



Afghan International Journal of Science (AIJS)

Publisher: Afghan International Islamic University

E-ISSN: 3134-5859

Website: <https://aijs.aiiu.edu.af>

Breastfeeding Knowledge, Attitude, and Practice among Female Health Workers in 80 Health Facilities in Nangarhar Province in 2025

Abdul Jalal Ibrahimi¹, Mohammad Reza Joya², Obaidullah Fahim³

¹ *Kabul University of Medical Science, Public Health, Kabul, Afghanistan*

^{2 & 3} *Kabul University of Medical Science, Nutrition, Public Health, Kabul, Afghanistan*

Abstract

The study was a cross-sectional study aimed at measuring the knowledge, attitudes, and practices (KAP) of 263 female healthcare workers in Nangarhar Province, Afghanistan. Findings revealed that the general knowledge (84.7%) and positive attitudes were satisfactory. There was, however, a large gap (in terms of knowledge-to-practice), especially in on-demand feeding (61.6%). The structural barriers were the main ones: 32.7 percent said they were too busy, and 22.1 percent said there were no appropriate facilities available at work. Health workers are good to know, but systemic workplace constraints limit their practice. The interventions needed to fill this gap should include addressing environmental obstacles through compulsory lactation rooms and supportive workplace policies, empowering healthcare workers to serve as effective breastfeeding role models.

Keywords: Afghanistan, Breastfeeding, Female health workers, Knowledge-practice gap, Workplace barriers,

Article History

Published: Mar 31, 2026

Accepted: Mar 30, 2026

Revised: Mar 29, 2026

Received: Feb 04, 2026

Cite as: Ibrahimi, A. J., Joya, M. R., & Fahim, O. (2026). Breastfeeding Knowledge, Attitude, and Practice among Female Health Workers in 80 Health Facilities in Nangarhar Province in 2025. *Afghan International Journal of Science* 2(1), 115-132. DOI: <https://doi.org/10.66546/am4d4337>

Introduction

Breastfeeding is an activity among the most basic and efficient in securing children's health and survival (Artantas, 2016). It is not a mere individual decision but a very important community health intervention. Some worldwide organizations such as the World Health Organization (WHO), and the United Nations Children Fund (UNICEF) strongly advocate that babies should be breastfed within the first hour of birth and fed on breast milk only (exclusive breastfeeding) until the age of six months after which they should be breastfed together with nutritious supplemental food until the age of two years and later (World Health Organization [WHO], 2019). This is because breast milk is the ideal food for a baby. It contains all the required nutrients in the appropriate proportions, immunizes the kid against prevalent childhood diseases such as diarrhea and pneumonia, and reduces the risk of developing chronic diseases in adulthood. For mothers, breastfeeding aids postpartum recovery, helps prevent some cancers, and may assist with spacing pregnancies (Singh, 2010).

*Correspondence: jalalibrahimi655@gmail.com

Link to this Article: <https://aijs.aiiu.edu.af/index.php/aijs/article/view/40>

Regardless of these commonly known advantages, breastfeeding levels worldwide, particularly exclusive breastfeeding, remain below the expected standards. Cultural practices, the absence of family and community support, misinformation, and the commercial influences exerted by formula milk companies can constitute substantial hindrances in most Low- and Middle-Income Countries (LMICs) (Petit, 2010). This is not an exception in Afghanistan, a country with complex humanitarian and developmental challenges. The health indicators of children and mothers in Afghanistan were the most worrying in the world. The ongoing lack of peace, poverty, limited access to proper healthcare, low female literacy, and other factors have complicated efforts to secure optimal infant feeding behaviors (MoPH, 2013; Afghanistan DHS, 2017).

Female health workers are made particularly essential in this tricky situation. They are the pioneers of the fight for the health of mothers and children. Their role in educating, guiding, and supporting mothers in their respective communities falls to midwives, nurses, nutrition consultants, and vaccinators (Bernardo & Horta, 2013). They provide antenatal care, help in childbirth, and post-childbirth counselling. Their experience and expertise in breastfeeding directly determine the decisions made by thousands of families. Thus, it is believed that such health professionals themselves have excellent levels of accurate information, positive attitudes, and best-practice breastfeeding with their own infants. They are supposed to act as role models in their societies (Rahimi & Mohamadi, 2020).

Nevertheless, to be a health worker and a first-time mother in Afghanistan is a set of challenges in itself. The women are usually juggling their professional lives in underdeveloped health institutions and their household chores (WHO, 2019). They can be subjected to workplace practices that are not conducive to breastfeeding mothers, such as not having a proper place to express milk or maternity leave. They may be faced with the same traditional beliefs and rumors regarding breastfeeding in their own relatives and communities, as they ridicule others. This creates a possible conflict between what they perceive as professional and as a mother. This disparity between the knowledge and the related practice is referred to as the knowledge-practice gap.

Other studies in other countries have revealed that, despite being health workers, they may have loopholes in their breastfeeding education and may not always practice what they are taught to do for their children. Some of the obstacles identified in African countries (Nigeria, India, and Turkey) include high workloads, institutional support, and personal beliefs (Onyiriuka et al., 2012; Kumar et al., 2019; Artantas, 2016). There are a few studies that examined breastfeeding among general mothers in Afghanistan. For example, one study in Kandahar found that, despite high antenatal care rates, exclusive breastfeeding was low (Rahimi & Mohamadi, 2020). Concerning the female health workers, however, there is very little research based on them. We also do not know much about their preparedness, not only to educate others but also to effectively breastfeed their own newborns amid the demands of their professional and personal lives.

This research paper will thus seek to address this critical knowledge gap. It focuses on female health workers working in both the Basic Package of Health Services (BPHS) and the Essential

Package of Hospital Services (EPHS) within Nangarhar Province, Afghanistan. These are the primary and secondary healthcare centers that serve the largest population. The research has a critical question: what is the level of Knowledge, Attitude, and Practice (KAP) regarding breastfeeding among these female health workers and the mothers of young children?

The study aims to fulfill several key goals by researching this:

- To determine the level of correct knowledge concerning the major breastfeeding recommendations among female health workers.
- To investigate their personal attitude and their perceived barriers regarding breastfeeding.
- To record their real breastfeeding routine with their new youngest infant.
- To identify the key sources from which mothers obtain information about breastfeeding.
- To offer evidence-based recommendations on how to grow their practice and increase their ability to make other mothers better.

This study is essential for several reasons. One, when such health workers are well educated and practiced, they will be a formidable force in their societies as advocates of breastfeeding. Second, the identification of gaps is a strong indication of the fundamental vulnerability of the healthcare system to be at the frontline, as, hence, the workers themselves should be provided with specific training and support as soon as possible. Lastly, by learning about their individual impediments, such as workplace barriers or personal fears, policymakers and health managers can create a more positive and supportive environment for these vital workers (Bernardo & Horta, 2013; Victora et al., 2016; WHO, 2020). Their experience will be enhanced, and the impact will trickle down to increased breastfeeding rates and improved healthcare outcomes for all children and mothers in Nangarhar Province and across the rest of Afghanistan.

Methods and Materials

This research paper employed a descriptive design and a cross-sectional design to determine the knowledge, attitudes, and practices (KAP) of female healthcare workers in Nangarhar Province, Afghanistan, in the first quarter of 2025. This design was selected because of the need to determine the extent of KAP indicators and other factors in this particular group at a given point in time, providing a picture of the present situation. The study design was developed so that not only was science rigorous and ethical, but the project was also feasible at the local level.

The study was undertaken in 80 public health facilities in the Nangarhar Province that would apply the national Basic Package of Health Services (BPHS) and Essential Package of Hospital Services (EPHS). These facilities ranged from primary care units, including Comprehensive Health Centers (CHCs), Basic Health Centers (BHCs), and Sub-Health Centers (SHCs), to secondary-care District Hospitals (DHs) and the Regional Hospital (RH). This choice was made to include all levels of population health within the province.

The population under study comprised all female healthcare workers working in the chosen facilities and who had at least one child under the age of five. This criterion ensured that the participants were currently and recently engaged in infant feeding. The midwives, nurses, doctors, nutrition consultants, vaccinators, psychosocial counselors, and support staff were included as professional cadres. 271 qualified employees were found across all the plants. The entire enumeration technique was used to invite everyone eligible to take part. A high response rate of 97 out of 271 and a non-response rate of 3 were achieved through the distribution of 271 questionnaires, of which 263 questionnaires were completed and returned to the researcher.

The main data collection program consisted of a structured questionnaire in Dari and Pashto, administered by an interviewer. It was developed based on a literature review and aligned with WHO/UNICEF infant and young child feeding indicators. The questionnaire was pretested among 15 non-participating health workers and revised accordingly. It comprised four sections. The socio-demographic and occupational data were obtained in section one and included age, education, occupation, work experience, employment status of the spouse, residential status, and the particulars of the youngest child (age, sex, and birth method). In section two, knowledge was evaluated based on ten main areas, which included the significance of early initiation, the benefits of colostrum and exclusive breastfeeding (EBF), breastfeeding frequency, breastfeeding during pregnancy, suckling and production of milk, and the timing of when to start complementary feeding and the length of time to keep breastfeeding. The questions were in multiple-choice or yes/no.

Attitudes and perceived barriers were discussed in Section Three. A given list identified the obstacles, and the participants picked these factors: workload/time constraint, inappropriate facilities in the workplace, mistrust of health workers or the quality of breast milk, cultural/religious, health (mother becomes weak), economic issues, and illness in either the mother or in the child. The self-reported practices were recorded in section four: the period of EBF, when colostrum is fed (at once or discarded), when complementary food is introduced, and when illness interferes. The last question gave the main sources of the information: mass/social media, training in a health institution, friends/relatives, husband, textbooks/guidelines, etc.

Data collection was conducted by trained enumerators who were not part of the participating facilities, to the extent possible, to reduce bias. They were trained on the tool, interviewing methods, and research ethics. Data collection was conducted through official letters to Kabul University of Medical Sciences and the implementing partner, JACK. Enumerators screened themselves, the facility, and paid a private visit to the facility, obtaining written informed consent. The procedure lasted an average of 30 minutes per individual.

The independent variables (socio-demographic/occupational characteristics) were examined, as were the dependent variables (KAP outcomes). The knowledge score was computed as the proportion of correct answers for each participant, and the general mean Knowledge of breastfeeding was assessed using a 10-item questionnaire covering key domains, including the benefits of breastfeeding, the recommended duration of exclusive breastfeeding, WHO guidelines, and clinical counseling practices. Each item was given equal weight, with one point awarded for each correct response and zero for incorrect or "do not know" answers.

An individual's total knowledge score was calculated by summing correct responses, resulting in a score ranging from 0 to 10. This raw score was then converted into a percentage. The overall knowledge level of 84.7% represents the mean percentage score across all participants.

For interpretation, knowledge levels were categorized as follows:

- **Low knowledge:** 0–4 correct answers (0–40%)
- **Moderate knowledge:** 5–7 correct answers (50–70%)
- **High knowledge:** 8–10 correct answers (80–100%)

These cut-offs were defined a priori based on commonly used thresholds in similar knowledge, attitude, and practice (KAP) studies. Practice indicators were discussed as specific behaviors reported. Attitudes were associated with the frequency of cited barriers.

Data handling involved passing unique IDs to maintain anonymity. The questionnaires were entered into a Microsoft Excel database and cross-verified to ensure there were no errors. EpiInfo version 7.2 and SPSS version 26 were used to analyze. The data were summarized using descriptive statistics: means and standard deviations for continuous variables (e.g., age), and frequencies and percentages for categorical variables (e.g., profession, knowledge responses).

The teacher's overall consent to the research was obtained through the Institute Review Board of Kabul University of Medical Sciences. Additional clearance was received, including provincial health departments and JACK. The research was conducted in accordance with fundamental ethical principles. Engagement was self-willed, and informed consent was signed prior to the engagement. The informed consent provided described the purpose of the study, the research procedures, the withdrawal rights, and the guarantee of confidentiality. There were no personal identifiers taken. Information was stored securely, only the research team accessed it, and no information was reported in a form that could be used to identify individuals. The risk involved in the study was very low, and the possible advantage was that the research would provide evidence for better care for healthcare workers and, eventually, for the health of both mothers and children in the area.

Findings

This comprehensive cross-sectional study aimed to assess the Knowledge, Attitude, and Practice of breastfeeding among 263 female health care workers with infants, working in 80 Basic Package of Health Services (BPHS) and Essential Package of Hospital Services (EPHS) facilities in Nangarhar Province, Afghanistan, in 2025. The following sections present the detailed findings of the study, including both quantitative and textual analyses.

Response Rate

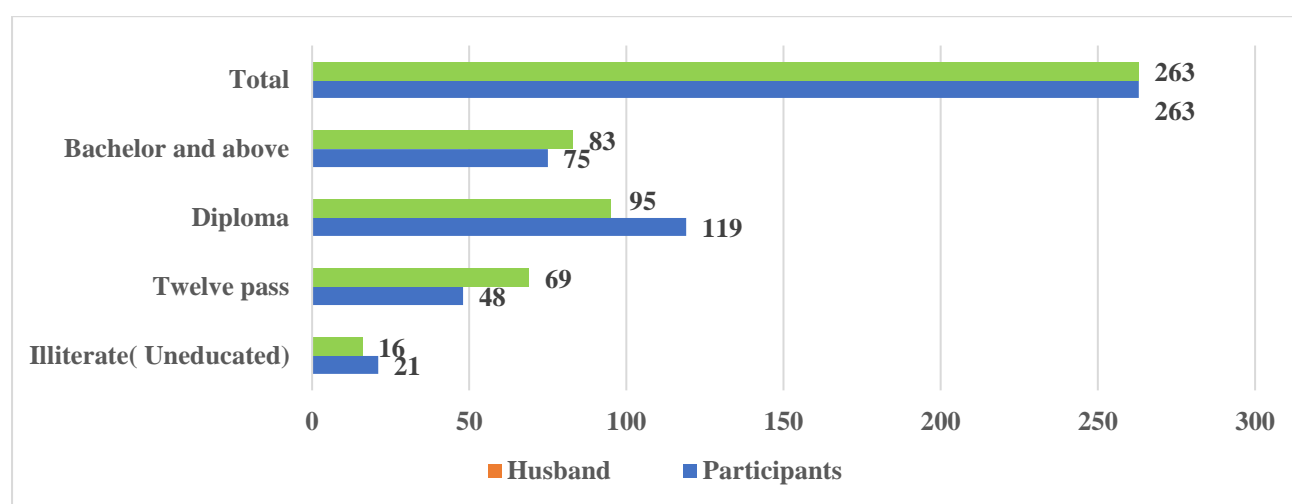
The study had an exceptionally high participation rate. In total, 271 questionnaires were administered to qualified female HCWs in the selected facilities. Of these, 263 questionnaires were completed and returned. This implies that the response rate was remarkably high at 97 percent. Only 8 participants (out of a total of 100) did not consent to take the questionnaire, implying that only 3% did not take it.

Table 1: Participant Response Rate

Consent	Frequency	Percent	Valid Percent	Cumulative Percent
Accepted	263	97	97	97
Not Accepted	8	3	3	100
Total	271	100	100	—

Socio-demographic Characteristics

Characteristic	Value
Age (years)	31.2 ± 3.3 (18–50)
Children per family	3.9 ± 0.9 (1–7)
Age of youngest child (years)	2.52 ± 1.48
Sex of youngest child	Male: 55.9%, Female: 44.1%
Mother's education	Illiterate: 8%; 12 years: 18.3%; Diploma: 45.2%; Bachelor's or higher: 28.5%
Husband's education	Illiterate: 6%; 12 years: 26%; Diploma: 36%; Bachelor's or higher: 32%
Place of practice	Primary care: 71.9%; Secondary care: 28.1%
Professional category	Midwife: 27.8%; Nurse: 21.7%; Nutrition consultant: 14.1%; Others: 36.4%
Years of experience	3.2 ± 0.6
Husband employed	Yes: 84.8%; No: 15.2%
Living arrangement	With husband & children: 69.2%; With extended family: 30.8%
Housemaid/Babysitter present	Yes: 44.9%; No: 55.1%
Type of delivery	Institutional: 93.9%; Home: 6.1%
BMI category	Underweight: 8%; Normal: 87.5%; Overweight/Obese: 4.6%

**Figure (1):** Female health workers and their husbands' Education Level

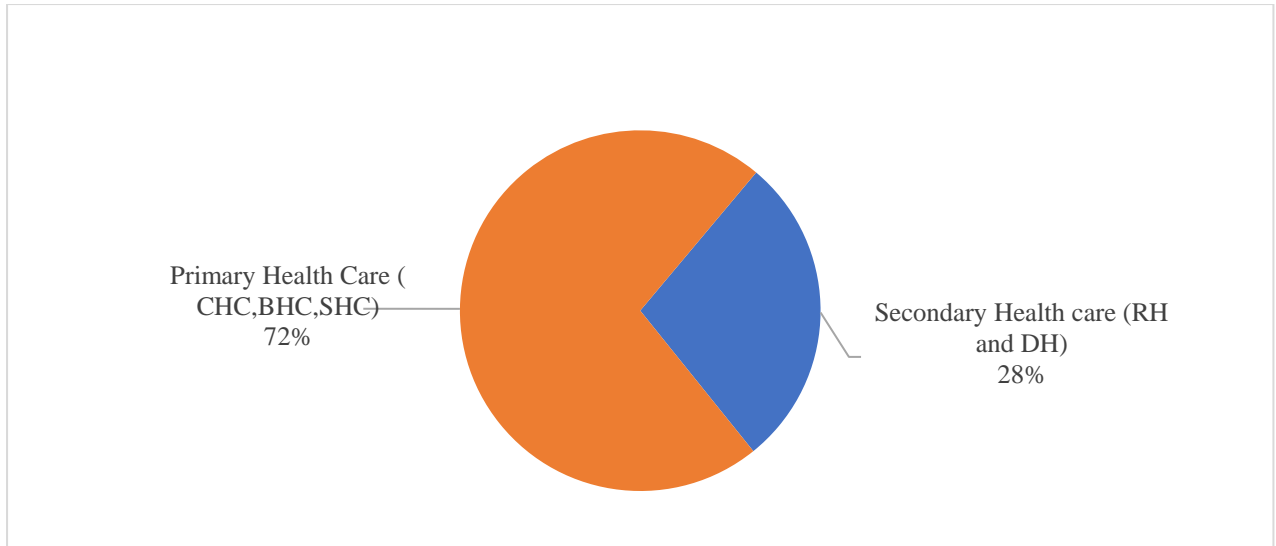


Figure (2): Place of the mothers' practice/Duty Station

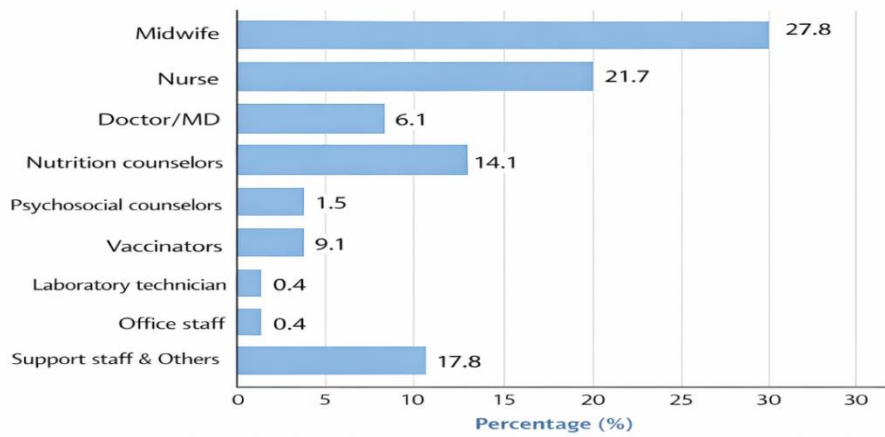


Figure (3): Percentage of Position/Professional in this HF/hospital

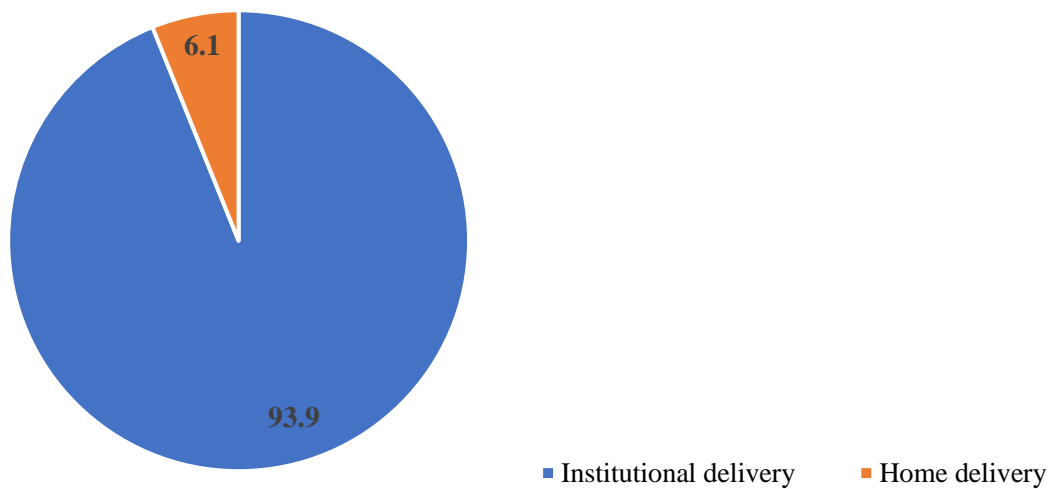


Figure (4): Type of Delivery

Knowledge About Breastfeeding

The level of understanding among female health care workers regarding breastfeeding in 10 key areas was examined, and the results showed that overall knowledge was 84.7%. This indicates an acceptable level, or "fair," level of understanding. Using the FAO standard, the total knowledge level is above the critical level; if the level is 70% or less, there is an urgent need for nutritional intervention. However, some areas need improvement, and education can be provided accordingly.

Table 3: Knowledge About Breastfeeding

Knowledge Domain	Correct Responses	Percent
Importance of breastfeeding	234	89.0
Frequency of feeding in the first 6 months	<8/day: 31; >8/day: 56; On-demand: 162; Don't know: 14	11.8; 21.3; 61.6; 5.3
Advantages of colostrum and exclusive breastfeeding	241	91.6
Colostrum feeding practice	Feed immediately: 247; Discard: 16	93.9; 6.1
Exclusive breastfeeding protects mothers from the next pregnancy	219	83.3
A pregnant woman can breastfeed	207	78.7
Frequent suckling stimulates milk production	246	93.5
Correct age to start complementary foods	222	84.4
The age at which a child receives only breast milk	213	81.0

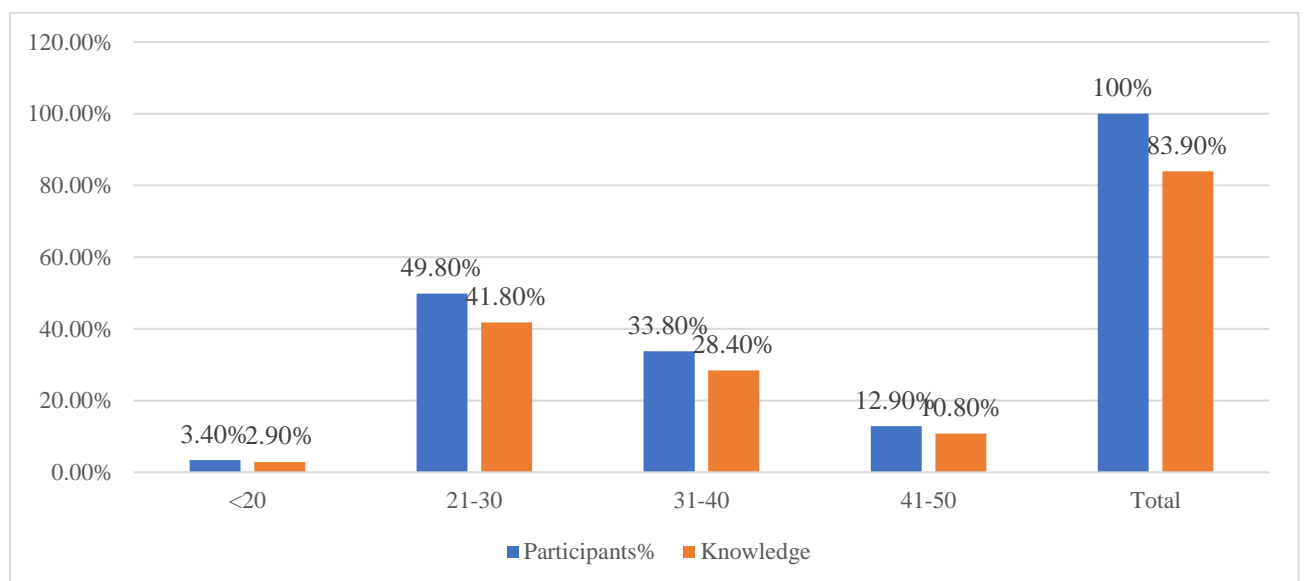


Figure (5): Knowledge of Mothers about Breastfeeding related to Age Categories

Attitudes Toward Breastfeeding

Table 4: Attitudes Toward Breastfeeding

Attitudinal Factor	Number	Percent (%)
Lack of trust in midwives/health workers	14	5.3
Lack of trust in breast milk quality	23	8.7
Religious beliefs	2	0.8
Fear of side effects	3	1.1
The belief that breastfeeding weakens the mother	9	3.4
Child rejects breast milk	16	6.1
Other reasons (attitudinal)	10	3.8

Table 5: Barriers to breastfeeding

Barrier	Number	Percent (%)
Being busy / lack of time	86	32.7
Lack of a suitable place in the workplace	58	22.1
Lack of maternal care services	13	4.9
Economic problems	12	4.6
Maternal illness	6	2.3
Child illness	11	4.2

Breastfeeding Practices

Breastfeeding practices showed partial adherence to recommendations. The median duration of exclusive breastfeeding (EBF) was 6 months (mean: 8.7 months), indicating that while many mothers followed guidelines, some continued longer. Colostrum feeding was widely practiced (93.9%). Most mothers (84.4%) initiated complementary feeding at 6 months, although some started earlier (8.4%) or later (7.2%). Breastfeeding interruptions due to maternal and child illness were reported by 2.3% and 4.2% of mothers, respectively.

Table 6: Breastfeeding Practices Among Participants

Practice Item	Reported Practice (%)	Interpretation
Early initiation within 1 hour	93.9	Strong adherence; consistent with knowledge
Colostrum provision	91.6	Reflects translation of knowledge into practice
Exclusive breastfeeding for 6 months	81.0	Indicates a partial gap compared to knowledge levels
Complementary feeding at 6 months	84.4	Good alignment with recommended practices
Feeding based on infant demand	61.6	Below the FAO-recommended benchmark of nearly 100%

The proportion of health workers demonstrating both knowledge and practice of on-demand (responsive) feeding was 61.6%, markedly below the FAO-recommended benchmark of nearly 100%. This highlights a notable shortfall between current practice and international guidelines,

underscoring the need for targeted interventions to strengthen awareness and consistent implementation of responsive feeding.

Sources of Breastfeeding Information

The source of information is crucial in understanding how best to educate them, as revealed by the study, which indicates that the most common source of information among HCWs is mass and social media, such as radio, television, Facebook, and WhatsApp, at 41.1%. This indicates the power of technology in spreading information.

Table 7: Sources of Breastfeeding Information

Source	n	%
Mass / social media	108	41.1
Health institutions/training	62	23.6
Friends/relatives	46	17.5
Husband	28	10.6
Textbooks/guidelines	14	5.3
Other sources	5	1.9

The second most common source is health institutions, at 23.6%, which indicates the importance of the workplace and further training in providing knowledge. Friends and relatives follow at 17.5%, which indicates the importance of social networks. Husbands contribute 10.6%, indicating the role of spouses in providing information, while textbooks and guidelines contribute only 5.3%, indicating their underutilization as a source of information.

Summary of Knowledge, Attitude, and Practice (KAP) by Age

A review of knowledge, attitudes, and practices (KAP) by age groups reveals that knowledge levels are relatively stable. The level of knowledge is in the mid-80s, ranging from 83.7% to 85.3%, regardless of age group (under 20, 21-30, 31-40, or 41-50 years). Thus, the baseline knowledge of these health professionals appears to be consistent across age groups.

However, attitudes and practices differ, depending on what is happening in people's lives, their level of experience, and perhaps their level or status. Some observations are:

- The youngest age group (<20) perceives very tight time constraints about 30% of the time.
- The 21-30 age group, probably balancing work and family responsibilities, perceives more work-related barriers at 35%.
- The 31-40 age group reveals a significant lack of confidence in midwives at 28%.
- The oldest age group (41-50) perceives cultural or religious concerns at 25%.

In terms of practice, there are also some differences. Exclusive breastfeeding (EBF) initiation rates are highest in the youngest age group (83%), while colostrum feeding rates are highest in the 31-40 age group (85%). This cross-tabulation clearly shows that knowledge is a strong foundation, but how it is implemented is influenced by age-related attitudes and circumstances, resulting in the differences observed in practices.

Table 8: KAP Summary by Age Category

Age (years)	Group Knowledge (%)	Key Attitude Observations	Key Practice Observations
<20	85.3	30% reported being busy / time constraints	83% initiated exclusive breastfeeding
21–30	83.9	35% reported workplace barriers	82% maintained exclusive breastfeeding up to 6 months
31–40	84.0	28% lacked trust in midwives	85% provided colostrum immediately
41–50	83.7	25% reported cultural/religious concerns	80% initiated complementary feeding at 6 months
Total	83.9	Mixed attitudinal and environmental barriers	Knowledge–practice gaps are evident

Obstacles and Rumors about Breastfeeding

The study examined the specific barriers and hearsay that prevent mothers from initiating breastfeeding on time and from continuing exclusive breastfeeding for 6 months, as well as for up to 2 years.

Table 9: Obstacles and Rumors Affecting Breastfeeding Up to Two Years of Age

Variable	N	Percentage
Religious beliefs	2	0.8
Lack of a suitable place to breastfeed at the workplace	58	22.1
Being busy / lack of time	86	32.7
Lack of maternal care services	13	4.9
Lack of trust in midwives/health workers	14	5.3
Lack of trust in the quality and healthiness of breast milk	23	8.7
Fear of the side effects of breast milk	3	1.1
The belief that breastfeeding weakens the mother	9	3.4
Economic problems	12	4.6
Maternal illness	6	2.3
Child illness	11	4.2
Child rejects breast milk	16	6.1
Other reasons	10	3.8

The figures indicate attitudes as well as the actual challenges. At the top of the list once more were being busy or having no time (32.7%), followed by not having a suitable place to breastfeed at work (22.1%). Other challenges included doubts about breast milk quality (8.7%), lack of confidence in midwives' and health workers' advice (5.3%), and financial problems (4.6%). The results indicate structural and psychosocial barriers faced by healthcare worker mothers, which may limit their potential to serve as unimpeded role models and counselors for other mothers.

Discussion

The paper evaluated the knowledge, attitudes, and practices (KAP) of 263 female healthcare workers in Nangarhar Province, Afghanistan, regarding breastfeeding. The results shed light on a complex interplay between professional knowledge and personal practice among a very specific group of people: competent health professionals who are mothers, simultaneously trying to survive in resource-limited, post-conflict conditions. It confirms that the results indicate that although the main foundational knowledge levels and attitudes are generally positive and consistent with global standards, there are systemic and contextual barriers, mostly rooted in the workplace, that hinder the full conversion of the knowledge into optimal practice, thus forming a serious knowledge-practice gap.

The participants' breastfeeding knowledge was fairly satisfactory (84.7 percent), which is no worse than that reported in research on health professionals in other areas. As an example, the knowledge scores of the key indicators, such as early initiation (93.9%) and colostrum benefits (91.6%), are higher than those reported in previous cases of primary healthcare physicians in Iraq more than 10 years ago, in which there were significant gaps in initiation and duration advice (Azeez et al., 2008). Similarly, awareness of the duration of exclusive breastfeeding (EBF) (81.0%) appears to be stronger than previously reported among nurses participating in other research, including in Pakistan (Bhatt et al., 2000). This indicates a strong secular trend and the integration of professional training within the BPHS/EPHS system in Afghanistan. Nevertheless, persistent deficiencies in certain spheres, including the information that breastfeeding can be safely practiced even in cases of maternal disease (78.7%) and, most importantly, the rule of on-demand feeding (61.6%), highlight areas of weakness. These particular gaps align with other environments where health workers' knowledge is protocol-based, but not in physiological counseling and special circumstances management, as suggested by the literature on medical students' preparedness (Abdulrahman et al., 2019). This highlights the fact that education, even at the level of trained professionals, should go beyond mere facts and also address the practical side, which has subtler nuances and shades.

The perception was predominantly favorable, and there was strong consensus regarding the role of breastfeeding in promoting children's health (85.9%), emotional attachment (83.7%), and EBF adequacy (87.5%). This professional acceptance is vital, as the attitudes of health workers directly influence community norms and the effectiveness of counseling. The good attitude in this survey is consistent with more recent research among health professionals in Turkey and Bangladesh, which also reports good attitudes, especially among clinically exposed respondents (Hossain et al., 2016; Hafeez and Batool, 2022). Nevertheless, a critical attitudinal deficiency was found in respect of breastfeeding during maternal sickness (68.1% concurrence), which is in agreement with the knowledge gap on the same subject. This similar lack of knowledge and attitude towards a certain clinical situation creates a major focus of intervention. It implies that misconceptions in this regard are deeply ingrained and may cause health workers to give mothers erroneous advice, thereby promoting unwanted weaning.

The practice analysis reveals the most crucial discovery: a sharp knowledge-practice gap. Whereas self-reported adherence was high regarding discrete and postpartum events such as early initiation (93.9% and colostrum feeding (91.6%), the reported practice in the critical

ongoing behaviors is low. Only 61.6% of respondents were practicing on-demand feeding, and 81.0% had practiced EBF for 6 months, indicating a gap between theory and practice. This difference is not isolated to Afghanistan; it has long been established in low- and middle-income countries. Indicatively, in Ethiopia, the community practice of EBF remains suboptimal despite high awareness, due to numerous factors (Debesay et al., 2022). The primary role of the given work is to define the quantifiable, overwhelming obstacles faced by this group of employees.

In contrast to the community-level research papers, which highlight household or cultural inhibitors, the same barriers reported here included workplace barriers: being too busy (32.7%) and a lack of an appropriate workspace (22.1%). This observation is strongly supported by the world literature, including that published in the *International Breastfeeding Journal* (2018), which defines workplace support as one of the key factors influencing breastfeeding duration. The lack of lactation rooms, rigid hours, and workload are direct forms of structural impediments in the Afghan context of female health workers who are crucial in the functionality of the system. The barriers not only affect their personal infant feeding preferences but also likely limit their experiential authority and the compassion they have when counselling other working mothers.

To sum up, this research demonstrates that female healthcare workers in Nangarhar are a pole and lineally empowered and positively predisposed group, with the potential to become ideal role models and qualified counselors, a potential widely damaged by the structure of their workplace. Their case represents a larger international issue: health systems frequently do not address the fundamental health needs of their own workforces. To solve this, it is necessary to go beyond standard training and introduce multifaceted, structural interventions. The first line of action for priorities must focus on: (1) passing and implementing workplace policies that are HRM friendly and enhance the culture of the institution such as obligating lactation breaks and appropriated, sterilized lactation areas in every health facility; (2) improving on continuous professional development to convert the residual myths especially those relating breastfeeding in sickness into proactive, practical administrative capabilities; and (3) institutional culture through peer mentoring and managerial advocacy. The Afghan health system can invest in such systemic supports to enable its female human resources to overcome their personal knowledge-practice gap, thereby enhancing their credibility and effectiveness in promoting breastfeeding, which is a pillar of child survival and development across all its communities.

Conclusion

This paper explored the breastfeeding practices, attitudes, and knowledge of female healthcare workers in Nangarhar Province, Afghanistan. The results provide a clear evaluation of the circumstances in this particular and critical group. The respondents demonstrated their professional training, as evidenced by a strong background in the elementary ideas of breastfeeding, and they expressed positive attitudes toward the suggested practices. The research, however, has found a major gap between this knowledge and the practices they report as the central challenge.

This gap can mainly be attributed to the fact that they are not the ones lacking information; rather, there are real, tangible obstacles in their professional realm. The most frequently mentioned barriers were workplace factors, such as excessive workload and a lack of appropriate equipment for breastfeeding or pumping. Such systemic problems make it difficult to implement the guidelines that healthcare workers are trained to use to promote them.

As such, the results lead to the unanimous conclusion that interventions are necessary to address these environmental and structural limitations. To enhance the efficacy of personal practice and professional counseling, it is necessary to go beyond educational reinforcement and introduce supportive systems in practice. The major activities should involve establishing binding work practices to ensure lactation breaks and the provision of special, sealed lactation rooms in every health institution. At the same time, lifelong learning must aim to apply the knowledge obtained to practice skills for handling the most common breastfeeding issues. Through such specific, structural reforms, the healthcare system can help its female employees covertly seize control of their knowledge-practice divide. This would be necessary to improve their well-being and increase their effectiveness as credible advocates of breastfeeding in their various communities, thereby further impacting maternal and child health in Afghanistan in general.

Acknowledgements

All praise to Allah, the Most Merciful, for enabling this work. I sincerely thank my supervisor, Professor Dr. Mohammad Reza Joya, Kabul University of Medical Sciences, the Education Development Center, and the health facilities in Nangarhar Province for their guidance and support. My gratitude goes to the female health workers who shared their experiences and to my family and friends for their encouragement. May Allah accept this effort and make it beneficial for all.

Authors Contributions

1. Abdul Jalal Ibrahimi, MD, DCH, MPH, designed the study, collected and analyzed the data, and wrote the manuscript.
2. Mohammad Reza Joya, MD, MPH, PhD, and Obaidullah Fahim, MD, MPH, PhD, supervised the study throughout and finalized the manuscript.
3. All authors reviewed and approved the final manuscript.

References

- Abdulrahman, N. M., Roslan, N. M., Rahman, N. H., & Rahim, M. A. (2019). Knowledge, attitudes, exposure, and future intentions toward exclusive breastfeeding among University Sains Malaysia final-year medical and dental students. *Malaysian Journal of Medical Sciences*, 26(6), 261–268. <https://doi.org/10.21315/mjms2019.26.6.25>
- Azeez, A. Z., Saeed, A. R., & Mohammed, A. A. (2008). Knowledge of Iraqi primary health care physicians about breastfeeding. *Eastern Mediterranean Health Journal*, 14(2), 381–388. <https://www.emro.who.int/emhj-volume-14-2008/volume-14-issue-2/article8.html>

- Bernardo, M. P., & Horta, B. L. (2013). Long-term effects of breastfeeding: A systematic review. *World Health Organization*. <https://apps.who.int/iris/handle/10665/79198>
- Bhatt, S. R., Gaur, A., & Suryawanshi, S. (2000). Decline in breast feeding—Who is to be blamed? A study of knowledge, attitude and practice among nurses. *Journal of the Pakistan Medical Association*, 50(8), 251–253.
- Cattaneo, A., Davanzo, R., & Worku, B. (2016). Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. *The Lancet*, 387(10017), 475–490. [https://doi.org/10.1016/S0140-6736\(15\)01024-7](https://doi.org/10.1016/S0140-6736(15)01024-7)
- Debesay, D. D., Tola, A., & Gezahegn, E. (2022). Breastfeeding practice and factors associated with exclusive breastfeeding among mothers in Horro District, Ethiopia: A community-based cross-sectional study. *PLoS ONE*, 17(3), e0264965. <https://doi.org/10.1371/journal.pone.0264965>
- Government of Afghanistan, Ministry of Public Health (MoPH). (2013). *National nutrition survey Afghanistan*. Public Nutrition Department, MoPH.
- Government of Afghanistan, Ministry of Public Health (MoPH). (2015). *District Health Information System (DHIS-2)*. MoPH Health Management Information System Department.
- Hafeez, R., & Batool, S. (2022). Knowledge, attitude and practice of female nurses on complementary feeding in a tertiary level hospital of Bangladesh. *Journal of Bangladesh College of Physicians and Surgeons*, 40(2), 89–92. <https://doi.org/10.3329/jbeps.v40i2.59250>
- Hossain, A. B., Begum, T., & Ozkan, A. (2016). Knowledge level, attitude and own experience of health professionals about breastfeeding and breast milk in a city of Turkey: Cross-sectional study. *Breastfeeding Medicine*, 11(12), 628–632. <https://doi.org/10.1089/bfm.2016.0101>
- International Breastfeeding Journal. (2018). Impact of key workplace breastfeeding support characteristics on job satisfaction and breastfeeding duration. *Breastfeeding Medicine*, 13(8), 503–509. <https://doi.org/10.1089/bfm.2018.0202>
- Kramer, M. S., & Kakuma, R. (2001). The optimal duration of exclusive breastfeeding: A systematic review (WHO/NHD/01.08). *World Health Organization*. https://www.who.int/nutrition/publications/optimal_duration_exc_bfeeding_review_eng.pdf
- Petit, A. I. (2010). Perception and knowledge on exclusive breastfeeding among women attending antenatal and postnatal clinics: A study from Mbarara Hospital, Uganda. *Dar Es Salaam Medical Students' Journal*, 16(1), 27–30.
- Rathore, F. A., Saeed, A., & Anjum, M. I. (2012). Breastfeeding knowledge and attitudes among health workers in a healthcare facility in South-South Nigeria. *Research Gate*, 9(1), 1–5. <https://doi.org/10.13140/RG.2.2.16332.05765>

- Schafer, E., & Thomson, G. (2002). Support for breastfeeding mothers. *Paediatrics and Child Health*, 7(6), 437–441. <https://doi.org/10.1093/pch/7.6.437>
- Simi, M., Ahmed, S., & Rahman, M. (2022). Unsuccessful exclusive breastfeeding and associated factors among healthcare providers in East Coast, Malaysia. *International Journal of Environmental Research and Public Health*, 19(12), 7310. <https://doi.org/10.3390/ijerph19127310>
- Singh, B. (2010). Knowledge, attitude and practice of breastfeeding: A case study. *European Journal of Scientific Research*, 40(3), 404–422.
- UNICEF. (2018). WHO and UNICEF issue new guidance to promote breastfeeding in health facilities globally. <https://www.unicef.org/press-releases/who-and-unicef-issue-new-guidance-promote-breastfeeding-health-facilities-globally>
- UNICEF. (2021). Optimal feeding practices are fundamental to a child's survival, growth and development. <https://www.unicef.org/nutrition/infant-and-young-child-feeding>
- WHO. (2003). *Community-based strategies for breastfeeding promotion and support in developing countries*. <https://apps.who.int/iris/handle/10665/42590>
- WHO. (2014). World breastfeeding week celebrated in Afghanistan: A winning goal for life. <https://www.who.int/afghanistan/news/detail/02-08-2014-world-breastfeeding-week-celebrated-in-afghanistan>
- WHO. (2019). *Global breastfeeding scorecard: Increasing commitment to breastfeeding through funding and improved policies and programmes*. <https://www.who.int/publications/i/item/9789241515945>
- Afghanistan Central Statistics Organization (CSO), Ministry of Public Health (MoPH), & ICF. (2017). *Afghanistan Demographic and Health Survey 2015*. Central Statistics Organization. <https://dhsprogram.com/pubs/pdf/FR323/FR323.pdf>
- Haroon, S., Das, J. K., Salam, R. A., Imdad, A., & Bhutta, Z. A. (2013). Breastfeeding promotion interventions and breastfeeding practices: A systematic review. *BMC Public Health*, 13(Suppl 3), S20. <https://doi.org/10.1186/1471-2458-13-S3-S20>
- Horta, B. L., de Mola, C. L., & Victora, C. G. (2015). Breastfeeding and intelligence: A systematic review and meta-analysis. *Acta Paediatrica*, 104(467), 14–19. <https://doi.org/10.1111/apa.13139>
- UNICEF. (2020). *Tracking progress for breastfeeding policies and programmes: Global breastfeeding scorecard 2020*. United Nations Children's Fund. <https://www.unicef.org/reports/global-breastfeeding-scorecard-2020>
- UNICEF. (2021). *Infant and young child feeding*. United Nations Children's Fund. https://www.unicef.org/nutrition/index_24824.html
- Victora, C. G., Bahl, R., Barros, A. J. D., França, G. V. A., Horton, S., Krasevec, J., Murch, S., Sankar, M. J., Walker, N., & Rollins, N. C. (2016). Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. *The Lancet*, 387(10017), 475–490. [https://doi.org/10.1016/S0140-6736\(15\)01024-7](https://doi.org/10.1016/S0140-6736(15)01024-7)

- World Health Organization. (2019). *Infant and young child feeding: Model chapter for textbooks for medical students and allied health professionals*. World Health Organization. <https://www.who.int/publications/i/item/9789241597494>
- World Health Organization. (2020). Exclusive breastfeeding for six months best for babies everywhere. <https://www.who.int/news/item/15-01-2011-exclusive-breastfeeding-for-six-months-best-for-babies-everywhere>
- World Health Organization. (2021). *Nutrition*. <https://www.who.int/health-topics/nutrition>
- Ali, S., Aziz, M., & Khan, M. (2018). Knowledge, attitude, and practices of midwives regarding breastfeeding in a public hospital of Pakistan. *Journal of Midwifery and Reproductive Health*, 6(3), 1364–1371. <https://doi.org/10.22038/jmrh.2018.27802.1291>
- Kohistani, S., Habib, S. S., & Saeed, A. (2021). Assessment of knowledge and practices regarding breastfeeding among health care providers in Kabul, Afghanistan. *Afghanistan Journal of Public Health*, 1(2), 45–51.
- Kumar, S., Sharma, R., & Gupta, R. (2019). Knowledge, attitude, and practices of health care providers towards breastfeeding in India: A cross-sectional study. *International Journal of Community Medicine and Public Health*, 6(2), 723–727. <https://doi.org/10.18203/2394-6040.ijcmph20190163>
- Ministry of Public Health (MoPH). (2022). *National Nutrition Strategy: Afghanistan 2022–2026*. Ministry of Public Health, Islamic Republic of Afghanistan.
- Okolo, S. N., & Ogbonna, C. (2021). Health workers' knowledge, attitudes and practices of exclusive breastfeeding in a Nigerian teaching hospital. *Nigerian Journal of Paediatrics*, 48(3), 151–158.
- Rollins, N. C., Bhandari, N., Hajeebhoy, N., Horton, S., Lutter, C. K., Martines, J. C., ... & Victora, C. G. (2016). Why invest, and what it will take to improve breastfeeding practices? *The Lancet*, 387(10017), 491–504. [https://doi.org/10.1016/S0140-6736\(15\)01044-2](https://doi.org/10.1016/S0140-6736(15)01044-2)
- Saeedzai, S., Noori, M., & Wafa, S. (2020). Cultural practices and beliefs influencing infant feeding in Eastern Afghanistan. *Journal of Global Health Reports*, 4, e2020071. <https://doi.org/10.29392/001c.16886>
- Yilmaz, G., Caylan, N., Karacan, C. D., & Oflu, A. (2020). Breastfeeding knowledge and practices among nurses and midwives in a Turkish hospital. *Breastfeeding Medicine*, 15(3), 159–165. <https://doi.org/10.1089/bfm.2019.0191>
- UNICEF. (2019). *The Baby-Friendly Hospital Initiative: Revised, updated and expanded for integrated care*. United Nations Children's Fund and World Health Organization. <https://www.unicef.org/documents/baby-friendly-hospital-initiative>
- Abdurrahman, M. A., & Saleh, Z. A. (2020). Knowledge of mothers towards exclusive breastfeeding in Erbil's maternity hospital. *Journal of Nursing and Health Science*, 9(1), 10–16. <https://doi.org/10.9790/1959-0901031016>

- Al-Qudah, M., Al-Shdifat, A., & Al-Rawashdeh, N. (2022). Breastfeeding knowledge and attitudes among midwifery diploma students in Jordan. *International Journal of Women's Health*, 14, 253–260. <https://doi.org/10.2147/IJWH.S351734>
- Artantas, A. B. (2016). Knowledge, attitudes, and practices regarding breastfeeding and breast milk among health professionals in Turkey. *Breastfeeding Medicine*, 11(4), 215–220. <https://doi.org/10.1089/bfm.2015.0151>
- Food and Agriculture Organization. (2014). *Nutrition education and knowledge thresholds for intervention*. FAO Nutrition Division. <http://www.fao.org/nutrition/en/>
- Onyiriuka, A. N., & Ohagwu, C. C. (2012). Breastfeeding knowledge and attitudes among health workers in a health care facility in South-South Nigeria. *International Breastfeeding Journal*, 7(1), 1–8. <https://doi.org/10.1186/1746-4358-7-3>
- Rahimi, B. A., & Mohamadi, E. (2020). Breastfeeding knowledge and practices among mothers in Kandahar, Afghanistan: A cross-sectional study. *International Journal of Pediatrics*, 2020, Article ID 7912360. <https://doi.org/10.1155/2020/7912360>
- Shetty, P., Ramachandra, N., & Gopalakrishnan, S. (2020). Breastfeeding initiation and duration in South India: A cross-sectional analysis. *Indian Journal of Pediatrics*, 87(5), 382–387. <https://doi.org/10.1007/s12098-019-03152-8>
- World Health Organization. (2023). *Breastfeeding: Recommendations for health care workers*. WHO Press. <https://www.who.int/health-topics/breastfeeding>
- World Health Organization. (2023). *Breastfeeding*. https://www.who.int/health-topics/breastfeeding#tab=tab_1
- International Labour Organization. (2023). *Maternity protection resource package: From aspiration to reality for all*. <https://www.ilo.org/global/topics/equality-and-discrimination/maternity-protection/lang--en/index.htm>
- United Nations Children's Fund (UNICEF) & World Health Organization. (2009). *Baby-Friendly Hospital Initiative: Revised, updated and expanded for integrated care*. <https://www.who.int/publications/i/item/9789241594967>
- World Health Organization. (2011). *WHO ethical and safety recommendations for research on domestic violence against women: Putting women's safety first*. <https://apps.who.int/iris/handle/10665/44615>
- Council for International Organizations of Medical Sciences (CIOMS) & World Health Organization. (2016). *International ethical guidelines for health-related research involving humans*. <https://cioms.ch/publications/product/international-ethical-guidelines-for-health-related-research-involving-humans/>
- World Health Organization (WHO). (2023). *Infant and young child feeding*. <https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>