Evaluating Socio-Economic and Occupational Barriers to Breastfeeding: A Comparative Study among Weaving Mothers

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ABSTRACT

Background: Stunting continues to be a major global public health issue, notably in low- and middle-income nations. This research sought to evaluate breastfeeding behaviors among mothers engaged in weaving activities in North Sumatra, Indonesia, and to explore the social economic and occupational factors influencing observance to recommended breastfeeding practices.

Methods: This research employed a cross-sectional approach involving 72 participants consisted of weaving mothers recruited from a pair of community-based health facilities in North Sumatera, specifically Tapanuli Utara (n = 36) and Samosir (n = 36). Data were gathered using pre-designed questionnaires that assessed mothers' knwledge, attitudes, and practice regarding Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF), as well as associated socio-economic and work-related factors..

Results: Across the participants, 83.3% reported practicing Early Initiation of Breastfeeding (IMD), while 61.1% adhered to Exclusive Breastfeeding (EBF). Higher levels of compliance were observed in Tapanuli Utara (IMD 86.1%; EBF 66.7%) relative to Samosir (IMD 80.6%; EBF 55.6%), This could be linked to enhanced community support networks and greater accessibility to healthcare service. Although most mothers demonstrated adequate knowledge of breastfeeding, work-related demands and the physically demanding nature of weaving limited consistent adherence to recommended breastfeeding practices.

Conclusion: These results highlight the need for breastfeeding support strategies that are specifically tailored to mothers working in the informal sector. Interventions including flexible work arrangements and community-based health education are recommended to improve adherence to breastfeeding practices and support efforts to prevent stunting.

KEYWORDS: breastfeeding; informal employment; weaving mothers; comparative analysis

INTRODUCTION

Stunting has become a prominent global public health challenge, particularly in developing nations, affecting approximately 162 million children under five years of age. Estimates indicate that, without effective preventive measures, the number of affected children may still reach 127 million by 2025 (Akseer et al., 2020; Schnee et al., 2018; Susianto et al., 2022). Stunting is define disrupted overall growth & maturation caused by prolonged undernutrition and repeated infections, resulting in both short & long term health consequences. The short term, stunted children are at risk of delayed brain development, diminished cognitive ability, limited

physical growth, and metabolic disorders. In the long term, these conditions may lead to reduced intellectual performance, lower educational attainment, and weakened immune function, this raises the risk of develop non communicable diseases, diabetes, cardiovascular conditions, obesity, & some types of cancer. (Chalid et al., 2022; Ruaida, 2018).

In Indonesia, stunting constitutes a critical concern as it endangers the future quality and productivity of the population. Beyond being a major public health problem, stunting carries broad social and economic consequences for national development. Research shows that children who experience stunting are more likely to face learning challenges, which can later limit workforce preparedness and hinder economic progress. Consequently, stunting reduction has been established as a national priority to improve public health & reinforce long term economic sustainability (Nisa, 2019; Yekti, 2020).

Modern initiatives to reduce stunting increasingly focus on community-centered approaches, especially programs maternal and child nutrition designed to improve. According to the World Health Organization (WHO), households and communities serve as critical points of intervention to tackle key drivers of stunting, encompassing sanitation deficitss, restricted access to potable water, and low-quality diets, poverty & reccurent infectious illnesses. Maternal health conditions and caregiving behaviors are central determinants of child growth and development. Nutritional deficiencies experienced by women prior to conception, during pregnancy, and throughout the breastfeeding period, as well as delayed initiation of breastfeeding, have been consistently linked to a greater chance of children experiencing stunting (Ariani, 2020; Hafid et al., 2021; Kusumawati et al., 2018).

Tackle these, numerous develop nations, Indonesia have implemented integrated strategies that focus on educating mothers about nutrition and promoting optimal breastfeeding practices, especially Early Initiation of Breastfeeding (EIB/IMD) and Exclusive Breastfeeding during the first 6 months. Breastfeeding initiation with first hour after born is widely acknowledged as vital for both infant and maternal health, as it aids thermal regulation, enhances mother–infant bonding, and significantly increases the likelihood of continued exclusive breastfeeding. Evidence further suggests that adherence to IMD can reduce neonatal mortality by up to 22%, highlighting its crucial role in improving early survival and long-term child health outcomes (Kragel et al., 2020; Trickey, 2018).

Indonesia so significan Early Initiation of Breastfeeding (IMD) and Exclusive Breastfeeding is formally acknowledged through a range of national health policies and programs designed to promote optimal infant feeding practices and reduce the prevalence of stunting. Nevertheless, empirical evidence reveals a continuing gap between policy goals and actual breastfeeding behavior. National data from 2021 indicate that just about half of infants before six month of age received exclusive breastfeeding, a figure that remains well below the targets established in the Ministry of Health's strategic plans (Munira, 2022).

In North Sumatra, which serves asthefocus of this study, exclusive infant feeding cover varied considerably over recent years. Although coverage reportedly rose from as low as 3.39% in 2020 to 57.83% in 2021, substantial disparities

persist among districts and communities (Damayanti, 2018; Sukarti et al., 2020). This uneven pattern underscores the need for targeted, context-specific interventions to strengthen breastfeeding support systems, particularly in areas where compliance remains limited. Previous studies have identified several obstacles to the effective implementation of IMD and Exclusive Breastfeeding, including inadequate maternal knowledge of breastfeeding benefits, insufficient support from healthcare providers and communities, & socio economic constraint limit mothers ability to adhere to recommend practice. Therefore, a more nuanced understand of the specific challenges faced by different population groups is crucial for developing effective, evidence-based approaches to reduce and prevent childhood growth failure (Sumarni et al., 2020).

1 Focuses on the socio economic and cultural barrier hinder the practice of Early Initiation of Breastfeeding (IMD) and Exclusive Breastfeeding (EBF) Mother engaged weave in North Sumatra. Weaving is a labor-intensive occupation that demands. Weaving is a labor intensive profession that demands concentration and extended working hours, which often limits opportunities for frequent breastfeeding and reduces mothers' ability to adequately fulfill their infants' nutritional needs. As workers in the informal sector, weaving mothers encounter unique challenges compared to other occupational groups, including insufficient workplace support, limited flexibility in working schedules, and the lack of breastfeeding-friendly environments. These conditions highlight the importance of developing targeted and context-specific breastfeeding interventions that are aligned with the socio-economic realities of this population. Previous research has demonstrated that maternal socio-economic status, knowledge related to breastfeeding, and occupational demands significantly influence breastfeeding practices and, in turn, stunting prevention efforts. Consequently, improving IMD and EBF practices among weaving mothers necessitates integrated strategies that consider both occupational constraints and maternal–child health requirements (Novianti et al., 2018; Sukarti et al., 2020).

Although numerous breastfeeding interventions have been implemented, their impact is often constrained when they fail to address the specific challenges experienced by working mothers in rural and economically disadvantaged settings. Evidence indicates that context-sensitive strategies—such as practical, skills-based health education, community support mechanisms, and flexible work arrangements when feasible—can substantially enhance breastfeeding practices. Kinanti and Karana (2022) reported that breastfeeding initiation immediately after birth reduces the risk of stunting by 1.3 times, highlighting the critical role of timely and sustained breastfeeding support. In communities with high stunting prevalence, interventions should move beyond merely improving maternal knowledge and instead prioritize practical assistance that enables mothers to initiate and maintain breastfeeding. For weaving mothers in North Sumatra, interventions must be carefully designed to accommodate work demands while supporting childcare responsibilities, ensuring optimal outcomes for both mothers and infants.

Current evidence in stunting prevention emphasizes is successful breastfeeding intervention rely on comprehensive support systems, include

accessible healthcare services, family engagement, and active community participation. Global actions implemented under the guidance of WHO and UNICEF aim to multi component approaches that integrate face-to-face as well as digital support, particularly to mothers dwelling in rural and isolated regions and resource-poor regions (UNICEF, 2021). Public health campaigns promoting Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF) play a vital role in encouraging adherence to recommend practice. However, to weaving mothers facing substantial time limitations and occupational constraints, conventional interventions may require adaptation to ensure feasibility and accessibility. By integrating targeted education, flexible support mechanisms, and community-based engagement, stunting prevention programs can more effectively respond to the needs of mothers working in informal or non-traditional employment secto (Abdulahi et al., 2021; El-Houfey et al., 2017; Rossau et al., 2023) .

Previous studies have emphasized the critical role of Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF) in stunting prevention. However, limited attention has been given to the distinct challenges encountered by work mothers inhabiting rural locations settings and informal employment. This research attempts to close this gap through an in-depth examination the impact socio economic conditions and work-related demands on breastfeeding behaviors of mothers engaged in weaving in North Sumatra. By identifying the specific barriers and support requirements faced by this population, the study aims to generate practical insights to support the development of context-appropriate strategies for stunting prevention. In doing so, the research builds on existing literature by underscoring the importance of breastfeeding interventions that are aligned with the everyday realities of weaving mothers, thereby contributing to the still-limited evidence on occupation-specific breastfeeding challenges in rural Indonesia (Alzaheb, 2017; Kusumawati et al., 2018; Santi, 2017).

To assess the factors associated with Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF) in mothers engaged in weaving with children aged 0–59 months in North Sumatra. The specific objectives are: (1) to assess mothers' knowledge and practices related to EIB and EBF, and (2) to identify socio-economic and occupational determinants influencing adherence to recommended breastfeeding guidelines. A cross-sectional approach was adopted utilized, data were obtained originating from two community health clinics (Puskesmas) located in Tapanuli Utara and Samosir, areas where weave is a prevalent maternal occupation. Through this approach, the study seeks to generate evidence-based insights to guide stunting prevention policies and interventions, especially for mothers residing in rural and socio-economically disadvantaged settings.

This research addresses a significant gap in the current existing literature that centers on weaving mothers, a population that has been largely overlooked within Indonesia's rural informal labor sector. Although prior studies have generally investigated barriers to breastfeeding, limited attention has been given to occupation-specific challenges, particularly those associated with physically demanding and time-consuming work such as traditional weaving. By exploring the interplay between occupational responsibilities, socio-economic limitations, and maternal roles, this research offers novel insights into how informal

employment conditions influence breastfeeding practices in resource-constrained environments.

In addition, the comparative assessment of two districts with similar cultural backgrounds but differing levels of infrastructure—Tapanuli Utara and Samosir—provides valuable perspectives on how disparities in local health systems, community support, and service accessibility affect compliance with recommended breastfeeding practices. Beyond its scholarly contribution, the study generates practical, evidence based recommendations to policymakers and public health practitioner aiming to develop inclusive and context-responsive maternal and child health interventions, particularly for mothers engaged in rural and informal occupations.

METHODS

A cross-sectional design was employed employed to investigate factors affecting Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF) among mothers engaged mothers engaged in weaving children age 0 until 59 months in the Tapanuli Utara and Samosir districts of North Sumatra, Indonesia. By concentrating within this particular population, & sought to assess the influence of socio-economic and occupational determinants of breastfeeding behaviors and their relevance to stunting prevention. The methodological framework was systematically developed to ensure rigor in data collection, analysis, and interpretation, in line with established research guidelines (Sugiyono).

Study Design

In this case utilized an observational cross-sectional research design in which data are collected at one specific moment in time to explore relationship among specific variable. This method was suitable for assessing the proportion of cases of Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF) within weaving mothers, along with for identifying socio economic and occupational factor related to such practices. The cross sectional approach provided an efficient snapshot of patterns of breastfeeding and the factors influencing them in the study group. Additionally, it allowed for a comparative analysis between Tapanuli Utara and Samosir districts, providing insight into how differences in social conditions environments an&d healthcare access affect maternal health behaviors.

Nevertheless, several limitations inherent to the cross-sectional design should be considered. Because data were collected at only one time point, causal relationships between independent and dependent variables cannot be established. Although associations between socio-economic or occupational factors & breastfeeding practices should be observed, the direction & causality of the relationship remain uncertain. In addition, the use of self-reported data may introduce bias, include recall bias in which participants might inaccurately recall previous actions and social desirability bias, the responses could represent perceived expectations rather than actual practices. Despite these limitations, the cross-sectional design offers a meaningful overview of infant feeding patterns & challenges among mothers who work as weavers and serves as a solid basis to

subsequent longitudinal or intervention-driven studies to further explore causal mechanisms.

Location

Undertaken in the districts of Tapanuli Utara & Samosir, North Sumatra Province, Indonesia, with data collection sites located at Puskesmas Siatas Barita in Tapanuli Utara and Puskesmas Buhit in Samosir. These locations were selected due to the predominance of weaving as a maternal occupation and the relatively high prevalence of stunting reported in these areas. In addition, the two districts represent differing socio-economic and occupational contexts that may influence maternal health behaviors. Data were collected between May and September 2024, a period that allowed sufficient time for participant recruitment and engagement while accommodating mothers' work commitments.

Population and Sampling

The study population consisted of weaving mothers live in the select district who had children age 0–59 months. Participants recruited using a purposive sampling method, targeting mothers who were actively engaged in weaving activities and acted as the primary caregivers for their young children. This approach ensured the inclusion of respondents whose socio-economic and occupational profiles were directly relevant to the objectives.

To ensure the accuracy and relevance of the data, participant selection was guided by specific inclusion criteria: mothers who agreed to take part in the study, worked as weavers as their primary occupation, and had children under five years of age, either currently breastfeeding or with prior experience of Early Initiation of Breastfeeding (IMD) and Exclusive Breastfeeding (ASI Eksklusif). Mothers were excluded if they had physical or mental health conditions can limit their participation, or if they confirmed to have infectious diseases example tuberculosis, HIV, or hepatitis, which could affect breastfeeding practices.

Slovin's formula was employed to estimate the required sample size with a 5% margin of error, resulting in a total of 72 respondents. To ensure balanced representation and facilitate comparative analysis, the sample was equally divided between the two research sites, with 36 participants recruited from Puskesmas Siatas Barita and 36 from Puskesmas Buhit. This equal distribution supported meaningful comparisons while accounting for socio-economic differences across communities in North Sumatra.

Data Collection Methods

This study collected data from both primar & second sources. Primary data were gathered directly from participants through structured questionnaires aimed at capturing essential information on Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF). Secondary data were obtained from Puskesmas records, which included contributions from healthcare personnel, program coordinators, and community health leaders. These secondary sources offered important contextual information regarding local stunting prevalence, breastfeeding patterns, and access to healthcare services in the study locations.

The survey instrument was developed for gather extensive information on participants' socio economic profiles, awareness regarding Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF), breastfeeding views and perceptions associated with occupational factors limitations. Its items formulated based on primary indicators identified in previous studies examining breastfeeding practices and stunting reduction, and adjusted to reflect the cultural and work-related context realities of mothers who work as weavers. EIB the measures included initiating early breastfeeding initiation within the first hour after birth, practicing direct skin contact between mother and infant, & allowing the newborn to self-latch. EBF indicators emphasized providing only breast milk, without supplemental foods or liquids, during the first six months, following guidelines from the Indonesian Ministry of Health.

Before primary data gathering, questionnaire was pilot tested with 15 of mothers who work as weavers from a nearby a population with comparable socio-demographic characteristics. The pilot study the findings were utilized to assess the instrument's soundness and dependability. Construct validity was verified by means of assessment by 3 maternal & child health experts, who evaluated the degree to which each item accurately reflected the theoretical indicators of EIB and EBF.

Reliability was measured applying Cronbach's alpha to measure internal reliability across questionnaire domains. The coefficients were 0.82 for knowledge, 0.78 for attitudes, and 0.80 for breastfeeding practices, all above the minimum acceptable cutoff of 0.70, reflecting high internal consistency and confirming that the instrument reliably captured the intended constructs.

Participants were recruited through a community-oriented strategy carried out in partnership with local groups healthcare providers, including local midwives and posyandu workers associated with each Puskesmas. Eligible respondents were recognized from community based health records & weave group membership lists, & select according to predetermined eligibility criteria. Data collection primarily took place at Puskesmas or nearby community venues to facilitate participation while minimizing disruption to weaving activities. For mothers unable to attend due to work commitments, home visits were conducted with assistance from local health cadres. This combined approach enhanced accessibility, ensured ethical standards, and supported the collection of comprehensive and reliable data.

Data Analysis Procedures

Data analysis was performed use descriptive statistical techniques for examine breastfeeding practice and the distribution of socio economic characteristics related to Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF) among study participants. The analytical process comprised several stages, including data cleaning, coding, tabulation, and statistical processing. Descriptive measures such as frequencies and percentages were applied to summarize respondents' socio-demographic profiles and breastfeeding behaviors. Responses to Likert-scale items assessing knowledge & attitudes toward breastfeeding were classified 4 categories very high, high, low, and very

low on predetermined scoring interval. Classification facilitated a nuanced interpretation of weaving mothers' levels of breastfeeding knowledge and attitudes, reflecting their socio-economic and occupational contexts.

Ethical Considerations

The investigation was undertaken strict conformity with ethical standards to safeguard the right, dignity, and well being of all participants. Ahead of data collection, informed consent obtained from each respondent after providing a comprehensive clarification of the study's aims, steps and associated risks, and anticipated benefit. Taking part was fully voluntary, & respondents were informed of their right to decline or opt out of the study at any stage with no repercussions. To ensure confidentiality, all any individual identifiers were omitted from the dataset and replaced with coded information used solely for analytical purposes. Ethical clearance for this research was collected from the Institutional Ethics Committee of Poltekkes Kemenkes Medan, in accordance with applicable national guidelines for health research ethics.

RESULTS

The findings this study offer insight into the existing practices of Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF) among weaving mothers with children aged 0–59 months in Tapanuli Utara and Samosir districts, North Sumatra.

Respondent Demographics

Table 1. Frequency Distribution of Respondents Age

Age Group (years)	Tapanuli Utara (%) (n=36)	Samosir (%) (n=36)
20-25	14	22
26-30	28	36
31-35	36	22
>35	22	20
Total	**100**	**100**

Table 1 presents ages the allocation of the respondents. Most of the weave mothers were between 26 and 35 years old, accounting for 64% of the sample 28% were aged 26 until 30 years and 36% were 31 until 35 years. Mothers aged 20 until 25 years and those over 35 years each comprised 18% of the participants. The pattern suggests that the majority of respondents were within a productive reproductive age and actively engaged in economic activities, a phase often associated with balancing childcare responsibilities and income-generating work. The dominance of this age group reflects the overlap between maternal and occupational roles, which may affect breastfeeding behaviors and compliance with Early Initiation of Breastfeeding (IMD) and Exclusive Breastfeeding (EBF) guidelines.

Middle School	8.33	11.11
High School	91.67	88.89
Total	**100**	**100**

Table 2 outlines the respondents' level of education. Most weaving mothers had completed secondary-level education (senior high school), accounting for 90.3% of the total sample, while a smaller proportion (9.7%) had attained junior high school education. By district, a slightly higher percentage of mothers in Tapanuli Utara had completed secondary education (91.7%) compared to in Samosir (88.9%). These results indicate the most respondent attained a mid level formal education, which could play a supportive role in enhancing their awareless and comprehension of recommended breastfeeding practices, particularly Early Initiation of Breastfeeding (IMD) and Exclusive Breastfeeding (EBF).

Age Distribution of Children

Table 3. Frequency Distribution Based on Age of Respondent's Child

Child Age Group (months)	Tapanuli Utara (%) (n=36)	Samosir (%) (n=36)
0-5	41.67	52.78
6-10	52.78	41.67
>10	5.55	5.55
Total	**100**	**100**

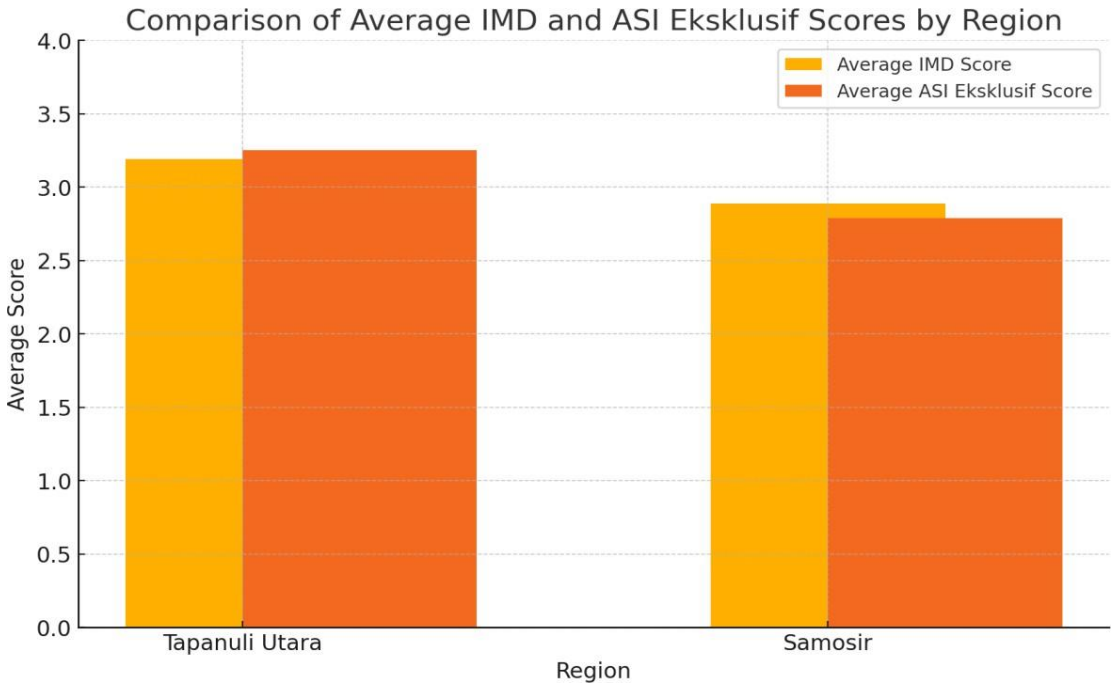
displays range the Utara, the majority aged 6 until 10 month by 0 until 5 months (41.67%), with only 5.55% over s. Conversely, in Samosir, most children were 0 until 5 months old (52.78%), followed by 6 until 10 months (41.67%), and 5.55% were older than 10 months. Overall, the results show that the majority of mothers in both districts were looking after infants younger than one year, which is a crucial time for implementing effective breastfeeding interventions. A higher share of younger infants in Samosir highlights the importance of strengthening breastfeeding programs and infant nutrition education. In Tapanuli Utara, where more infants were aged 6 to 10 months, the focus could be on sustaining Exclusive Breastfeeding up to six months and promoting suitable complementary feeding.

(EIB) differed modestly districts. mothers r EIB, and successfully sustained Exclusive Breastfeeding for the recommended six-month period. In comparison, 80.6% of mothers in Samosir practiced EIB, while only 55.6% adhered to Exclusive Breastfeeding. When data from both districts were

combined, 83.3% of respondents initiated breastfeeding early, and 61.1% practiced Exclusive Breastfeeding.

These findings suggest that, although most weaving mothers were knowledgeable about recommended breastfeeding practices and made efforts to follow them, the overall prevalence of Exclusive Breastfeeding has yet to reach optimal levels. Higher compliance observed in Tapanuli Utara may be linked to stronger community engagement and improved access to maternal and child health services, underscoring the importance of local support systems in sustaining breastfeeding. In contrast, mothers in Samosir appeared to face greater difficulties in maintaining Exclusive Breastfeeding, largely due to work-related responsibilities and limited daily flexibility.

Maintaining regular use of the terms Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF) is crucial, as these practices represent sequential and interconnected aspects of optimal infant feeding. Early initiation promotes lactation onset and strengthens early mother–infant bonding, while Exclusive Breastfeeding provides continued health and immune advantages in the initial six months. Collectively, these practices constitute an essential continuum that supports infant growth and helps prevent stunting, particularly in resource-constrained settings and among families with demanding occupational workloads, like households involved in weave.



The chart depicts the practice of Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF) among weaving mother across two study districts. In Tapanuli Utara, 86.1% of mothers reported performing EIB, and 66.7% successfully continued Exclusive Breastfeeding to 6 months. In comparison, 80.6% of mothers in Samosir practiced EIB, while 55.6% adhered to Exclusive Breastfeeding. Overall, the prevalence of both EIB and EBF was higher in Tapanuli Utara than in Samosir.

Although Early Initiation of Breastfeeding was widely practiced in both districts, compliance for Exclusive Breastfeeding remained relatively lower, particularly in Samosir. The observed differences roughly 5.5% for EIB and 11.1% for EBF may appear small, yet they reflect meaningful disparities in breastfeeding practices between the two areas. These results indicate that reinforcing targeted breastfeeding education and support initiatives in Samosir could help reduce this deficits and boost compliance with the suggested breastfeeding guidelines.

DISCUSSION

This study provides meaningful perspectives on breastfeeding practices among weaving mothers in North Sumatra, with particular attention to Early Initiation of Breastfeeding (EIB) and Exclusive Breastfeeding (EBF). The discussion examines the distinct socio-economic and occupational constraints experienced by this group and contextualizes the findings within existing literature and theoretical perspectives on breastfeeding and maternal health behavior. Although multiple barriers to optimal breastfeeding were identified, the study also demonstrates the potential impact of context-specific interventions and underscores the need for policy-driven approaches to strengthen and sustain infant feeding behaviors in comparable communities.

Socio-Economic and Educational Factors

The findings show that the majority of weaving mothers in both Tapanuli Utara and Samosir had attained at least a secondary level of education, a relatively high educational profile for rural and economically disadvantaged contexts. Previous research indicates that higher levels of education are associated with improved knowledge and stronger compliance with recommended breastfeeding practices. The relatively good understanding of Early Initiation of Breastfeeding (IMD) and Exclusive Breastfeeding identified aligns with this evidence, underscoring the influence of education on health-related behaviors. However, financial constraints particularly the necessity to generate income through weaving continue to pose substantial challenges, since these mothers typically are without access to maternity support or breastfeeding-friendly workplace support (Nkoka et al., 2019; Woldeamanuel, 2020).

Implementation of IMD and ASI Eksklusif

The results indicate that both districts showed fairly high compliance with Early Initiation of Breastfeeding (IMD) and Exclusive Breastfeeding, with slightly higher adherence in Tapanuli Utara compared to Samosir. Globally, IMD is recognized for its significant health benefits, including reducing neonatal mortality and promoting early mother–infant bonding. These findings are consistent with previous studies highlighting the importance of immediate breastfeeding initiation for successful lactation and enhanced neonatal immune protection (UNICEF, 2021). Nevertheless, further analysis reveals that maternal occupational demands pose a substantial barrier to maintaining Exclusive Breastfeeding. Weaving, being a physically demanding job with limited flexibility, frequently interrupts the continuous care needed for sustained breastfeeding. This aligns with Shohaimi et al. (2022), who reported that informal employment negatively affects the duration of breastfeeding.

Occupational Constraints as Barriers to Breastfeeding

The considerable time demands and physical workload inherent in weaving present significant obstacles to sustaining Exclusive Breastfeeding. Previous literature supports this observation, noting that informal-sector employment often lacks institutional supports commonly found in formal workplaces, such as maternity leave and breastfeeding-friendly facilities (Saraha & Umanailo, 2020). In this study, mothers in Tapanuli Utara showed comparatively higher adherence to recommended breastfeeding practices, which may be attributed to stronger community support systems and improved access to healthcare services. This variation aligns with the findings of Kusumawati et al. (2018), who emphasized the role of locally tailored health education and community-based support in enabling mothers in resource-limited settings to continue breastfeeding despite demanding occupational conditions.

Breastfeeding challenges within mothers employed informal sector have been extensively documented, and the find consistent with global evidence. Hadisuyatmana et al. (2021) reported that communities with similar socio-economic profiles demonstrated higher adherence to Early Initiation of Breastfeeding (IMD) and Exclusive Breastfeeding when supported by strong community networks and flexible work arrangements. The present study reinforces this evidence by showing that effective breastfeeding support must address both socio-economic limitations and occupational demands simultaneously. Research from other low- and middle-income countries likewise indicates that mothers engaged in informal employment face greater vulnerability to breastfeeding difficulties due to the absence of structured workplace support compared with those in formal employment (Ahmed & Salih, 2019; Cohen et al., 2018; Rollins et al., 2016). Consequently, this study contributes to the international literature by emphasizing the necessity of context-specific interventions to support populations at increased risk.

The results of this study have significant implications for stunting prevention efforts and maternal health policy development in Indonesia. Interventions should prioritize the implementation of flexible work arrangements that enable mothers to continue breastfeeding without compromising their economic stability. Providing

workplace support, including designated breastfeeding areas and scheduled lactation breaks, may help reduce the occupational barriers identified. In addition, community-based breastfeeding facilities or mobile lactation services could serve as practical alternatives for weaving mothers and other women employed in comparable informal work environments.

This study further contributes to maternal health research by examining breastfeeding challenges specific to mothers working in the informal sector. Although the benefits of Early Initiation of Breastfeeding and Exclusive Breastfeeding are well established, limited research has explored the interaction between informal work conditions, maternal responsibilities, and adherence to recommended breastfeeding practices. By identifying the socio-economic and occupational barriers faced by weaving mothers, this study expands understanding of how context-sensitive interventions can improve breastfeeding outcomes in comparable populations. Moreover, the findings provide actionable insights for policymakers and health practitioners working in rural and resource-limited settings where informal employment predominates.

Beyond reaffirming the role of occupational and socio economic factors in shaping breastfeeding practices, this study offers a unique contribution by situating the analysis within the lived experiences of weaving mothers, a group that remains largely underrepresented in maternal health research. By adopting an occupation-specific lens, the study enriches the breastfeeding literature and highlights the necessity of integrating work-related contexts into the planning and delivery of breastfeeding support interventions

Moreover, this research represents one of the early efforts to evaluate breastfeeding compliance across two district with shared cultural backgrounds but differing levels of healthcare access and community support. This comparative perspective illustrates how environmental and infrastructural factors influence maternal breastfeeding behaviors. The policy-relevant insights generated may guide the development of targeted, workplace-aware breastfeeding interventions, thus contributing to national and international initiatives to lower stunting rates and enhance maternal and child health outcomes.

Although The research concentrates c chosen districts and the results obtained cannot be for sector remain breastfeeding challenges similar occupational and Future studies encompassing a broader range of enhance the generalizability and practical application

CONCLUSION

This study demonstrates that the practice of Early Initiation of Breastfeeding (IMD) and Exclusive Breastfeeding (EBF) within the group of mothers who weave in Tapanuli Utara and Samosir is influenced by both appropriate maternal knowledge and the demanding nature of weaving work. Although comparable levels of breastfeeding knowledge were identified across both regions, mothers in Tapanuli Utara exhibited more consistent breastfeeding practices, potentially

reflecting stronger social support networks and improved access to healthcare services.

The comparative findings indicate that difficulties in breastfeeding are influenced only by demands surrounding environment accessibility healthcare services. Socioeconomic determinants, including educational attainment and levels of community participation, play a significant role in fostering appropriate breastfeeding practices. Therefore, context-specific interventions are required for mothers engaged in informal employment, such as weavers, by strengthening community-based health education, promoting flexible working arrangements, and enhancing cross-sector collaboration to support the continuation of IMD and EBF. These strategies are crucial components of integrated stunting prevention efforts in rural settings with a high proportion of informal workers.

AUTHOR'S CONTRIBUTION STATEMENT

MS conceptualized & design, supervised the the data gathering procedure process, drafted the initial version of the manuscript. HP contribute p to the stage of analyzing and interpreting the findings, and critically revised the manuscript to improve its scholarly content. Both authors review & approved the final manuscript and take full respon for its accuracy and integrity.

CONFLICTS OF INTEREST

The authors declare that the authors have no competing interests concerning this manuscript. The research was conducted independently, free from any monetary or personal ties that could have impacted the study's findings or how they were interpreted.

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