

Assessment of Knowledge of Pregnant Women Regarding Benefits of Breastfeeding

Muhammad Zeeshan¹, Ayesha Rafiq², Arshad Rafique³, Muhammad Sohail Shahzad⁴, Irfan Younas⁵, Umer Farooq⁶

¹Post Graduate Resident (FCPS), Department of Pediatrics, Central Park Medical College & Central Park Teaching Hospital, Lahore, Pakistan,

²Senior Registrar, Neonatology fellow, Department of Pediatrics, Central Park Medical College & Central Park Teaching Hospital, Lahore, Pakistan, ³Associate Professor, Department of Pediatrics, Central Park Medical College & Central Park Teaching Hospital, Lahore, Pakistan,

⁴Assistant Professor, Department of Pediatrics, Central Park Medical College & Central Park Teaching Hospital, Lahore, Pakistan, ⁵Assistant Professor, Fellow Pediatrics Cardiology, Department of Pediatrics, Central Park Medical College & Central Park Teaching Hospital, Lahore, Pakistan,

⁶Senior Medical Officer, Department of Pediatrics, Central Park Medical College & Central Park Teaching Hospital, Lahore, Pakistan

Correspondence to: Muhammad Zeeshan, Email: Zeeshansuleman0312@gmail.com

ABSTRACT

Background: Breastfeeding is commonly regarded as a cost-effective, readily accessible, and comprehensive source of nourishment for all infants. The positive impacts of breastfeeding on both maternal and infant health are widely acknowledged. Nevertheless, there is data indicating a decline in the prevalence of breastfeeding in numerous developing nations. The objective of the research article is to evaluate the extent of mothers' knowledge and understanding of breastfeeding practices, identify gaps in information, and assess how this knowledge influences their breastfeeding decisions and behaviors, ultimately aiming to make interventions to enhance maternal and infant health outcomes. This study aims to assess the proportion of expectant mothers who understand the advantages associated with breastfeeding.

Patients and methods: A cross-sectional study was conducted at Central Park Teaching Hospital, a tertiary health care system in Lahore, spanning from the 1st August 2023 to 31st March 2024 in the Gynae OPD by residents of the Pediatric department. The sample size was calculated according to the number of patients who visited Gynae OPD in LG Corporations months. The study's exclusion criteria comprised of women with psychiatric or other related conditions, while married pregnant women with no co-morbidities were included. The Arabic Breastfeeding Knowledge Questionnaire (BFKQ-A) was to assess the participants' knowledge of breastfeeding. Data was analyzed using SPSS version 25. The language of the questionnaire was local language (Urdu) and explained in the local language Urdu for better understanding of participants. The score was assigned on the basis of a pre-formed questionnaire, the validated Arabic Breastfeeding Knowledge Questionnaire (BFKQ-A). The data was stratified based on age, educational background, employment status, monthly income, and place of residence to account for any influencing factors. A significance level of $p \leq 0.05$ was deemed statistically important.

Results: A total of 205 pregnant women were included. The mean age of mothers was 29.93 ± 5.873 years. The mean BFKQ-A score was 12.51 ± 2.96 . Among 205 pregnant women, 68 (33.2%) had excellent breastfeeding knowledge, 62 (30.2%) had good breastfeeding knowledge, 54 (26.3%) had fair breastfeeding knowledge and 21 (10.2%) had poor breastfeeding knowledge.

Conclusion: The results of this research revealed a poor understanding of breastfeeding. This underscores the necessity of formulating targeted strategies and regulations to enhance breastfeeding comprehension and establish a supportive atmosphere that assists women during their breastfeeding experience.

Keywords:

Breastfeeding, Pregnant Women, Adequate Knowledge, World Health Organization

INTRODUCTION

Breastfeeding plays a crucial role in ensuring the overall well-being and health of an individual, beginning right from the moment of birth and continuing throughout various stages of life. It is imperative to commence breastfeeding promptly

and to sustain it for the recommended period of time, as this practice has been shown to have numerous benefits for both the infant and the mother. The World Health Organization (WHO) emphasizes the importance of initiating breastfeeding within the first-hour post-delivery, highlighting the critical nature of this early bonding and nutritional support for the newborn.¹ This guideline underscores the significance of early breastfeeding in establishing a strong foundation for the infant's future health and development, making it a pivotal aspect of optimal healthcare practices for

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newborns. The recommendation of exclusive breastfeeding for the first 6 months of an infant's life, with continued supplementary feeding up to 18 months, is widely endorsed by health authorities.^{1,2} Adhering to these optimal breastfeeding guidelines offers numerous benefits to both infants and mothers. Extensive research has consistently demonstrated the significant positive effects of breastfeeding on the overall well-being of children, their mothers, and the larger community. The empirical evidence overwhelmingly supports the notion that promoting and practicing breastfeeding can lead to improved health outcomes at various levels, contributing to a healthier population overall.² The primary advantages of breastfeeding for mothers encompass a reduction in maternal postpartum hemorrhaging, a lowered susceptibility to specific forms of cancer such as ovarian and endometrial cancer, as well as a decreased likelihood of developing osteoporosis in the long term.³ Bottle feeding, as an alternative to breastfeeding, plays a significant role in the development of late neonatal sepsis, a condition characterized by a systemic inflammatory response to infection in newborns, which can lead to serious health complications if not promptly diagnosed and treated.⁴ This surge in mortality can primarily be linked to the widespread use of non-purified water in the preparation of formula milk, serving as a conduit for transferring waterborne pathogens to vulnerable infants. The consequences of this practice are the urgent need for comprehensive education and interventions aimed at promoting safe feeding practices and reducing the associated risks to infant health and well-being.⁵ UNICEF has released a set of guidelines outlining the '10 steps for optimal breastfeeding' that are recommended for implementation in all healthcare facilities offering Mother Child Healthcare (MCHC) services to ensure the well-being of both mothers and their newborn children.⁶ These guidelines serve as a crucial framework for healthcare providers to follow promote and support successful breastfeeding practices, ultimately contributing to the overall health and development of both the mother and the child.⁶ The primary objective of these guidelines is to offer informative support to mothers concerning maternal issues associated with breastfeeding. Despite extensive endeavors, the rate of breastfeeding is significantly low. Key factors contributing to this decline include the mother's employment status, level of education, number of previous pregnancies, attendance at prenatal appointments, and the support provided by healthcare providers.⁷ The low rate of breastfeeding among infants

in Pakistan is a cause for concern. A significant factor leading to this decline in breastfeeding rates is the insufficient awareness among mothers.^{8,9}

PATIENTS AND METHODS

This observational descriptive cross-sectional study was carried out at Central Park Teaching Hospital Lahore, from the 1st August 2023 to 31st March 2024, A sample size of 205 was calculated using WHO calculator for the study with an anticipated excellent knowledge rate of 25.8% 95% confidence level and 6% margin of error.¹⁰ informed consent was obtained during the interview process. Inclusion criteria encompassed married pregnant women, while exclusion criteria involved women with psychiatric disorders or other comorbidities. Detailed medical histories and demographic information were recorded using a predefined proforma for each participant. The validated Arabic Breastfeeding Knowledge Questionnaire (BFKQ-A) was employed to assess participants' knowledge about breastfeeding. The language of the questionnaire was Urdu, and residents of the Pediatrics Department at Central Park Teaching Hospital in Gynae OPD collected data. This questionnaire comprised 10 multiple-choice and 10 true-false questions, totaling 20 questions. Scores on the BFKQ-A ranged from 0 to 20, with higher scores indicating superior breastfeeding knowledge. Participants received a score of either 1 for a 'correct' answer or 0 for a 'wrong' answer on each question. The overall breastfeeding (BF) knowledge score was classified into four categories: less than 9 (indicating poor BF knowledge), 9 – 11 (reflecting fair knowledge), 12 – 13 (suggesting good knowledge), and higher than 14 (indicating excellent knowledge). Participants' total scores on the BFKQ-A were evaluated to determine if they possessed adequate knowledge, defined as scoring at or above the median value of the total BFKQ-A scale (correctly answering 10 questions). Those scoring below this threshold were deemed to have inadequate knowledge of breastfeeding. Subsequently, all data collected were inputted and analyzed using SPSS version 25. Descriptive statistics such as mean and standard deviation were computed for quantitative variables like maternal age and BFKQ-A score. Qualitative variables such as educational status, employment status, residence, monthly income, and knowledge category were analyzed in terms of frequency and percentages. Stratification of data was performed based on age, educational status, employment status, monthly income, and residence to

Table 1: Stratification of breastfeeding knowledge with respect to different variables

Characteristics	Breastfeeding knowledge				p-value
	Excellent	Good	Fair	Poor	
Maternal age					
18-30 years	36 (31.3%)	24 (20.9%)	42 (36.5%)	13 (11.3%)	0.001
31-40 years	32 (35.6%)	38 (42.2%)	12 (13.3%)	8 (8.9%)	
Monthly income					
≤50,000/ month	48 (33.3%)	41 (28.5%)	38 (26.4%)	17 (11.8%)	0.646
>50,000/ month	20 (32.8%)	21 (34.4%)	16 (26.2%)	4 (6.6%)	
Employment status					
Employed	28 (32.6%)	20 (23.3%)	30 (34.9%)	8 (9.3%)	0.084
Un-employed	40 (33.6%)	42 (35.3%)	24 (20.2%)	13 (10.9%)	
Residence					
Urban	36 (51.4%)	21 (30.0%)	9 (12.9%)	4 (5.7%)	0.001
Rural	32 (23.7%)	41 (30.4%)	45 (33.3%)	17 (12.6%)	

account for potential effect modifiers. Statistical significance was set at a p-value of ≤0.05.

RESULTS

In this study, a total of 205 pregnant women were enrolled. age of the mothers participating in the study was $29.93 \pm$ years. 115 (56.1%) participants were age range of 18 to 30 years, whereas 90 individuals were between 31 and 40 years. In terms of monthly income, 144 (70.2%), reported a monthly income of 50,000 or less, whereas 61 indicated an income exceeding PKR 50,000 per month. Regarding the distribution of educational backgrounds, 53 individuals (25.9%) were classified as illiterate, 25 individuals (12.2%) had completed primary or middle school education, 111 individuals (54.1%) had attained a matriculation level of education, and 16 individuals (7.8%) had completed intermediate studies or higher. The employment status distribution revealed that 86 (42.0%) were employed, while the remaining 119 individuals (58.0%) were categorized as unemployed. Moreover, with regards to the residence distribution, 70 individuals (34.1%) were identified as urban residents, whereas 135 individuals (65.9%) rural residents. The mean score for breastfeeding knowledge based on the BFKQ-A assessment tool was calculated to be 12.51 ± 2.96 . Among the 205 pregnant women, 68 (33.2%) had excellent knowledge about breastfeeding, 62 (30.2%) exhibited good knowledge, 54 (26.3%) possessed fair knowledge, and 21 (10.2%) displayed poor knowledge on the subject. The analysis further revealed that most patients, specifically 184 individuals (89.8%), had adequate breastfeeding knowledge, while a smaller proportion, 21 individuals (10.2%), were deemed to have insufficient knowledge in this area. Detailed stratification of breastfeeding knowledge concerning various demographic variables has been presented in

Table 1 for comprehensive understanding and reference purposes.

DISCUSSION

Breastfeeding plays a crucial role in safeguarding the overall health and well-being of the newborn infant, offering a myriad of benefits that contribute to their optimal growth and development. The World Health Organization (WHO) has set forth comprehensive guidelines aimed at promoting and supporting the practice of breastfeeding to ensure that infants receive the best possible start in life. To raise awareness and highlight the numerous advantages associated with breastfeeding, various organizations actively participate in the celebration of World Breastfeeding Week, a global event observed during the initial week of August each year. This initiative, conducted under the auspices of the World Health Organization and the United Nations, serves as a platform to underscore the significance of breastfeeding and to encourage its widespread adoption among new parents worldwide.^{8,11} Despite the extensive initiatives implemented to promote breastfeeding, a considerably small proportion of children are being breastfed optimally, with the majority relying on bottle feeding as their primary source of nourishment. The prevalent practice of bottle feeding can be primarily linked to the diminishing level of awareness among mothers regarding the numerous advantages associated with breastfeeding. This decline in maternal knowledge regarding the benefits of breastfeeding has significantly contributed to the prevailing trend of bottle feeding among infants.¹² A more profound understanding of women can result in more positive attitudes and enhanced behaviors within this demographic. Consequently, there is a decrease in malpractice among mothers, thereby contributing to the overall well-being of their offspring. The

inadequate health practices of mothers can have detrimental effects on the health of children, causing a decline in their immunity levels and making them more susceptible to gastrointestinal and respiratory tract infections.¹³ Hence, it is crucial to evaluate the level of expertise possessed by the mothers in this field. This study assessed the knowledge of mothers who were visiting the Outpatient Department of Central Park Teaching Hospital. The initiation of breastfeeding immediately after birth is highly recommended as the first source of nourishment for the newborn. However, it has been observed that within the Pakistani cultural context, there exists a misconception regarding the feeding practices for infants, where pre-lacteal feeds such as dates, honey, sweet water, etc., are given to the newborns. This misconception can have detrimental effects on the health and well-being of both the mother and the infant. Therefore, it is imperative to address and rectify such misconceptions through targeted educational interventions and awareness campaigns.

Evaluate the level of understanding on this matter, a total of 205 participants were included in investigation. The findings from study indicate that around 33.2% of the surveyed population demonstrated a good level of awareness regarding the importance of breast milk as the primary choice for nourishment following childbirth. These outcomes show a striking resemblance to the findings from a study carried out at Mayo Hospital in Lahore, where it was discovered that 67% of first-time mothers opted to provide their newborns with pre-lacteal feeds, commonly consisting of substances such as honey, 'ghutti', 'araqi', gripe water, sugar water, and plain water.¹⁴

In contrast to this finding, demonstrated a lower prevalence of pre-lacteal feeding at 20.6%, a notably reduced figure compared to the rates observed in . Interestingly, the primary substance utilized in their study was identified as plain water, diverging from our results. Factors positively associated with the practice of pre-lacteal feeding included residing in a joint family setting, absence of guidance on breastfeeding, and maternal avoidance of colostrum, as highlighted by the authors.¹⁵

Initiating breastfeeding promptly after birth plays a crucial role in promoting the health and longevity of the child. Extensive research findings consistently highlight the significance of timely commencement of breastfeeding in enhancing neonatal health outcomes. Studies have indicated that proper initiation of breastfeeding can lead to a substantial decrease of up to 22% in neonatal mortality rates, underscoring the

critical importance of this early feeding practice in ensuring the well-being of infants.¹⁶

Overall, the level of knowledge pertaining to breastfeeding among the female participants was deemed satisfactory, as indicated by a mean score of 12.51 ± 2.96 . It was observed that there existed a positive relationship between the total knowledge score and variables such as the mother's age, level of education, and place of residence. In a study conducted by Hamza L. et al, it was found that a majority of mothers exhibited a neutral understanding of breastfeeding. Furthermore, the average score obtained for the knowledge component of the questionnaire utilized in the research was 10.83 ± 2.77 .

These findings underscore the importance of enhancing awareness and education on breastfeeding practices among women, particularly focusing on factors such as maternal age, educational background, and living environment. Future studies could delve deeper into exploring the specific areas where mothers may require additional support and information to further improve their knowledge and attitudes towards breastfeeding.

Another study with a similar focus further illustrated that mothers exhibit a high level of knowledge regarding breast feeding, with a mean score of 12.05 and a standard deviation of 1.74.¹⁸ This finding aligns with the results of the study conducted by Mohsin SS et al, which also observed a high level of knowledge among participants in relation to breast feeding practices. The consistent demonstration of robust knowledge in various studies underscores the importance of empowering mothers with information and education on breastfeeding to promote better maternal and child health outcomes.¹⁹

The study's limitation lay in its failure to evaluate the attitudes and behaviors of women in relation to breastfeeding, a crucial aspect that was overlooked in the research. It is imperative for future investigations to address this deficiency by dedicating attention to understanding the perspectives and actions of women towards breastfeeding. By focusing on this area, future studies can offer a more comprehensive and insightful analysis of the factors influencing women's decision-making process regarding breastfeeding practices.

CONCLUSION

This study provides valuable insights into the variation of knowledge of breastfeeding among pregnant women, on maternal age, income, employment status, and residence. Our analysis reveals several findings that can

helpful targeted educational and maternal health interventions. Such findings underscore the urgency for the implementation of targeted interventions and the formulation of policies directed toward enhancing breastfeeding awareness. Furthermore, it accentuates the necessity for establishing a supportive environment that facilitates women in every stage of their breastfeeding experience, thus ensuring they receive the necessary assistance and resources.

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