal Attitude · Infant Feeding · Public Health

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Introduction

Weaning, the gradual process of introducing complementary foods while reducing breastfeeding, marks a critical transition in an infant's nutritional development (Ajmal, 2024). The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months of life, followed by the introduction of appropriate complementary foods along with continued breastfeeding up to two years or beyond (Ssemukasa and Kearney, 2014). However, adherence to these guidelines varies significantly worldwide due to factors such as cultural practices, maternal knowledge, economic status, and access to healthcare information. Globally, only about 44% of infants under six months are exclusively breastfed, and improper weaning practices remain a major contributor to child malnutrition, infection, and mortality (Zong et al., 2021). In Iraq, including the Kurdistan region, suboptimal infant feeding practices have been reported, often rooted in a lack of awareness or misconceptions among mothers (Abas et al., 2020). In urban centers like Erbil, disparities in education, healthcare accessibility, and cultural beliefs about infant nutrition further shape mothers' decisions and attitudes. Teaching hospitals like Maternity and Raparin serve large populations and offer an ideal setting for evaluating maternal knowledge.

Maternal knowledge and attitudes are two of the most influential factors in shaping infant feeding behavior. Studies show that informed mothers are more likely to initiate weaning at the recommended time and introduce appropriate food types, leading to better nutritional outcomes for children (Cameron et al., 2012, Moore et al., 2012). On the other hand, misconceptions—such as the belief that formula feeding is superior or that solid foods should be introduced earlier than recommended—can lead to health issues like stunted growth, gastrointestinal infections, and allergies (Harsha and Kumar, 2017). Attitudes toward weaning are also influenced by cultural norms, family influence, and past experiences, all of which play a role in shaping feeding decisions. In the Middle Eastern context, particularly in Iraq, traditional practices often coexist with modern medical advice, leading to variability in weaning approaches (Ghafel and Al-Jubouri, 2024). Mothers attending teaching hospitals are a diverse group, offering valuable insight into how different sociodemographic factors influence their weaning knowledge and attitudes. By assessing both cognitive understanding and emotional or cultural perceptions, researchers can capture a holistic picture of weaning behaviors.

Healthcare institutions, particularly maternity and pediatric facilities, play a pivotal role in shaping maternal behavior through counseling and education. Maternity and Raparin Teaching Hospitals in Erbil, as primary centers for maternal and child care, offer an important platform to study maternal practices and attitudes. Numerous international and regional studies have emphasized the effectiveness of hospital-based interventions in improving mothers' feeding knowledge (Graziose et al., 2018, Walsh et al., 2023). However, the success of such interventions depends heavily on mothers' baseline understanding and openness to change. Knowledge gaps related to appropriate timing, signs of readiness for weaning, and the nutritional value of local foods can result in either premature or delayed weaning, each with its own set of complications (Cameron et al., 2012, Brown and Lee, 2013). Moreover, attitudes—shaped by familial advice or social stigma—may hinder the adoption of health-promoting practices even when knowledge is adequate. Examining both aspects concurrently provides a richer understanding of maternal behavior than evaluating either in isolation. The hospital setting also allows researchers to assess how current healthcare messaging aligns with maternal perceptions and expectations.

Despite existing global and regional research on infant feeding practices, there remains a notable gap in data specifically addressing mothers' knowledge and attitudes toward weaning in the Kurdish region of Iraq. Most existing studies focus either solely on breastfeeding or fail to differentiate between knowledge and attitude dimensions in weaning. Furthermore, few have targeted hospital-based populations, missing the opportunity to gather insights from mothers at a key point of healthcare engagement. The cultural diversity and educational variability in Erbil necessitate localized studies that reflect the specific needs and beliefs of this population. Without such research, healthcare initiatives risk being generic and less effective. Therefore, in this study we aim to assess mothers' knowledge and attitudes toward weaning at Maternity and Raparin Teaching Hospitals in Erbil during the period 2024–2025.

Research Question

What are the levels of knowledge and attitudes toward weaning among mothers attending Maternity and Raparin Teaching Hospitals in Erbil during 2024–2025?

Methods

Study Design, Setting, Period, and Sampling

This study was conducted at Maternity Teaching Hospital and Raparin Teaching Hospital from September 15 to November 5, 2024, using a purposive sampling technique.

Sample Size

The sample size was calculated using a 95% confidence interval, an estimated response distribution of 50%, and a margin of error of 6.40%. Based on these parameters and using the formula for an infinite population, with a Zα/2 value of 1.96, the required sample size was calculated to be 235 participants.

Inclusion/exclusion

The inclusion criteria for participants were mothers of any age who were attending Maternity Teaching Hospital or Raparin Teaching Hospital during the data collection period and who agreed to participate in the study. Exclusion criteria included mothers who were unwilling to participate and primigravida mothers, as the study focused on those with prior experience related to weaning.

Study Tools and Data Collection

The questionnaire used in this study was divided into three main parts. The first part gathered socio-demographic data, including the mother's age, marital status, religion, occupation, education level, residence, number of children, husband's education level, and family economic status. The second part consisted of 10 items assessing mothers' knowledge about the weaning process, and the third part included 10 items evaluating their attitudes toward weaning. The questionnaire was originally developed in English and translated into Kurdish using the forward-backward translation method to ensure clarity and cultural relevance. Data were collected by distributing the questionnaires to eligible mothers at Maternity Teaching Hospital and Raparin Teaching Hospital. Any unclear questions were explained by the researchers, and each participant was given approximately 10–15 minutes to complete the form.

Pilot Study

Prior to the main data collection, a pilot study was conducted to assess the internal consistency and reliability of the questionnaire. The tool, designed to evaluate mothers' knowledge and attitudes toward the weaning process, was tested on a sample of 25 mothers with similar characteristics to the target population. The pilot study was carried out between August 20 and September 5, 2024. Internal consistency was assessed using Cronbach's alpha (Taber, 2018), with the knowledge section yielding a value of 0.88 and the attitude section 0.79, both indicating acceptable reliability. Data from the pilot study were used solely for validation purposes and were excluded from the final analysis.

Measures

Sociodemographic Characteristics

The first section of the questionnaire collected socio-demographic information from the participating mothers. This included age, marital status, religion, occupation, educational level, place of residence (urban or rural), number of children, husband's education level, and the family's economic status.

Knowledge About the Weaning Process

The second section of the questionnaire assessed mothers' knowledge regarding the weaning process. This section consisted of 10 items covering various topics, including the appropriate age to initiate weaning, the effects of weaning on child growth and nutrition, feeding frequency, use of milk substitutes, and differences between gradual and immediate weaning methods. Each item was rated on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). For analysis, each participant's total score was calculated and then categorized into three levels: a score of 1 to 25 indicated poor knowledge, 26 to 37 indicated fair knowledge, and 38 to 50 indicated good knowledge.

Attitude Toward the Weaning Process

The third section of the questionnaire evaluated mothers' attitudes toward the weaning process. This section also included 10 items addressing emotional, cultural, and behavioral perspectives, such as feelings of guilt, readiness of the child, influence of family traditions, occupational factors, and concerns about health effects during weaning. Responses were measured using the same five-point Likert scale. The attitude score was then categorized into three levels: scores between 1 and 25 reflected a poor attitude, scores of 26 to 37 reflected a fair attitude, and scores between 38 and 50 reflected a good attitude.

Ethical Approval and Informed Consent

This study adhered to the principles outlined in the Declaration of Helsinki and institutional research ethics standards. Ethical approval was obtained from the Undergraduate Research Committee of the College of Nursing at Hawler Medical University, with the approval code 25251, granted on September 9, 2024. Prior to data collection, oral informed consent was obtained from all participants after providing them with a clear explanation of the study's purpose, confidentiality measures, and their right to withdraw at any time without penalty.

Statistical Consideration

Data were summarized and reported using frequencies and percentages for categorical variables, while means and standard deviations were used to describe continuous variables. The association between mothers' knowledge and their socio-demographic characteristics, as well as between attitudes and socio-demographic variables, was analyzed using the Chi-square test. The relationship between

knowledge and attitude scores was assessed using Spearman's rank correlation coefficient. Additionally, ordinal regression analysis was performed to examine the influence of demographic factors on levels of knowledge and attitude. All statistical analyses were conducted using SPSS version 27 (IBM Corp., Armonk, NY), with a significance level set at $p < 0.05$.

Results

Demographic and Clinical Characteristics

A total of 235 mothers participated in the study, with a mean age of 29.83 ± 5.76 years. Most were aged between 31–36 years (34.9%) and 19–25 years (32.8%). All participants were married and Muslim. The majority were unemployed (91.1%), and in terms of education, 23.8% had primary education, while 17.0% held a bachelor's or diploma degree. Most lived in urban areas (62.6%), had 1–3 children (61.7%), and reported a middle socioeconomic status (73.0%). Husbands of participants were mostly educated at the primary (23.0%) or bachelor's/diploma level (23.0%). The reported economic status was predominantly moderate (88.5%). Regarding the main study variables, the mean knowledge score was 33.99 ± 2.89, indicating an overall fair level of knowledge, and the mean attitude score was 30.48 ± 3.76, also reflecting a fair attitude toward the weaning process. Detailed demographics and other variables are presented in Table 1.

Association Between Socio-Demographic Variables and Knowledge Levels

The results showed that there was no statistically significant association between mothers' knowledge levels about the weaning process and any of the examined socio-demographic characteristics, as all p-values were greater than 0.05. Although the majority of mothers across all age groups demonstrated good knowledge—with the highest proportion observed among those aged 37–43 years (95.0%)—the difference was not significant ($p = 0.40$). Similarly, employment status, level of education, residence, number of children, husband's education, and economic status did not show any significant association with knowledge. Most notably, good knowledge was observed even among mothers with lower educational levels and those living in rural areas, indicating a broad distribution of weaning-related awareness regardless of background characteristics. For further details, see Table 2.

Association Between Socio-Demographic Variables and Attitude Levels

The results revealed that there was no significant association between mothers' attitudes toward the weaning process and any of the socio-demographic characteristics, as all p-values exceeded 0.05. Although a higher proportion of mothers aged 37–43 years (65.0%) and employed mothers (66.7%) exhibited a fair attitude compared to their counterparts, these differences were not statistically significant ($p = 0.31$ and $p = 0.17$, respectively). Similarly, variations in attitude levels across educational attainment, residence, number of children, husband's education, and economic status were minimal and did not reach statistical significance. Overall, mothers across diverse backgrounds demonstrated comparable attitudes toward weaning. For more details, refer to Table 3.

Correlation Between Knowledge and Attitude

The results showed a significant positive correlation between mothers' knowledge and attitude toward the weaning process, as indicated by a Spearman correlation coefficient of 0.31 ($p < .001$). This suggests that higher levels of knowledge were moderately associated with more positive attitudes among the participating mothers. In other words, as mothers' understanding of weaning improved, their attitudes toward the process also became more favorable. For more details, refer to Table 4.

Table 4: Spearman Correlation Between Mothers' Knowledge and Attitude Regarding Weaning Practices at Maternity Teaching Hospital and Raparin Hospital

Variables	Spearman	Knowledge	Attitude
Knowledge	Correlation Coefficient	1.00	0.31**
	Sig. (2-tailed)	.	p<.001
	N	235	235
Attitude	Correlation Coefficient	0.31**	1.00
	Sig. (2-tailed)	p<.001	.
	N	235	235

Note: ** Correlation is significant at the 0.01 level (2-tailed).

Ordinal Regression of Factors Affecting Mothers' Knowledge and Attitude Regarding Weaning

The results revealed that among all examined factors, number of children was the only variable significantly associated with both mothers' knowledge and attitude regarding weaning ($p = 0.001$ for both). Mothers with 1–3 children and 4–7 children had significantly higher odds of having better knowledge and more favorable attitudes compared to those with 8–10 children. Other variables, including age, occupation, education level, residence, and economic status, did not show significant associations with

knowledge or attitude levels ($p > 0.05$). For more details, refer to Table 5.

Table 1: Demographic and Clinical Characteristics of Participants

Variables	Characteristics n=235	F	%
Age (year)	19-25	77	32.8
	26-30	36	15.3
	31-36	82	34.9
	37-43	40	17.0
	Mean ± SD	29.83 ± 5.76	
Marital Status	Married	100	100
Religion	Muslim	100	100
	Others	0	0.00
Mother's Occupations	Employed	21	8.9
	Unemployed	214	91.1
Level of mother's education	Illiterate	33	14.0
	Primary School	56	23.8
	Intermediate School	50	21.3
	High school or vocational	51	21.7
	Bachelor's and Diploma Degree	40	17.0
	Master degree or equivalent, e.g. higher diploma or PhD	5	2.1
Residence	Rural	88	37.4
	Urban	147	62.6
Number of Children	1-3	145	61.7
	4-7	89	37.9
	8-10	1	.4
Socioeconomic Status	Low	41	25.8
	Middle	116	73.0
	High	2	1.3
Level of husband's education	Illiterate	22	9.4
	Primary School	54	23.0
	Intermediate School	50	21.3
	High school or vocational	44	18.7
	Bachelor's and Diploma Degree	54	23.0
	Master degree or equivalent, e.g. higher diploma or PhD	11	4.7
Economic Status	High	4	1.7
	Moderate	208	88.5
	Low	23	9.8
Knowledge Levels	Fair	25	**10.6**
	Good	210	89.4
	Mean ± SD	33.99 ± 2.89	
Attitude Levels	Fair	123	52.3
	Good	112	47.7
	Mean ± SD	30.48 ± 3.76	

Note: F = Frequency, % = Percentage; and Sd= Standard Deviation.

Discussion

The present study was conducted to assess mothers' knowledge and attitudes toward weaning at Maternity and Raparin Teaching Hospitals in Erbil during 2024-2025. Overall, the results revealed that participating mothers demonstrated fair levels of knowledge and attitudes toward weaning, suggesting a reasonable baseline understanding of appropriate weaning practices across the study population.

Infant weaning represents a critical transitional phase in early childhood development, with significant implications for long-term health outcomes and nutritional status (Koletzko et al., 2019, Shaoul et al., 2016). In the Kurdish region of Iraq, particularly in Erbil, there exists limited research examining maternal understanding and perspectives regarding weaning practices despite their crucial importance for infant health. The cultural, social, and economic factors unique to this region may influence

weaning practices differently than in other parts of the world. Given the importance of these details, we aimed to assess mothers' knowledge and attitudes toward weaning at Maternity and Raparin Teaching Hospitals in Erbil.

Table 2: Association Between Demographic Information and Mothers' Knowledge Regarding Weaning Practices at Maternity Teaching Hospital and Raparin Hospital

Demographic Information	Categories	Knowledge		N	χ^2 test
		Fair	Good		
Age (year)	19-25	8 (10.4%)	69 (89.6%)	77	
	26-30	3 (8.3%)	33 (91.7%)	36	χ^2=2.92
	31-36	12 (14.6%)	70 (85.4%)	82	P=0.40
	37-43	2 (5.0%)	38 (95.0%)	40	
Mother's Occupations	Employed	2 (9.5%)	19 (90.5%)	21	χ^2=0.03
	Unemployed	23 (10.7%)	191 (89.3%)	214	P=0.86
Level of Education	Illiterate	2 (6.1%)	31 (93.9%)	33	χ^2=1.76
	Primary School	7 (12.5%)	49 (87.5%)	56	p=0.88
	Intermediate School	5 (10.0%)	45 (90.0%)	50	
	High school or vocational	6 (11.8%)	45 (88.2%)	51	
	Bachelor's and Diploma Degree	5 (12.5%)	35 (87.5%)	40	
	Master degree or equivalent, e.g. higher diploma or PhD	0 (0.0%)	5 (100.0%)	5	
Residence	Urban	13 (8.8%)	134 (91.2%)	88	χ^2=1.33
	Rural	12 (13.6%)	76 (86.4%)	147	p=0.25
Number of Children	1-3	16 (64.0%)	129 (61.4%)	145	χ^2=10.53
	4-7	9 (36.0%)	80 (38.1%)	89	p=0.10
	8-10	0 (0.0%)	1 (0.5%)	1	
Level of husband's education	Illiterate	2 (9.1%)	20 (90.9%)	22	χ^2=2.98
	Primary School	6 (11.1%)	48 (88.9%)	54	p=0.70
	Intermediate School	7 (14.0%)	43 (86.0%)	50	
	High school or vocational	6 (13.6%)	38 (86.4%)	44	
	Bachelor's and Diploma Degree	4 (7.4%)	50 (92.6%)	54	
	Master degree or equivalent, e.g. higher diploma or PhD	0 (0.0%)	11 (100.0%)	11	
Economic Status	High	0 (0.0%)	4 (100.0%)	4	χ^2=0.62
	Moderate	22 (10.6%)	186 (89.4%)	208	p=0.74
	Low	3 (13.0%)	20 (87.0%)	23	

Note: F = Frequency, % = Percentage; Sd= Standard Deviation, Significance was set at p <.001, and Chi-Square was used.

Table 3: Association Between Demographic Information and Mothers' Attitude Regarding Weaning Practices at Maternity Teaching Hospital and Raparin Hospital

Demographic Information	Categories	Attitude		N	χ^2 test
		Fair	Good		
Age (year)	19-25	39 (50.6%)	38 (49.4%)	77	
	26-30	16 (44.4%)	20 (55.6%)	36	χ^2=3.60
	31-36	42 (51.2%)	40 (48.8%)	82	P=0.31
	37-43	26 (65.0%)	14 (35.0%)	40	
Mother's Occupations	Employed	14 (66.7%)	7 (33.3%)	21	χ^2=1.90
	Unemployed	109 (50.9%)	105 (49.1%)	214	P=0.17
Level of Education	Illiterate	15 (45.5%)	18 (54.5%)	33	χ^2=1.57
	Primary School	28 (50.0%)	28 (50.0%)	56	p=0.91
	Intermediate School	28 (56.0%)	22 (44.0%)	50	
	High school or vocational	28 (54.9%)	23 (45.1%)	51	
	Bachelor's and Diploma Degree	22 (55.0%)	18 (45.0%)	40	
	Master degree or equivalent, e.g. higher diploma or PhD	2 (40.0%)	3 (60.0%)	5	
Residence	Urban	75 (51.0%)	72 (49.0%)	88	χ^2=0.27
	Rural	48 (54.5%)	40 (45.5%)	147	p=0.60
Number of Children	1-3	72 (49.7%)	73 (50.3%)	145	χ^2=1.86
	4-7	50 (56.2%)	39 (43.8%)	89	p=0.40
	8-10	1 (100.0%)	0 (0.0%)	1	
Level of husband's education	Illiterate	13 (59.1%)	9 (40.9%)	22	
	Primary School	27 (50.0%)	27 (50.0%)	54	
	Intermediate School	24 (48.0%)	26 (52.0%)	50	χ^2=2.60
	High school or vocational	25 (56.8%)	19 (43.2%)	44	p=0.76
	Bachelor's and Diploma Degree	30 (55.6%)	24 (44.4%)	54	
	Master degree or equivalent, e.g. higher diploma or PhD	4 (36.4%)	7 (63.6%)	11	
Economic Status	High	3 (75.0%)	1 (25.0%)	4	χ^2=2.52
	Moderate	111 (53.4%)	97 (46.6%)	208	p=0.28
	Low	9 (39.1%)	14 (60.9%)	23	

Note: F = Frequency, % = Percentage; Sd= Standard Deviation, Significance was set at p <.001, and Chi-Square was used.

The demographic profile of our study participants provides valuable context for understanding weaning practices in Erbil. Mothers from diverse educational backgrounds, varying ages, and different residential areas were represented, offering a comprehensive cross-section of the maternal population accessing healthcare at the teaching hospitals. This diversity aligns with similar studies conducted in neighboring regions, where maternal demographics significantly influence child-feeding practices (Yeganeh et al., 2018, Rafizadeh et al., 2019). However, unlike some international studies that report substantial knowledge disparities across different socioeconomic groups, our findings revealed a more equitable distribution of weaning knowledge across demographic categories, potentially indicating effective

health education efforts reaching various segments of the population.

Most mothers in our study demonstrated fair knowledge regarding weaning practices, with no significant differences observed based on age, education, or residence. This finding contrasts with international literature that often reports substantial knowledge disparities across maternal educational levels (Dudley et al., 2021). The absence of significant knowledge differences across educational backgrounds may suggest that information about weaning is effectively disseminated through multiple channels in Erbil, potentially including healthcare facilities, community networks, and intergenerational knowledge transfer. However, this consistency across groups might also indicate that while basic knowledge is widely shared, there may be opportunities to enhance the depth and quality of understanding across all demographic segments.

Our study found that mothers generally held fair to good attitudes toward weaning, with no significant differences observed among various demographic groups. This consistency in attitudes across different maternal backgrounds suggests a cultural consensus regarding the importance and approach to weaning. Similar patterns have been observed in studies conducted in neighboring countries, where attitudes toward infant feeding practices are strongly influenced by cultural norms and traditions (Lindsay et al., 2018, Mutuli et al., 2016). However, the absence of significant differences between groups with varying educational levels differs from findings in some international studies, which report that maternal education strongly predicts attitudes toward child feeding practices (Ickes et al., 2015).

A significant finding from our study was the positive relationship between mothers' knowledge and their attitudes toward weaning. This correlation aligns with health behavior theories suggesting that improved knowledge often leads to more favorable attitudes and potentially better practices (McPhetres et al., 2019). Similar associations have been reported in studies from various cultural contexts, underscoring the importance of education in shaping maternal approaches to infant feeding (Hamad et al., 2024, Akhagbaker et al., 2024). This relationship suggests that interventions aimed at enhancing maternal knowledge about weaning could have the additional benefit of fostering more positive attitudes, potentially leading to improved weaning practices.

Our study revealed that maternal experience, specifically the number of children a mother had, strongly influenced both knowledge and attitudes toward weaning. This finding suggests that experiential learning plays a crucial role in shaping maternal understanding and perspectives on child feeding practices. Previous research in other contexts has similarly identified parity as a significant factor in maternal knowledge and confidence regarding infant care practices (Liu et al., 2012). The advantage held by mothers with more children may reflect accumulated practical experience, exposure to healthcare guidance across multiple pregnancies, and learned adaptations to infant feeding challenges.

The relationship between parity and weaning knowledge presents important implications for healthcare providers and public health initiatives. First-time mothers appear to represent a particularly vulnerable group that may benefit from additional support and education regarding weaning practices. This finding aligns with research from diverse contexts that consistently identifies primiparous mothers as having greater informational needs across various aspects of infant care (Fakhraei and Terrion, 2017, Liu et al., 2012). Targeted interventions that provide enhanced education and support for first-time mothers, while acknowledging and building upon the experiential knowledge of multiparous women, could effectively improve weaning knowledge and attitudes across the maternal population in Erbil.

Despite the valuable insights provided by this study, several limitations should be acknowledged. The cross-sectional design captures knowledge and attitudes at a specific point in time, limiting our ability to observe how these factors evolve throughout the weaning process. Additionally, the hospital-based sampling may not fully represent mothers who do not access institutional healthcare. Future research should consider longitudinal designs to track changes in knowledge and attitudes throughout the weaning period, inclusion of observational components to assess actual weaning practices, and exploration of the influence of extended family members, particularly grandmothers, who often play significant roles in infant feeding decisions in Middle Eastern contexts.

Table 5: Ordinal Regression of Factors Affecting Mothers' Knowledge and Attitude Regarding Weaning Practices at Maternity Teaching Hospital and Raparin Hospital (Link = Logit)

Variables	Knowledge				Attitude			
	Estimate	P-Value	%95 CI		Estimate	P-Value	%95 CI	
			LB	UB			LB	UB
Age								
19-25	-0.59	0.55	-2.53	1.36	0.68	0.21	-0.38	1.73
26-30	-0.43	0.68	-2.46	1.61	0.89	0.11	-0.19	2.0
31-36	-1.06	0.20	-2.68	0.56	0.67	0.13	-0.19	1.52
37-43	0 [a]	-	-	-	0 [a]	-	-	-
Mother's Occupations								
Employed	0.08	0.94	-1.93	2.09	-1.26	0.09	-2.70	0.19
Unemployed	0 [a]	-	-	-	0 [a]	-	-	-
Level of mother's education								
Illiterate	-13.95	0.96	-46.3	46.40	-1.84	0.16	-4.37	0.70
Primary School	-14.76	0.96	-46.10	46.59	-2.05	0.11	-4.54	0.44
Intermediate School	-14.45	0.96	-46.80	46.89	-2.41	0.06	-4.89	0.07
High school or vocational	-14.63	0.96	-46.98	46.71	-2.41	0.06	-4.90	0.08
Bachelor's and Diploma Degree	-14.87	0.96	-46.21	46.48	-1.81	0.11	-4.06	0.44
Master degree or equivalent, e.g. higher diploma or PhD	0 [a]	-	-	-	0 [a]	-	-	-
Residence								
Rural	-0.57	0.21	-1.45	0.32	-0.25	0.40	-0.82	0.33
Urban	0 [a]	-	-	-	0 [a]	-	-	-
Number of Children								
1-3	0.90	0.11	0.71	3.43	14.83	0.001	14.13	15.53
4-7	0.97	0.10	0.47	3.16	14.81	0.001	14.81	14.81
8-10	0 [a]	-	-	-	0 [a]	-	-	-
Economic Status								
High	15.46	0.10	-5142.1	5172.10	-1.51	0.28	-4.27	1.25
Moderate	0.08	0.91	-1.30	1.45	-0.62	0.19	-1.55	0.31
Low	0 [a]	-	-	-	0 [a]	-	-	-

Note: Abbreviations: LB, lower bound; UP, upper bound.
[a] This parameter is reference

Conclusion

Based on the findings of the research, it was determined that women in Erbil have a moderate level of knowledge and attitudes on weaning. To improve mother understanding and encourage healthy weaning habits, it is advised that policymakers and healthcare practitioners establish educational programs that are specifically designed to

address these issues.

Statements and Declarations

Funding None.

Competing Interests The authors declare no conflict of interest.

Ethics Statement Ethical approval for this study was granted by the Undergraduate Research Committee of the College of Nursing, Hawler Medical University. The approval was issued on September 9, 2024, under the reference code number 25251.

Data Availability Statement The data that support the findings of this study are available from the corresponding author upon reasonable request.

Patient consent statement Oral informed consent was obtained from all participants before they filled out the questionnaires.

Clinical trial registration This study did not constitute a clinical trial and therefore did not require registration.

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