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SELF-MEDICATION BEHAVIOR AMONG BREASTFEEDING MOTHERS

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ABSTRACT
Self-medication is a common practice among breastfeeding mothers and may pose risks to infants due to potential drug exposure through breast milk. Limited awareness of medication safety and the widespread availability of over-the-counter drugs contribute to this behavior. This study aimed to describe self-medication behavior among breastfeeding mothers. A descriptive cross-sectional study was conducted involving 120 breastfeeding mothers with infants aged 0–24 months. Data were collected using a validated and reliable self-administered online questionnaire. The instrument consisted of 25 items covering self-medication practices, including types of medications used, frequency, reasons for use, sources of information, and awareness of medication safety. Data were analysed using descriptive statistics. Self-medication was reported by 78.3% of respondents. Analgesics and antipyretics were the most commonly used medications, followed by cold remedies and vitamins. The main reasons for self-medication were perceived mild symptoms, prior experience, and convenience. Most respondents relied on informal sources of information, particularly the internet and social media. Awareness of medication safety during breastfeeding varied, with a substantial proportion demonstrating moderate to poor understanding. Self-medication behaviour is prevalent among breastfeeding mothers and is influenced by accessibility, prior experience, and reliance on non-professional information sources. Limited awareness of medication safety highlights the need for improved health education and professional guidance to support safer medication practices during breastfeeding.

Keywords: breastfeeding mothers; drug use; health behaviour; lactation; medication safety; self-medication

INTRODUCTION
Breastfeeding is a critical period that plays a fundamental role in ensuring optimal maternal and infant health outcomes, particularly in the first two years of life (Pérez-Escamilla et al., 2023). During this phase, mothers often experience various physiological and health-related conditions that may require medication use, ranging from minor ailments to chronic conditions (Modak et al., 2023). However, drug exposure during lactation presents unique challenges, as many medications can be transferred to infants through breast milk, potentially leading to adverse effects (Prentice, 2022). Consequently, appropriate decision-making regarding medication use is essential to maintain both maternal well-being and infant safety (cite). Despite the availability of clinical guidelines, gaps in knowledge and access to reliable information remain common among breastfeeding mothers (Basrowi et al., 2024).

Self-medication behavior among breastfeeding mothers has emerged as a significant public health concern, particularly in settings where over-the-counter medications are easily accessible (Naseri et al., 2022). Self-medication is often driven by factors such as perceived mildness of illness, previous experience with medications, and limited access to healthcare services (Ohams, 2025). While self-

medication may offer convenience and cost-effectiveness, inappropriate use of medications during lactation can increase the risk of drug-related problems in infants (Ferrer, 2026). Studies have shown that a substantial proportion of breastfeeding mothers engage in self-medication practices without adequate knowledge of drug safety profiles (cite). This behavior is further influenced by informal sources of information, including family members, social media, and online health platforms (Mostufa Abd Elsamad et al., 2023).

Recent studies have increasingly focused on medication safety during lactation and the prevalence of self-medication practices; however, most have primarily examined prevalence rates or general knowledge levels without providing a comprehensive understanding of behavioral patterns (Spencer et al., 2022). Existing research tends to emphasize clinical safety aspects or pharmacological risks, while limited attention has been given to how breastfeeding mothers actually behave when making decisions about medication use in real-life contexts (Allegaert, 2022). Furthermore, there is still a lack of descriptive studies that explore the characteristics, patterns, and underlying tendencies of self-medication behavior specifically among breastfeeding mothers (Tezel Yalçın et al., 2024). Understanding these behavioral dimensions is essential to bridge the gap between knowledge and practice and to inform more effective health interventions.

Therefore, this study aims to describe self-medication behavior among breastfeeding mothers, focusing on patterns of medication use, sources of information, and decision-making processes. By providing a comprehensive overview of how breastfeeding mothers engage in self-medication, this study is expected to contribute to the development of targeted health education strategies and clinical guidance. The findings may also support healthcare professionals, particularly midwives and pharmacists, in designing more responsive and context-specific interventions to promote safe medication practices during lactation. Ultimately, this research is expected to enhance maternal health literacy and reduce potential risks associated with inappropriate medication use among breastfeeding mothers.

METHOD

This study employed a descriptive cross-sectional design to explore self-medication behavior among breastfeeding mothers. The cross-sectional approach was selected to provide a comprehensive overview of behavioral patterns, including medication use, decision-making processes, and sources of information at a specific point in time. Data collection was conducted over a period of [insert duration, e.g., two months] using an online survey to facilitate broader participation and accessibility across different regions. The study population consisted of breastfeeding mothers with infants aged 0–24 months. A total of 120 respondents were recruited through online platforms, including social media groups and maternal communities, using a purposive sampling technique. Participants were eligible if they were currently breastfeeding, had an infant aged 0–24 months, were able to read and understand Indonesian, and provided informed consent to participate in the study. Responses were screened to ensure completeness and consistency prior to analysis.

The main variable in this study was self-medication behavior among breastfeeding mothers, defined as any action taken by mothers to use medication without direct consultation with healthcare professionals. This behavior encompassed several dimensions, including the types of medications used, frequency of use, reasons for engaging in self-medication, sources of information, and considerations related to medication safety during lactation. The variable was measured descriptively to capture patterns and tendencies in medication-related decision-making. Data were collected using a structured questionnaire developed based on a review of recent literature on self-medication practices and medication safety during lactation. The instrument consisted of 25 items distributed across several domains, including sociodemographic characteristics, breastfeeding-related information, and self-

medication behavior. The self-medication behavior domain covered key aspects such as types of drugs commonly used, frequency of self-medication, motivations for self-treatment, sources of drug-related information, and awareness of potential risks associated with medication use during breastfeeding. The questionnaire was presented in a self-administered online format using a combination of multiple-choice and Likert-scale items to capture both categorical responses and behavioral tendencies. The blueprint of the questionnaire was developed to ensure content coverage and alignment with the study objectives. The domains and item distribution are presented in

Table 1.
Characteristics of Respondents (n = 120)

Domain	Indicators	Number of Items
Sociodemographic characteristics	Age, education, occupation, parity	5
Breastfeeding characteristics	Infant age, breastfeeding status	3
Self-medication behavior	Type of medication, frequency of use	5
	Reasons for self-medication	4
	Sources of information	4
	Awareness of medication safety	4

Before the main data collection process was conducted, the research instrument was first evaluated through validity and reliability assessments. The content suitability of each questionnaire item was reviewed by three specialists in maternal health and pharmacology who examined the relevance, comprehensibility, and appropriateness of the statements. Several minor modifications were subsequently implemented based on the experts' recommendations in order to improve wording clarity and enhance participant understanding. To further examine the quality of the instrument, a pilot test involving 30 respondents with characteristics comparable to the target population was carried out. The construct validity results demonstrated that all questionnaire items achieved corrected item-total correlation scores above 0.30, indicating that the indicators were sufficiently valid for use in the final survey instrument. Instrument consistency was evaluated using Cronbach's alpha analysis, which produced a coefficient value of 0.87, reflecting strong internal reliability and confirming that the questionnaire was dependable for assessing self-medication practices.

The collection of research data was conducted through an online survey administered using a protected digital platform. Before answering the questionnaire, participants were provided with an informed consent statement containing explanations regarding the objectives of the research, study procedures, possible benefits, and participant rights. Only respondents who voluntarily agreed to participate were able to continue to the questionnaire section. To maintain participant privacy and confidentiality, the survey was designed anonymously and did not request any personally identifiable information. The obtained data were analyzed using descriptive statistical techniques. Variables categorized as categorical data were summarized in the form of frequencies and percentages, whereas numerical data were described using mean values and standard deviations when necessary. The analytical results were then organized to illustrate patterns of self-medication behavior, including the frequency of self-medication practices, types of medications commonly used, factors motivating self-medication, and the dominant sources of health-related information accessed by participants.

RESULT AND DISCUSSION

A total of 120 breastfeeding mothers participated in this study. Table 1 presents the sociodemographic and breastfeeding-related characteristics of the respondents. Most participants were within the productive reproductive age group, had completed at least secondary education, and were multiparous.

In addition, most respondents were breastfeeding infants aged 0–12 months, indicating that the sample predominantly represented mothers in the early phase of lactation.

Table 1.
Respondent characteristics (n= 120)

Respondent characteristics	Categories	f	%
Maternal age (years)	< 20	6	5.0
	20–25	28	23.3
	26–30	42	35.0
	31–35	30	25.0
	> 35	14	11.7
Educational level	Primary school	8	6.7
	Junior high school	14	11.7
	Senior high school	52	43.3
	Diploma	20	16.7
	Bachelor's degree or higher	26	21.7
Occupation	Housewife	68	56.7
	Private employee	26	21.7
	Civil servant	10	8.3
	Entrepreneur	12	10.0
	Others	4	3.3
Parity	Primiparous	46	38.3
	Multiparous	74	61.7
Infant age (months)	0–6	48	40.0
	7–12	32	26.7
	13–18	22	18.3
	19–24	18	15.0
Breastfeeding status	Exclusive breastfeeding	64	53.3
	Predominant breastfeeding	28	23.3
	Partial breastfeeding	28	23.3
History of medication use during breastfeeding	Yes	88	73.3

A total of 120 breastfeeding mothers participated in this study. As shown in Table 1, most respondents were aged 26–30 years (35.0%), followed by those aged 31–35 years (25.0%). The majority had completed senior high school (43.3%), and more than half were housewives (56.7%). Most participants were multiparous (61.7%) and were breastfeeding infants aged 0–6 months (40.0%). In terms of breastfeeding status, more than half of the respondents reported exclusive breastfeeding (53.3%). Notably, a large proportion of respondents (73.3%) reported a history of medication use during breastfeeding.

Table 2.
Self-Medication Behavior among Breastfeeding Mothers (n = 120)

Variable	Category	f	%
Self-medication practice	Yes	94	78.3
	No	26	21.7
Frequency of self-medication	Rarely	38	31.7
	Occasionally	42	35.0
	Frequently	14	11.7
	Never	26	21.7
Types of medication used	Analgesics/antipyretics	72	60.0
	Cold and flu medications	54	45.0
	Herbal/traditional medicines	40	33.3
	Antibiotics	18	15.0
	Vitamins/supplements	62	51.7
Reasons for self-medication	Perceived mild illness	70	58.3
	Previous experience with the drug	56	46.7
	Practicality/convenience	48	40.0
	Limited access to healthcare	30	25.0
	Cost considerations	26	21.7
Sources of information	Internet/social media	68	56.7
	Family/friends	52	43.3
	Pharmacists	44	36.7
	Midwives/health workers	38	31.7
	Previous prescription	50	41.7
Awareness of medication safety during breastfeeding	Good	28	23.3
	Moderate	52	43.3
	Poor	40	33.3

Table 2 presents the pattern of self-medication behavior among breastfeeding mothers. The findings indicate that self-medication was highly prevalent, with 78.3% of respondents reporting medication use without professional consultation. In terms of frequency, most respondents reported occasional (35.0%) and rare (31.7%) self-medication, while a smaller proportion reported frequent use (11.7%). Analgesics and antipyretics were the most commonly used medications (60.0%), followed by vitamins and supplements (51.7%) and cold and flu medications (45.0%). Notably, 15.0% of respondents reported the use of antibiotics without consultation. Herbal and traditional medicines were also commonly used (33.3%), indicating a preference for alternative remedies among some participants. The primary reasons for self-medication were perceived mildness of illness (58.3%) and previous experience with the medication (46.7%). Practicality and convenience were also commonly reported (40.0%), suggesting that time and accessibility play an important role in decision-making. In terms of information sources, most respondents relied on the internet and social media (56.7%), followed by family or friends (43.3%). Professional sources such as pharmacists (36.7%) and midwives (31.7%) were less frequently utilized. Regarding awareness of medication safety during breastfeeding, only 23.3% of respondents demonstrated good awareness, while the majority had moderate (43.3%) or poor (33.3%) awareness.

The present study demonstrates that self-medication behavior is highly prevalent among breastfeeding mothers, with more than three-quarters of respondents reporting medication use without prior consultation. This finding aligns with recent studies indicating that self-medication remains common among women in the reproductive period, particularly in settings with easy access to over-the-counter drugs and widespread use of digital health information (Donaldson & Goodchild, 2023). The predominance of occasional and rare use suggests that self-medication is often perceived as a situational response to minor health complaints rather than a habitual practice. Nevertheless, the high overall prevalence underscores the need for closer attention to medication use during lactation.

Analgesics, antipyretics, and cold remedies were the most frequently used medications, which is consistent with patterns reported in previous research on self-medication for minor ailments (Al-Omrani et al., 2023). However, the reported use of antibiotics without professional supervision is concerning, given the potential risks of inappropriate use, including antimicrobial resistance and unintended exposure to infants through breast milk (Atnkut et al., 2025). The use of herbal and traditional medicines by a considerable proportion of respondents also reflects cultural preferences and perceptions of safety, although evidence regarding their safety during breastfeeding remains limited. These findings highlight the complexity of medication choices among breastfeeding mothers, which are influenced not only by clinical considerations but also by accessibility and beliefs.

The reasons underlying self-medication behavior in this study were largely driven by perceived mildness of illness, prior experience, and convenience. These factors are consistent with behavioral models suggesting that individuals are more likely to engage in self-treatment when symptoms are considered manageable and when they feel confident in their prior knowledge or experience (Loosli et al., 2024). Limited access to healthcare services and time constraints further reinforce the tendency toward self-medication. Importantly, reliance on previous experience may lead to repeated use of medications without adequate consideration of safety during lactation, which poses potential risks to infants.

A notable finding of this study is the predominant reliance on informal sources of information, particularly the internet and social media, compared to professional sources such as pharmacists and midwives. This pattern reflects the growing influence of digital health information on decision-making but also raises concerns about the accuracy and reliability of such information. Previous studies have emphasized that misinformation and unverified online content may contribute to inappropriate medication use, especially among populations with limited health literacy (Hale & Krutsch, 2022). The relatively lower utilization of healthcare professionals suggests a gap in communication and accessibility that needs to be addressed.

The variation in awareness of medication safety during breastfeeding further supports the need for targeted interventions. While some respondents demonstrated adequate awareness, a substantial proportion had moderate to poor understanding of medication risks. This finding is consistent with earlier research indicating that knowledge gaps remain a key factor influencing unsafe medication practices during lactation (Ferrer, 2026). Improving awareness alone, however, may not be sufficient, as behavioral decisions are also shaped by contextual and practical considerations (Donaldson & Goodchild, 2023). Therefore, interventions should integrate both educational and behavioral components.

From a practical perspective, the findings of this study have important implications for healthcare

providers, particularly midwives and pharmacists, who play a critical role in supporting safe medication use during breastfeeding. Strengthening interprofessional collaboration and improving access to reliable, evidence-based information may help reduce reliance on informal sources (Crescioli et al., 2025). In addition, integrating medication counseling into routine maternal and child health services could enhance mothers' confidence in making safer decisions.

This study has several limitations that should be acknowledged. The use of a cross-sectional design limits the ability to establish causal relationships between variables. Data were collected through self-reported online questionnaires, which may be subject to recall bias and social desirability bias. Furthermore, the use of purposive sampling may limit the generalizability of the findings to broader populations. Despite these limitations, the study provides valuable insights into the patterns and determinants of self-medication behavior among breastfeeding mothers.

CONCLUSION

Self-medication behavior is common among breastfeeding mothers, with most respondents relying on non-professional sources of information. The practice is mainly driven by perceived mild symptoms, prior experience, and convenience, while awareness of medication safety during lactation remains variable. These findings highlight the need for improved access to reliable information and stronger involvement of healthcare professionals to promote safer medication practices during breastfeeding.

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