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Challenges Faced by Working Mothers in Providing Exclusive Breastfeeding (EBF) Within Educational Institutions

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Abstract

Exclusive breastfeeding (EBF) is the recommended standard for infant nutrition, yet its practice among working mothers in educational institutions remains suboptimal. This literature review examines key challenges related to workplace environment, job demands, institutional support, and individual maternal conditions. Findings show that inflexible schedules, high workloads, and limited break times restrict opportunities for breastfeeding or milk expression. Inadequate facilities, including the lack of lactation rooms and proper milk storage, further reduce feasibility. Organizational culture and weak policy implementation also limit support from supervisors and colleagues. At the individual level, fatigue, stress, and health-related issues compound these barriers, particularly as mothers manage dual roles at work and at home. These findings indicate that challenges are interconnected and require integrated solutions. Strengthening institutional policies, improving facilities, and providing flexible work arrangements are essential to support the sustainability of EBF in educational settings.

Keywords: Exclusive Breastfeeding; Working Mothers; Educational Institutions; Workplace Support

1. Introduction

Exclusive breastfeeding (EBF) refers to the practice of feeding infants solely with breast milk from birth until six months of age, with no additional food or drink other than medicine and vitamins (Chetwynd et al., 2024). This practice is widely recommended as the gold standard for infant nutrition, given its significant role in supporting optimal growth, development, and overall health, with benefits ranging from a stronger immune system and reduced risk of infection to lower rates of morbidity and mortality (Amir et al., 2025). Beyond the infant, breastfeeding also brings meaningful benefits to mothers, including faster postpartum recovery, a reduced risk of breast and ovarian cancer, and a deeper emotional bond with their child (Khotimah et al., 2024). Despite these advantages, many mothers still struggle to sustain exclusive breastfeeding in practice, particularly working mothers in educational institutions, who frequently face limited time, inadequate facilities, and insufficient support to maintain the practice consistently.

Exclusive breastfeeding offers significant benefits for both infant and maternal health, yet in practice, working mothers particularly those in institutional settings like educational environments continue to face considerable barriers to making it work. Studies have found that inflexible schedules, heavy workloads, and short maternity leave are among the most common obstacles that make exclusive breastfeeding difficult to sustain (Syahri et al., 2024), and many workplaces simply lack the infrastructure to support breastfeeding mothers, such as no dedicated lactation rooms or set time to

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pump gaps that directly undermine breastfeeding success (Ekayanthi and Besral, 2024). The social environment at work plays a role too, including a lack of support from supervisors and colleagues, lingering stigma around breastfeeding in professional settings, and inconsistent childcare arrangements while mothers are at work (Prastita et al., 2025). On a more personal level, fatigue, stress, low confidence, and the difficulty of applying breastfeeding knowledge under real working conditions further chip away at a mother's ability to breastfeed exclusively (Cunningham et al., 2024). Research also points to job type as a factor, where roles that demand high mobility or frequent face-to-face interaction tend to pose greater challenges than more flexible positions. Taken together, the structural, social, and individual dimensions of this issue place working mothers in a particularly vulnerable position when it comes to maintaining exclusive breastfeeding over the long term.

Although exclusive breastfeeding is recommended for the first six months of life, working mothers in educational institutions continue to face a complex set of barriers that undermine this practice. Studies among university employees reveal that workplace support covering technical resources, physical environment, break time, and institutional policy frequently falls short, ultimately affecting breastfeeding continuity once mothers return to work (Pérez-Escamilla et al., 2020). In Nigeria, roughly 30.2% of working mothers cited heavy academic and administrative workloads alongside inflexible schedules as significant obstacles, with work schedules emerging as the primary barrier to exclusive breastfeeding (Ojo et al., 2020). Health-related factors compound the problem further: a national study by Adebayo et al. (2020) found that 58.7% of mothers reported health condition-related constraints, 52.4% faced issues tied to their infant's condition, 39.2% experienced nipple soreness or pain, and 36.9% struggled with insufficient milk supply all of which directly impede successful breastfeeding. Beyond these physical challenges, the absence of meaningful support from colleagues and supervisors, combined with a generally low regard for the importance of workplace lactation facilities, worsens the situation (Anibijuwon and Esimai, 2020). Limited knowledge and skills around exclusive breastfeeding including expressed milk management serve as an additional layer of difficulty that reduces mothers' ability to sustain optimal breastfeeding practices.

Upon closer examination, the barriers encountered by working mothers in educational and university settings are notably complex, as they must balance dual roles simultaneously. On one hand, academic and professional demands often limit opportunities for breastfeeding or milk expression (Ojo et al., 2020). On the other hand, institutional support remains inadequate, including the lack of clear policies, limited access to information, and insufficient facilities such as lactation rooms and milk storage (Ndzi et al., 2024). These challenges are further intensified by academic work cultures that emphasize high productivity and offer limited flexibility (Hentges and Pilot, 2021), along with inconsistent support from colleagues and supervisors and restricted time for milk expression (Ibekwe et al., 2022). As a result, many mothers struggle to maintain exclusive breastfeeding optimally amid these overlapping demands.

Although numerous studies have examined the barriers to exclusive breastfeeding among working mothers, particularly within educational institutional settings, research that comprehensively integrates individual factors, occupational environment, and institutional support within a unified framework remains limited. Therefore, this study aims to identify and analyze the various constraints experienced by working mothers in sustaining exclusive breastfeeding practices within educational settings. The findings of this study are expected to yield a more nuanced understanding that may serve as a foundation for formulating evidence-based strategies and policies that are more conducive to supporting exclusive breastfeeding practices within educational work environments.

2. Materials and methods

This study employed a literature review method aimed at identifying and analyzing the barriers faced by working mothers in providing exclusive breastfeeding within educational institutions. Literature was collected from electronic databases including PubMed, ScienceDirect, Web of Science, and Google Scholar using keywords such as "exclusive breastfeeding", "working mothers", "educational institution", "breastfeeding barriers", "university workplace" and "lactation support", combined using Boolean operators AND and OR to obtain relevant and comprehensive articles. Inclusion criteria comprised original research articles and review focused on working mothers in formal educational settings including schools and universities, and available in full text in English or Indonesian. Articles were excluded if they involved non-working mother populations, focused outside the education settings, consisted of opinion pieces without empirical data, or were irrelevant to the barriers of exclusive breastfeeding in the workplace. Selection was conducted through stepwise title and abstract screening, followed by full-text review to confirm eligibility. Articles meeting the criteria were then systematically analyzed through thematic identification, cross-study synthesis, and structured scientific narrative construction organized around four discussion themes: individual maternal conditions, work demands and dual roles, workplace environment and support, and institutional policies and facilities.

3. Result and discussion

3.1. Individual Conditions of Breastfeeding Mothers

Individual maternal conditions play a significant role in determining the success of exclusive breastfeeding, particularly among working mothers in educational institutions. Physical health factors are among the most dominant constraints, where maternal health problems and infant-related conditions directly interfere with breastfeeding continuity. Evidence shows that 58.7% of mothers report personal health issues, while 52.4% experience challenges related to their infant's condition, both of which reduce the ability to sustain exclusive breastfeeding (Adebayo et al., 2020). In addition, technical breastfeeding problems such as nipple pain or injury and insufficient milk supply further complicate the process, especially when combined with work-related fatigue (Ibekwe et al., 2022). These physiological barriers indicate that breastfeeding success is not solely dependent on external support but also on maternal physical readiness.

Psychological factors also substantially influence breastfeeding practices. Working mothers frequently experience stress, fatigue, and emotional pressure due to the dual demands of professional responsibilities and childcare (Cunningham et al., 2024). This psychological burden can reduce confidence in breastfeeding ability and disrupt consistency in milk expression routines. In academic environments, the pressure to maintain productivity and meet performance targets intensifies this stress, making it more difficult for mothers to prioritize breastfeeding (Ojo et al., 2020). Over time, these conditions may lead to early supplementation or discontinuation of exclusive breastfeeding, even when mothers have adequate knowledge about its benefits.

Knowledge and self-efficacy are additional individual determinants that affect breastfeeding outcomes. Although many mothers are aware of the benefits of exclusive breastfeeding, translating this knowledge into practice remains challenging under real working conditions (Chetwynd et al., 2024). Limited skills in managing expressed breast milk, including storage and handling, can reduce mothers' confidence and effectiveness in maintaining breastfeeding routines (Ekayanthi and Besral, 2024). Furthermore, mothers with higher educational backgrounds tend to have better understanding and stronger motivation to sustain breastfeeding, although this does not always overcome structural and occupational barriers (Ibekwe et al., 2022).

Motivation and personal commitment are often the final determining factors in sustaining exclusive breastfeeding. Studies indicate that strong internal motivation can help mothers persist despite significant workplace and physical challenges (Ibekwe et al., 2022). However, in the absence of adequate support systems, maintaining this motivation becomes increasingly difficult over time. In some cases, mothers rely heavily on personal coping strategies to balance their dual roles, which may not be sustainable in the long term (Anibijuwon and Esimai, 2020). This highlights that while individual resilience is important, it cannot fully compensate for the absence of supportive environments and institutional structures.

3.2. Work Demands and Dual Roles

Work demands remain one of the most consistent barriers faced by breastfeeding mothers in educational institutions. Academic environments require high productivity, strict schedules, and continuous performance, which leave little room for breastfeeding activities. Many mothers struggle to maintain regular pumping routines because teaching schedules, meetings, and administrative tasks are often fixed and difficult to adjust (Hentges and Pilot, 2021). Empirical data show that work schedules are perceived as a major obstacle by a significant proportion of working mothers, with around 30.2% identifying it as a primary challenge to exclusive breastfeeding (Adebayo et al., 2020). These constraints are further reinforced by institutional expectations that prioritize output over personal needs, making breastfeeding practices harder to sustain over time (Ndzi et al., 2024).

The intensity of workload in academic settings also contributes to the disruption of breastfeeding routines. Mothers are frequently required to meet teaching targets, research outputs, and administrative responsibilities simultaneously, even shortly after returning from maternity leave. This accumulation of responsibilities often forces mothers to delay or skip pumping sessions, which can negatively affect milk production (Cervera-Gasch et al., 2020). Among student mothers, the situation becomes even more demanding, as academic pressure alone is reported by 72% of respondents as a major barrier, alongside increased workload reported by 67% (Ojo et al., 2020). These findings indicate that both formal employment rolls and academic responsibilities generate similar patterns of constraint that interfere with breastfeeding continuity.

At the same time, breastfeeding mothers are required to navigate dual roles that extend beyond the workplace. In addition to professional responsibilities, they must manage childcare, household duties, and emotional caregiving. This

overlap creates a persistent role conflict, where time and energy must be divided between competing priorities (Anibijuwon and Esimai, 2020). The challenge is not only logistical but also psychological, as mothers often feel pressure to perform well in both domains without adequate support. Studies show that this dual burden can lead to exhaustion, reduced focus, and decreased motivation to continue exclusive breastfeeding (Cunningham et al., 2024).

In many cases, the absence of institutional adjustments intensifies the strain of these dual roles. Workplaces rarely modify workload expectations or provide flexible arrangements that reflect the realities of postpartum recovery and breastfeeding needs. As a result, mothers often rely on personal coping strategies, such as working longer hours, multitasking, or sacrificing rest time to meet both family and professional demands (Ibekwe et al., 2022). While some are able to maintain breastfeeding under these conditions, the sustainability of such efforts is limited. This suggests that without structural changes in how work demands are organized, the burden of managing dual roles will continue to fall disproportionately on mothers, affecting their ability to sustain exclusive breastfeeding.

3.3. Workplace Environment and Support

The physical work environment within educational institutions plays a critical role in shaping the success of exclusive breastfeeding practices. Many universities still lack adequate lactation facilities in terms of accessibility, privacy, and comfort, which directly affects mothers' ability to express milk during working hours (Hentges and Pilot, 2021; Ndzi et al., 2024). In several cases, mothers are required to use multi-purpose rooms or first-aid spaces that are not designed for breastfeeding, leading to discomfort and reduced efficiency during pumping (Ndzi et al., 2024). Limited access to hygienic milk storage and shared facilities further discourages mothers from utilizing available resources (Cervera-Gasch et al., 2020). These structural gaps demonstrate that insufficient physical infrastructure remains a key barrier to sustaining exclusive breastfeeding in workplace settings (Ekayanthi and Besral, 2024).

From an organizational perspective, work flexibility is a central determinant in supporting breastfeeding practices. In academic settings, rigid teaching schedules and high professional demands often restrict opportunities for regular milk expression (Hentges and Pilot, 2021). The absence of designated break times for breastfeeding, combined with heavy workloads, forces mothers to skip pumping sessions, which can negatively impact milk production (Cervera-Gasch et al., 2020). Evidence also indicates that the lack of formal workplace policies regulating breastfeeding breaks contributes significantly to early discontinuation of exclusive breastfeeding (Pérez-Escamilla et al., 2020). This highlights the importance of institutional work arrangements in enabling or constraining breastfeeding continuity.

Social support within the workplace further influences breastfeeding outcomes. Mothers who receive active support from colleagues and supervisors tend to maintain breastfeeding for longer durations (Cervera-Gasch et al., 2020). However, many studies report that workplace environments remain insufficiently supportive, both emotionally and practically (Prastita et al., 2025; Ibekwe et al., 2022). Gender dynamics also affect perceived support, as women working in female-dominated environments or under female supervisors often report more positive experiences (Hentges and Pilot, 2021). In contrast, male-dominated environments can create discomfort and reduce openness in discussing breastfeeding needs (Ndzi et al., 2024).

Institutional support in the form of clear policies and effective communication is also frequently lacking. Many mothers are unaware of their rights regarding breastfeeding breaks and available facilities due to limited dissemination of information by management (Hentges and Pilot, 2021). Information related to workplace breastfeeding support is often fragmented and difficult to access (Ndzi et al., 2024). The absence of explicit lactation policies reinforces the perception that breastfeeding is not a priority within institutional agendas (Ndzi et al., 2024). This indicates that without structured policies and consistent implementation, educational institutions remain inadequately equipped to support exclusive breastfeeding among working mothers.

3.4. Institutional Policies and Facilities

Institutional policies remain a critical yet often underdeveloped component in supporting exclusive breastfeeding within educational settings. Many studies highlight the absence of clear and specific workplace policies that regulate breastfeeding practices, leaving mothers without formal guidance or protection when they return to work (Hentges and Pilot, 2021; Ndzi et al., 2024). In several cases, mothers are not adequately informed about their rights to breastfeeding breaks or available support systems, which forces them to independently negotiate their needs in the workplace (Pérez-Escamilla et al., 2020; Ekayanthi and Besral, 2024). This lack of structured policy communication contributes to inconsistencies in implementation and reinforces the perception that breastfeeding is not institutionally prioritized.

In addition to policy gaps, the availability and quality of facilities significantly influence breastfeeding practices. Evidence shows that many universities lack dedicated lactation rooms, or provide spaces that do not meet basic

standards of privacy, comfort, and hygiene (Ndzi et al., 2024; Hentges and Pilot, 2021). Some institutions rely on multi-purpose rooms or temporary spaces, which can compromise both convenience and psychological comfort for mothers (Cervera-Gasch et al., 2020; Anibijuwon and Esimai, 2020). Furthermore, limited access to proper storage facilities for expressed milk and the absence of supporting infrastructure reduce the practicality of maintaining breastfeeding routines during working hours (Ekayanthi and Besral, 2024; Cervera-Gasch et al., 2020).

The effectiveness of institutional support also depends on how policies and facilities are integrated into daily work practices. Even in institutions that promote gender equality or inclusivity, breastfeeding is often overlooked as a specific and practical need (Ndzi et al., 2024; Prastita et al., 2025). In some cases, policy initiatives exist only at a formal level without meaningful implementation, which limits their impact on mothers' real experiences (Hentges and Pilot, 2021; Ibekwe et al., 2022). This disconnect between policy design and execution creates a gap where mothers continue to face structural barriers despite the presence of institutional commitments.

Ultimately, the lack of comprehensive policy frameworks and adequate facilities shifts the burden of breastfeeding management onto individual mothers. Without clear regulations, accessible infrastructure, and consistent institutional support, mothers must rely on personal strategies to sustain breastfeeding under constrained conditions (Anibijuwon and Esimai, 2020; Cunningham et al., 2024). This situation reduces the likelihood of maintaining exclusive breastfeeding over time and highlights the need for integrated approaches that combine policy clarity, facility provision, and organizational commitment (Pérez-Escamilla et al., 2020; Ekayanthi and Besral, 2024).

4. Conclusion

Working mothers in educational institutions face multiple, overlapping challenges in maintaining exclusive breastfeeding, driven by rigid work demands, dual role pressures, limited facilities, and weak institutional support. Inflexible schedules and high workloads restrict time for breastfeeding, while inadequate lactation spaces and unclear policies reduce practical feasibility. At the same time, mothers must balance professional responsibilities with childcare, which increases fatigue and stress and disrupts breastfeeding routines. These conditions show that the issue is not caused by a single factor, but by the interaction between workplace structure, organizational culture, and individual capacity. Improving breastfeeding outcomes requires institutions to provide clear policies, accessible facilities, and flexible work arrangements that align with the real needs of working mothers

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that there are no conflicts of interest related to this study.

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