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Factors influencing early initiation of breastfeeding in Afghanistan: secondary analysis of the Afghanistan MICS 2022–23

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Abstract

Background Initiating breastfeeding immediately within the first hour following birth has positive effects on the mother's and newborn's health and wellbeing. Little is known about the early initiation of breastfeeding and associated factors in Afghanistan. In this study, we addressed this research gap.

Methods We used data from the Afghanistan Multiple Indicator Cluster Survey (MICS) 2022–23. Data were analysed from 11,992 ever-married women, aged 15–49 years, who delivered a live child in the last 2 years before the survey. The outcome was early initiation of breastfeeding and defined as initiating breastfeeding within the first hour of birth. A logistic regression model was used to identify factors associated with early initiation of breastfeeding.

Results Out of 11,992 women, 46.9% initiated breastfeeding within the first hour of birth. The likelihood of early initiation of breastfeeding was greater in women with secondary or higher education (AOR 1.44 [95% CI 1.26, 1.63]), in women belonging to the second wealth quintile (AOR 1.17 [95% CI 1.04, 1.31]), in women who had access to media (AOR 1.15 [95% CI 1.03, 1.29]), and in women who had mobile phones (AOR 1.25 [95% CI 1.15, 1.37]). The likelihood was lower in women who gave birth at home (AOR 0.60 [95% CI 0.55, 0.66]), at private hospitals or clinics (AOR 0.65 [95% CI 0.56, 0.76]), as compared to women who gave birth at public clinics or hospitals, and in women living in rural areas (AOR 0.88 [95% CI 0.78, 0.95]). Women who had C-section for their latest live birth (AOR 0.26 [95% CI 0.21, 0.32]), and women who had very small-sized babies (AOR 0.89 [95% CI 0.79, 0.99]) were less likely to report early initiation of breastfeeding.

Conclusion With nearly half of Afghan women delaying breastfeeding beyond the first hour of birth, targeted health policies and interventions are crucial. Addressing key socioeconomic and healthcare disparities through education, equitable access to maternal care, and community-based awareness programs can promote early breastfeeding practices and improve neonatal health outcomes in Afghanistan.

Keywords Breastfeeding, Colostrum, Early breastfeeding, Neonatal health, Afghanistan

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Background

Breast milk contains the essential nutrients an infant needs in the first six months of life [1]. Early initiation of breastfeeding assures that an infant receives the colostrum which has antibodies that protect the newborn against diseases [1]. Breastfeeding within the first hour of an infant's life may prevent neonatal death and improve child survival [2]. A systematic review shows that compared to infants who initiated breastfeeding within the first hour of birth, infants who initiated breastfeeding within 1–23 h of birth had a 33% higher risk for neonatal death, and infants who initiated breastfeeding ≥ 24 h after birth had a 2.19 times higher risk for neonatal death [2]. Additionally, early suckling by the newborn stimulates the release of the oxytocin hormone, which aids in uterine contraction and reduces postpartum bleeding [3]. Skin-to-skin contact during early breastfeeding promotes maternal-infant bonding and attachment [4]. Moreover, the release of oxytocin during breastfeeding can have a calming effect and reduce stress levels in the mother, potentially lowering the risk of postpartum depression [4].

The World Health Organization (WHO) recommends initiating breastfeeding within one hour of birth, referring to it as "early initiation of breastfeeding" [1]. Any breastfeeding initiation after the first hour, whether 2–23 h or ≥ 24 h after birth, is considered "delayed initiation of breastfeeding" [1]. Early initiation of breastfeeding varies widely across countries and regions worldwide. A study utilizing data from Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) conducted between 2012 and 2017 in 58 low and middle-income countries (LMICs) found that the prevalence of delayed initiation of breastfeeding was 53.8%, ranging from 15.0% in Burundi to 83.4% in Guinea [5]. In Afghanistan, the study reported that the prevalence of delayed initiation of breastfeeding was 59.1% [5].

Early/delayed initiation of breastfeeding in LMICs can be influenced by maternal sociodemographic characteristics, use of maternal healthcare, place and mode of birth, and neonatal characteristics [6–8]. In a meta-analysis study that used pooled data from the 35 sub-Saharan African countries DHS, which were conducted between 2008 and 2019, it was found that mother's age, education, socioeconomic status, exposure to media, place of birth, mode of birth, newborn size, residential areas, parity, intended pregnancy, and type of birth (single vs. multiple births) were significantly association with early initiation of breastfeeding [9]. The study reported no significant association between early initiation of breastfeeding and antenatal care use, mother's occupation, and newborn sex [9]. Several other studies also reported that mother's education [10], residential areas [11, 12], household income [13], and place of birth [12], are strongly associated with early/delayed initiation of breastfeeding. According to several studies in LMICs, the use of antenatal care is a determinant of early/delayed initiation of breastfeeding [14].

In Afghanistan, several policy initiatives were implemented, including mass-media campaigns, with the aim of raising awareness about breastfeeding practices [15, 16]. However, in Afghanistan, 40.9% of postpartum mothers reported early initiation of breastfeeding, according to the 2015 national survey [5]. A 2020 study from Kandahar province in Afghanistan found that 51.2% of mothers initiated and continued exclusive breastfeeding [17], defined as providing exclusively breast milk to the newborn during the first six months of life [1]. This study examined the determinants of exclusive breastfeeding, using data collected over six months from seven health facilities in Kandahar [17]. To our knowledge, apart from the study from Kandahar, no other study has examined factors influencing breastfeeding, specifically early initiation of breastfeeding in Afghanistan. A systematic review of studies on early initiation of breastfeeding in the South Asia region reported not locating any study on early initiation of breastfeeding in Afghanistan to include in the review [18].

In light of the research gap identified, this study aimed to explore the factors that are associated with early initiation of breastfeeding in Afghanistan, using data from the latest nationwide Afghanistan MICS 2022–23. Our findings potentially have policy implications for improving the quality and availability of maternal and neonatal care through enhancing early initiation of breastfeeding practices among postpartum mothers in Afghanistan.

Methods

Study population and data source

In this cross-sectional study, we used data from the MICS 2022–2023, which collected data from a nationally representative sample in Afghanistan [19]. The sampling approach and data collection process have been described in details elsewhere [19]. During the survey, data were collected from reproductive-age women by trained surveyors [19]. In this study, we used data from 11,992 ever-married women, aged 15–49 years, who delivered a live child in the last 2 years before the survey (Fig. 1).

Study variables

The outcome variable was early initiation of breastfeeding, defined as initiating breastfeeding within the first hour of birth. During the survey, as part of the maternal and newborn health questionnaire, each woman who had a livebirth was asked the following question on initiation

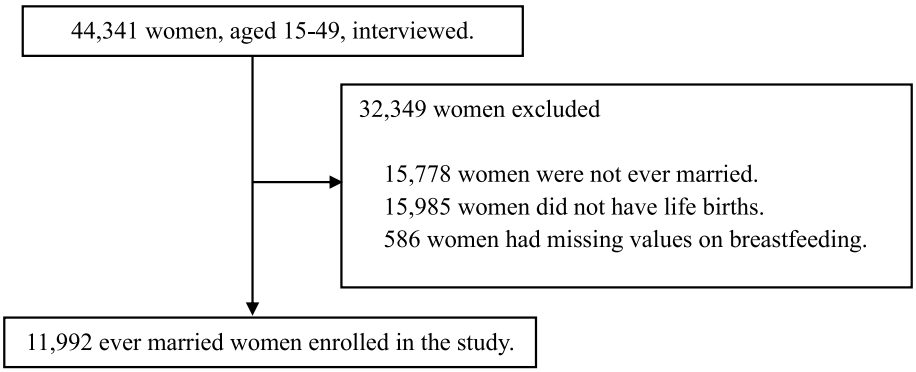

Fig. 1 Sample size and schematic presentation of the sample selection

of breastfeeding "How long after birth did you first put (name) to the breast?". The response options were (a) immediately, (b) hour, (c) day, (d) don't know/don't remember. The following instructions were provided to the surveyors "If less than 1 h, record '00' hours. If less than 24 h, record number of hours. Otherwise, record number of days.". We coded initiation of breastfeeding as "early" when the response was "immediately" or "less than 1 h", and "delayed" when the response was "less than 24 h" or "days".

The explanatory variables were women's age (15–29, 30–39, 40–49 years), women's education (no formal education, primary education, secondary/higher education), education of the household head (no formal education, primary education, secondary/higher education), wealth status (lowest quintile up to highest quintile), residential area (urban vs. rural), place of delivery (public clinic/hospital, private clinic/hospital, and at home), antenatal care (ANC) visits (no visit, 1–3 visits, ≥ 4 visits), woman parity (primipara vs. multipara), C-section ("yes" if the delivery was by C-section, and "no" otherwise), very small baby ("yes" if the size of the baby was reported to be very small by the interview mother, and "no" otherwise), woman uses a mobile phone at least once a week in the last 3 months (yes/no), and access to media (yes/no). Access to media was defined as "yes" if woman watched TV daily, or woman listened to radio daily, or woman read newspaper, and as "no", otherwise.

Statistical analysis

Descriptive statistics were used to describe the participants' sociodemographic characteristics. The chi-square test examined the relationship between independent variables and early initiation of breastfeeding. We also examined the association of watching TV, listening to the radio, and owning a mobile phone with wealth status, because it is assumed that people with access to ownership of TV, radio, and mobile phones might be wealthier than those with no access or ownership of TV, radio, and mobile phones. Binary and multivariate logistic regression models were used to examine the likelihood of early initiation of breastfeeding across the categories of independent variables. The *p*-values obtained from the bivariate analysis were used to decide about the inclusion of explanatory variables in the multivariate model. It was determined that any variable with a *p*-value of < 0.25 would be included in the multivariate model. During bivariate analysis, it was observed that women's age, women's parity, and ANC visits had *p*-values > 0.25; therefore, the three explanatory variables were not included in the multivariate model. We also added a random cluster effect in the model to take the clustering effects of data at the household level into account, and to provide adjusted standard errors for the odds ratios (ORs) and 95% CIs. STATA version 17 was used for the data analyses. The significant statistical level was set at 0.05.

Results

Figure 2 depicts the initiation of breastfeeding following birth. The prevalence of early initiation of breastfeeding was 46.9% (5,620/11,992). The prevalence of initiating breastfeeding between 1 – 24 h, starting at the end of the first hour of birth, was 43.4%, including 34.6% for the 1–3 h after birth. One out of ten women initiated breastfeeding after day one of birth, including 9.5% for the 1–7 days period after birth.

Table 1 shows the baseline characteristics of 11,992 postpartum women by status of early initiation of breastfeeding. Overall, 59.9% of women were 15–29 years old, and 80.2% of women had no formal education. A higher proportion of women who initiated early breastfeeding had secondary or higher education than those women who initiated breastfeeding after 1 h following birth (13.7% vs. 9.2%). A similar pattern was observed for women who were from the highest wealth quintile, those who lived in urban areas, those who gave birth in

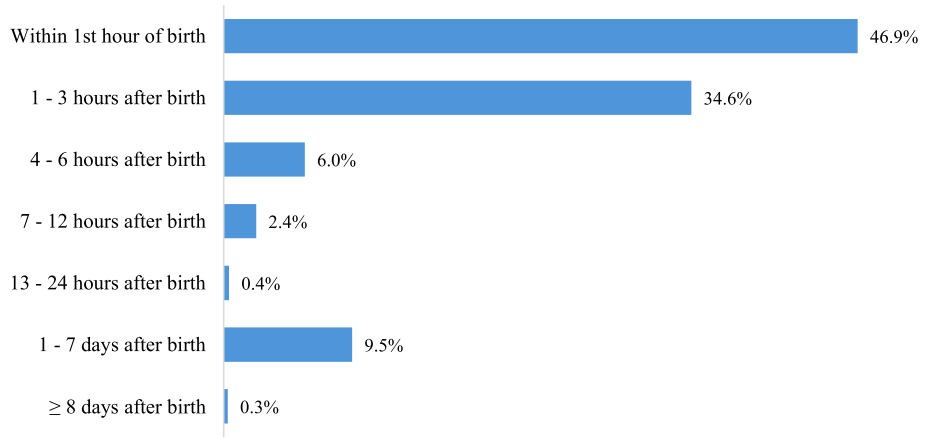

Fig. 2 Initiation of breastfeeding following birth reported by ever-married women ($n = 11,992$)

public clinics or public hospitals, those who had ANC utilization, those with mobile phones, those who listened to radio, and those who watched TV. Unlike the above pattern, a smaller proportion of women who initiated early breastfeeding underwent C-section than those women who initiated breastfeeding after 1 h following birth (2.1% vs. 5.9%). A similar pattern was seen for women who delivered very small-sized babies. All the above differences between the two groups of women were statistically significant (Table 1). The association of watching TV, listening to radio, and owning a mobile phone with wealth status shows that there exists a positive relationship between watching TV and wealth status, between listening to radio and wealth status, and between owning a mobile phone and wealth status. For example, access to TV was 0.2%, 1.5%, 7.3%, 20.2%, and 45.7% for the women belonging to the 1st quintile (poorest), 2nd quintile, 3rd quintile, 4th quintile, and 5th quintile, respectively. Similar patterns were observed for access to radio, and ownership of mobile phones in relation to wealth status (details in supplementary file).

Table 2 shows the likelihood of early initiation of breastfeeding among postpartum women. Below we present results from multivariate analysis. Compared to women with no formal education, it was more likely that women with secondary and higher education initiated early breastfeeding (AOR 1.44 [95% CI 1.26, 1.63]). It was more likely that women from the second wealth quintile, compared to those at the lowest quintile, initiate early breastfeeding (AOR 1.17 [95% CI 1.04, 1.31]). Women who had access to media (radio, TV, newspaper), compared to women with no access to media, had higher likelihood of initiating early breastfeeding (AOR 1.15 [95% CI 1.03, 1.29]), and women who had mobile phones, were more likely to have early initiation of breastfeeding, compared to women who did not have mobile phones (AOR 1.25 [95% CI 1.15, 1.37]). Women who lived in rural areas were less likely to initiate early breastfeeding, compared to women living in urban areas (AOR 0.88 [95% CI 0.78, 0.95]). Women who gave birth at home had lower likelihood of initiating early breastfeeding than women who gave birth at public clinics or hospitals (AOR 0.60 [95% CI 0.55, 0.66]). A similar pattern was observed for women who gave birth at private hospitals or clinics than women who gave birth at public clinics or hospitals (AOR 0.65 [95% CI 0.56, 0.76]). Women who had C-section for their latest live birth were less likely to initiate early breastfeeding than women who did not have C-section for their latest live birth (AOR 0.26 [95% CI 0.21, 0.32]). Women who delivered a very small size baby had lower odds of early initiation of breastfeeding than those women who did not give birth to a very small size baby in their latest childbirth (AOR 0.89 [95% CI 0.79, 0.99]).

Discussion

In this study of 11,992 women who had given birth in the last 2 years preceding the survey, we found that 46.9% of them initiated breastfeeding within one hour of birth. Our analysis identified that older women, those aged 40–49 years, those with secondary or higher education, women belonging to the second wealth quintile, women with access to mobile phones, and women with access to media were more likely to practice early initiation of breastfeeding. However, women who gave birth at home, those who gave birth at private clinics or hospitals (compared to women who gave birth at public clinics or health posts), women living in rural areas, women who underwent C-section, and women with very small size baby in their latest childbirth had lower likelihoods of early initiation of breastfeeding. We found that women's age, parity, and the use of ANC services did not significantly affect the early initiation of breastfeeding practices.

Table 1 Baseline characteristics of ever-married women, by status of early initiation of breastfeeding

Characteristics	Total *n* = 11,992 (%)	Early initiation of breastfeeding		*P*-Value
		Yes *n* = 5,620 (%)	No *n* = 6,372 (%)	
Women's age (years)				
15–29	59.9	59.6	60.1	0.84
30–39	32.4	32.6	32.3	
40–49	7.7	7.8	7.6	
Women's education				
No formal education	80.2	77.2	82.8	< 0.001
Primary	8.5	9.2	8.0	
Secondary/higher	11.3	13.7	9.2	
Household head education				
No formal education	64.7	62.9	66.3	< 0.001
Primary	11.0	11.4	10.7	
Secondary/higher	24.3	25.7	23.0	
Residential area				
Urban	15.3	16.7	14.0	< 0.001
Rural	84.7	83.3	86.0	
Place of delivery				
Public clinic/hospital	57.0	63.6	51.2	< 0.001
Home	36.0	30.3	41.0	
Private clinic/hospital	7.0	6.1	7.8	
Antenatal care (ANC) visits				
No visit	26.0	25.1	26.8	0.02
1–3 visits	44.0	43.3	44.6	
≥ 4 visits	30.1	31.6	28.7	
Parity				
Primipara	16.0	16.1	15.8	0.65
Multipara	84.0	83.9	84.2	
C-section				
No	95.9	97.9	94.1	< 0.001
Yes	4.1	2.1	5.9	
Very small sized baby				
No	87.3	88.2	86.5	0.01
Yes	12.7	11.8	13.5	
Access to mobile phones				
No	65.5	61.4	69.0	< 0.001
Yes	34.6	38.6	31.0	
Access to TV				
No	88.2	85.4	90.6	0.02
Yes	11.8	14.6	9.4	
Access to Radio				
No	94.5	95.1	94.0	0.01
Yes	5.5	4.9	6.0	
Access to newspapers				
No	99.7	99.5	99.8	0.01
Yes	0.3	0.5	0.2	

Table 1 (continued)

Characteristics	Total *n* = 11,992 (%)	Early initiation of breastfeeding		*P*-Value
		Yes *n* = 5,620 (%)	No *n* = 6,372 (%)	
Wealth status				
Lowest quintile	22.1	19.9	24.1	< 0.001
Second	23.3	24.1	22.7	
Third	22.7	23.2	22.4	
Fourth	18.7	19.0	18.4	
Highest quintile	13.1	13.9	12.5	

The 46.9% prevalence of early initiation of breastfeeding observed in our study is higher than the 40.9% reported prevalence for Afghanistan in a study that analyzed pooled data from 58 LMICs [5]. In that study, which included data from the Afghanistan DHS2015, the prevalence of delayed initiation of breastfeeding in Afghanistan was reported as 59.1% (95%CI: 56.6%—61.6%), corresponding to a 40.9% (39.4%—44.4%) of early initiation of breastfeeding rate. In a recent study from Nigeria, the prevalence of delayed initiation of breastfeeding was reported at 56.6% [20]. In the meta-analysis study that employed data from 35 sub-Saharan African countries' DHS, the overall prevalence of early initiation of breastfeeding was reported at 58.3%, ranging from 24% in Chad to 86% in Burundi [9]. In a study from Mexico, 49.4% of mothers reported early initiation of breastfeeding [21]. Considering the substantial variation in the early initiation of breastfeeding practice across LMICs, the 47.4% observed in our study can be expected. However, the 47.4% prevalence of early initiation of breastfeeding highlights the need for further improvement in early initiation of breastfeeding as more than half of postpartum mothers in Afghanistan still practice delayed initiation of breastfeeding.

We found that women with secondary and higher education are more likely to practice early initiation of breastfeeding, and this finding is consistent with several previous studies in LMICs [9, 13, 14, 20, 22]; however, it is not supported by a few studies in LMICs [21, 23]. It is known that educated women can better understand the health benefits of early breastfeeding for their baby and their own health [22]. Moreover, women's education is generally associated with a range of health benefits, including adequate maternal healthcare utilization and appropriate postpartum practices [24–27]. However, the Afghan government's recent policies restricting females from pursuing secondary and higher education will have dire effects over the coming years [28]. The education of mothers is essential not only for their empowerment but also for the direct impact it has on the health and nutritional status of their children. Therefore, our study highlights the urgent need for advocacy of women's education in Afghanistan. Moreover, addressing the timely initiation of breastfeeding among uneducated women through various means, such as health education programs, counseling, media campaigns, and peer-led education efforts, is a public health imperative that cannot be overlooked.

In the current study, women in the second wealth quintile were 1.7 times more likely to practice early initiation of breastfeeding as compared to those in the lowest wealth quintile. Previous studies on wealth inequalities and early initiation of breastfeeding practice have yielded inconsistent results. For instance, some studies were in line with our results, which indicated lower early initiation of breastfeeding rates among women in the lowest wealth quintile [6, 9]. Conversely, several other studies found conflicting results, reporting higher rates of early initiation of breastfeeding among women in the lowest wealth quintile [29, 30]. These discrepancies suggest that wealth and early initiation of breastfeeding association vary across countries, and other enabling factors, next to household wealth status, such as social, cultural, and healthcare utilization behaviors, may affect breastfeeding practices in LMICs [6, 29, 30]. In Afghanistan, policy interventions to increase early initiation of breastfeeding practices will have the highest impact if they focus on women from households in the lowest wealth quintile.

Consistent with previous literature suggesting urban–rural disparities in early initiation of breastfeeding rates [31, 32], our study found that women living in rural areas are less likely to report early initiation of breastfeeding. This is likely because women in rural Afghanistan tend to be exposed to additional challenges in relation to literacy, autonomy, healthcare utilization, sociocultural norms, and accessing health information [33, 34]. This disparity is consistent with findings from LMICs like Ethiopia and Nigeria, where rural–urban inequalities in maternal education and healthcare services significantly influence

Table 2 Likelihood of early initiation of breastfeeding by ever-married women

Characteristics	COR (95%CI)	*P*-Value	AOR (95%CI)	*P*-Value
Women's age (years)				
15–29	Reference		-	-
30–39	1.02 (0.94, 1.10)	0.65	-	-
40–49	1.03 (0.90, 1.19)	0.65	-	-
Women's education				
No formal education	Reference		Reference	
Primary	1.24 (1.08, 1.41)	0.001	1.11 (0.97, 1.27)	0.14
Secondary/higher	1.59 (1.41, 1.79)	< 0.001	**1.44 (1.26, 1.63)**	**< 0.001**
Household head education				
No formal education	Reference		Reference	
Primary	1.12 (0.99, 1.27)	0.07	1.03 (0.90, 1.17)	0.68
Secondary/higher	1.18 (1.07, 1.29)	< 0.001	1.02 (0.93, 1.13)	0.66
Residential area				
Urban	Reference		Reference	
Rural	0.82 (0.73, 0.91)	< 0.001	**0.88 (0.78, 0.95)**	**0.047**
Place of delivery				
Public clinic/hospital	Reference		Reference	
Home	0.59 (0.55, 0.64)	< 0.001	**0.60 (0.55, 0.66)**	**< 0.001**
Private clinic/hospital	0.63 (0.54, 0.73)	< 0.001	**0.65 (0.56, 0.76)**	**< 0.001**
Antenatal care (ANC) visits				
No visit	Reference		-	-
1–3 visits	1.04 (0.95, 1.14)	0.42	-	-
≥ 4 visits	1.08 (0.92, 1.30)	0.31	-	-
Parity				
Primipara	Reference		-	-
Multipara	0.98 (0.89, 1.08)	0.65	-	-
C-section				
No	Reference		Reference	
Yes	0.34 (0.28, 0.42)	< 0.001	**0.26 (0.21, 0.32)**	**< 0.001**
Very small sized baby				
No	Reference		Reference	
Yes	0.86 (0.77, 0.96)	0.006	**0.89 (0.79, 0.99)**	**< 0.001**
Access to mobile phones				
No	Reference		Reference	
Yes	1.40 (1.29, 1.51)	< 0.001	**1.25 (1.15, 1.37)**	**< 0.001**
Access to media				
No	Reference		Reference	
Yes	1.26 (1.14, 1.39)	< 0.001	**1.15 (1.03, 1.29)**	**0.017**
Wealth status				
Lowest quintile	Reference		Reference	
Second	1.29 (1.15, 1.44)	< 0.001	**1.17 (1.04, 1.31)**	**0.008**
Third	1.26 (1.12, 1.41)	< 0.001	1.03 (0.91, 1.16)	0.67
Fourth	1.26 (1.11, 1.42)	< 0.001	0.90 (0.79, 1.03)	0.14
Highest quintile	1.35 (1.18, 1.55)	< 0.001	0.85 (0.71, 1.01)	0.07

Abbreviations: COR Crude odds ratio, *AOR* Adjusted odds ratio

Significant values are in bold

breastfeeding practices [33, 35]. However, this is contrary to the findings of previous studies from Vietnam [36] and India [32], which observed better early initiation of breastfeeding rates in women residing in rural areas. Given the findings of this study, public health interventions for improving early initiation of breastfeeding rates should pay more attention to women residing in rural Afghanistan. In addition, addressing such disparities is globally critical to achieving equitable progress toward improving neonatal health outcomes.

The present study indicated that women who had access to media had a 1.15-fold higher odds of practicing early initiation of breastfeeding. This finding is consistent with previous studies [37, 38], and highlights the importance of media access in improving knowledge about breastfeeding practices, particularly in less educated women. In Afghanistan, nationwide mass media campaigning is embedded in policies aimed at improving breastfeeding indicators [15, 16]. These findings suggest that access to educational materials may be one of the most important factors for achieving breastfeeding targets in Afghanistan [15]. Therefore, the Afghan government and international stakeholders should continuously invest resources in the design and implementation of breastfeeding awareness and educational programs through all the available mass media channels in Afghanistan.

This study also indicated that women who had mobile phones were more likely to practice early initiation of breastfeeding. This result aligns with similar observations reported in studies conducted across LMICs [39, 40], showing that women's mobile ownership has assisted in achieving breastfeeding targets. Moreover, several experimental studies have provided evidence for the effectiveness of mobile phone-based interventions to improve breastfeeding practices in LMICs [39, 41]. Specifically, weekly counseling calls, daily text or voice messages in local languages, and smartphone applications for breastfeeding support were positively associated with improved breastfeeding indicators [41]. With respect to our findings, it is likely that women who use mobile phones are more educated or have a higher socioeconomic status; thus, they may have higher knowledge of their child's nutrition and health needs and seek child health services more often than women with less education or those who are from a lower socioeconomic background. The crucial role of women's access to mobile phones and its positive association with early initiation of breastfeeding is an important finding, with potential for policy implications and effective health interventions for maternal and child health services.

Another unique contribution of our study to the current literature on early initiation of breastfeeding in LMICs lies in the comparison of early initiation of breastfeeding between women who delivered in public hospitals/clinics and those women who delivered at home, as well as between women who delivered in private hospitals or clinics and those who delivered in public hospitals/clinics. To our knowledge, few studies have examined the association between early initiation of breastfeeding and place of birth, stratified by deliveries conducted at public hospitals/clinics, at home, and at private hospitals/clinics, and comparing the results between them [42]. Previous studies have reported that the likelihood of early initiation of breastfeeding by postpartum mothers was significantly lower at private hospitals compared to government facilities [21, 35]. Likewise, we found that postpartum mothers who gave birth at home, as well as those who gave birth at private hospitals/clinics, were significantly less likely to practice early initiation of breastfeeding, compared to women who gave birth at government hospitals/clinics. In terms of policy relevance, this finding can help policymakers and health managers in prioritizing maternal and child healthcare interventions for mothers who give birth at private hospitals/clinics or at home, as well as those who give birth at public hospitals/clinics.

Our findings support the results of previous studies on the association between C-section and early initiation of breastfeeding practices, indicating lower early initiation of breastfeeding rates in women who had a C-section [6, 18]. Specifically, a meta-analysis examining the impact of C-section on early initiation of breastfeeding practices in Ethiopia found that C-section was associated with 79% lower odds of early initiation of breastfeeding practices compared to vaginal delivery [43]. Additionally, a scoping review of the literature revealed that early initiation of breastfeeding rates are lower following C-sections than after vaginal deliveries [44]. Besides, many studies have indicated that C-section also shortens the duration of exclusive breastfeeding [44, 45]. The lower early initiation of breastfeeding rates among women who had C-section may be due to post-operative maternal and neonatal instability, positioning difficulties, equipment problems, and low support for breastfeeding from healthcare professionals [6, 45]. Women's and healthcare professionals' knowledge and skill deficit of breastfeeding are other potential barriers to early initiation of breastfeeding after C-sections [44, 45]. Therefore, breastfeeding initiatives, including guidance on breastfeeding strategy, providing additional support and care, and involving trained health professionals, are highly recommended to support women who have a C-section.

Additionally, we found that women who delivered a very small size baby were less likely to practice early initiation of breastfeeding. This result corroborates

existing evidence showing that low birth weight is associated with delayed initiation of breastfeeding [46]. The observation that women who delivered a very small size baby were less likely to practice early initiation of breastfeeding may reflect conditional problems associated with low birth weight [35]. A growing body of literature suggests that immediate initiation of breastfeeding among low birth weight newborns is associated with improved neonatal outcomes [47]. It has been shown that healthcare professional-led breastfeeding education and counseling, family support interventions, and training of hospital nursery staff in the care and support of low birth weight newborns may improve early initiation of breastfeeding rates in this group [48]. Therefore, health system and healthcare professionals may consider these approaches for breastfeeding initiatives in Afghanistan.

Limitations

This study has its limitations. First, owing to data limitations in the MICS dataset, we were unable to account for other potential factors associated with early initiation of breastfeeding among Afghan women. Therefore, we urge future studies to consider other influencing factors, such as mother's occupation, pregnancy intention, father's characteristics, family support for women, knowledge about breastfeeding, cultural beliefs, health of the mother and newborn at delivery, and health system factors in their analysis. Furthermore, the cross-sectional design of the study cannot establish a temporal relationship between early initiation of breastfeeding and associated factors. Nevertheless, the associated factors identified by the current study are consistent with previous literature on early initiation of breastfeeding [9, 49].

Despite the mentioned limitations, the present study provided insights into factors influencing early initiation of breastfeeding in Afghanistan, using a nationally representative sample, which may inform policymakers and healthcare professionals for specific interventions.

Conclusion

To our knowledge, this is the first nationally representative study that investigated early initiation of breastfeeding practice among Afghan women, revealing a concerningly low prevalence of 46.9%. To address this public health challenge, targeted health policies and interventions are urgently needed. These should prioritize improving education and awareness among uneducated and socioeconomically disadvantaged women, enhancing access to maternal healthcare in rural areas, and addressing barriers to early initiation of breastfeeding in-home deliveries, private healthcare facilities, C-section cases, and for mothers of low-birth-weight infants. Integrating community-based education, media campaigns, and healthcare system improvements could play a critical role in promoting early breastfeeding initiation and improving neonatal health outcomes in Afghanistan.

Abbreviations

ADHS	Afghanistan Demographic Health Survey
ANC	Antenatal care
AOR	Adjusted odds ratio
DHS	Demographic Health Survey
C-section	Cesarean section
CI	Confidence interval
COR	Crude odds ratio
LMICs	Low and middle-income countries
MICS	Multiple Indicator Cluster Survey
MNCH	Maternal, newborn, and child health outcomes
WHO	World Health Organization

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s13006-025-00723-7.

Supplementary Material 1.

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Authors' contributions

Conceptualization and design: ET and MHS. Analysis: ET and MHS. Writing-original draft: ET, MHS, and OD. Writing- review & editing: MHS, ZT, SAA, AWW, and OD. All authors have read and approved the final manuscript.

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None.

Data availability

The MICS 2022-23 dataset is publicly available on UNICEF's official website through the following link: https://mics.unicef.org/surveys

Declarations

Ethics approval and consent to participate

The Research and Ethics Committee at the Faculty of Medicine, Kandahar University waived the ethical application because secondary data from the Multiple Indicator Cluster Survey (MICS) 2022–2023 were used and analyzed in this study. For the MICS 2022–2023, informed consent was obtained from all women who were interviewed, and informed consent was taken from legal guardians of women aged under 16 years. Moreover, all methods in the MICS survey were conducted in accordance with the Declaration of Helsinki.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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