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Non-Professional Sources of Breastfeeding Advice Received During Antenatal Period by Primiparous Mothers Admitted to the Teaching Hospital, Peradeniya, Sri Lanka

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ABSTRACT

Introduction: Inadequate information before childbirth can result in improper breastfeeding practices. While professional guidance is essential, family and friends also play a significant role in providing breastfeeding support to mothers. However, there is a notable knowledge gap regarding non-professional sources of breastfeeding information available to first-time mothers in Sri Lanka. This study aimed to identify non-healthcare professional sources of breastfeeding advice, such as family and friends with prior breastfeeding experience, accessed by primiparous mothers during pregnancy. **Methods:** A descriptive cross-sectional study was conducted using a self-administered, pre-tested questionnaire distributed among 262 primipara mothers. Data were gathered regarding impact of the family/ friends on providing information regarding breastfeeding. The sociodemographic characteristics were examined using frequency distributions, with summary statistics and bar graphs employed for visual representation. The Chi-square test was used to compare independent and dependent variables. **Results:** Primiparous mothers received information from both professional (95%) and non-professional sources (89.2%). The primary non-professional source was their own mother (75%), followed by contributions from mother-in-law, sisters, friends, and colleagues. The topics discussed included breastfeeding techniques, common problems and remedies, assessing breastfeeding adequacy, and the use of formula milk. Additionally, the internet was the most widely used non-human source of information, with 66.9% of mothers accessing it for breastfeeding-related guidance. **Conclusion:** The present study concludes that a significant proportion of pregnant mothers receive information on breastfeeding initiation, techniques, and managing problems from close family members and friends. However, since the study did not assess the quality and accuracy of the information provided, further qualitative research or studies with a broader scope are recommended to evaluate these aspects.

Keywords: Breastfeeding, primiparous mothers, non-professional, pregnancy, sources



INTRODUCTION

Exclusive breastfeeding for up to six months and subsequently with supplementary feeding till the age of two years is recommended in Sri Lanka due to its benefits to the infant as well as the mother. Exclusive breastfeeding reduces neonatal morbidity especially neonatal sepsis by about 22% (1). Suboptimal breastfeeding is responsible for the death of nearly 600,000 children annually due to diarrhoea and pneumonia (2). Exclusive breastfeeding is beneficial for women because it ensures better reproductive and postmenopausal health (3).

A study conducted in Sri Lanka identified several key factors contributing to breastfeeding failure, including the lack of antenatal health education before hospital admission, absence of prior breastfeeding experience, and discharge within 24 hours after delivery (4). Additionally, a study in a rural area of Sri Lanka reported that 32% of babies under three months of age were fed formula milk, with difficulties in breastfeeding being a significant reason for initiating formula feeding (5).

Recent studies indicate that breastfeeding duration is influenced by a range of factors, including maternal characteristics (age, BMI, education, smoking status), socioeconomic factors (income, employment), healthcare-related aspects (delivery method, baby-friendly hospital practices, breastfeeding support), infant characteristics (birth weight, timing of first breastfeeding), and cultural influences (family structure and support, cultural beliefs and practices, media exposure, and breastfeeding education) (6,7,8). These factors interact in complex ways to influence breastfeeding duration, highlighting the need for comprehensive support strategies to promote and protect breastfeeding practices.

Antenatal counselling has a significant positive impact on mothers' knowledge, attitude, and practice of breastfeeding (9). A study in Sri Lanka revealed that approximately 16% of primiparous mothers had breast or nipple abnormalities, yet 92% of them successfully breastfed with appropriate support and advice provided during pregnancy and immediately after childbirth (10). Antenatal guidance plays a critical role in establishing successful breastfeeding. Mothers receive breastfeeding advice through both

professional channels and non-professional sources, such as family members, friends, and coworkers. However, there is limited research exploring and evaluating the breastfeeding education received from non-professional sources during pregnancy.

A systematic review conducted using Web of Science, Scopus, and PubMed identified eight studies examining the influence of older generations' attitudes or experiences on breastfeeding. Five of these studies reported a significant positive impact on breastfeeding when the infant's grandmother had prior breastfeeding experience or held positive attitudes toward breastfeeding (11). A prospective descriptive study conducted among first-time mothers found a strong correlation between breastfeeding knowledge, breastfeeding confidence, and the actual duration of lactation (5). Additionally, a recent study in Sri Lanka concluded that poor support and social norms, along with other factors, contributed to the introduction of water and formula to infants aged 2-3 weeks (12).

This study aimed to determine the sources of information regarding breastfeeding received before delivery by first-time pregnant mothers from non-healthcare professional resources such as close family members and other non-related individuals such as workmates and friends who had previous experience with breastfeeding.

METHOD

This descriptive, cross-sectional study was conducted at the Teaching Hospital, Peradeniya, a tertiary care facility in the central province of Sri Lanka. The study setting, the hospital's obstetric unit, staffed by at least seven obstetricians at a given time, handles 400-500 deliveries per month. The study was carried out among primiparous mothers admitted to the hospital from December 2019 to February 2020. Mothers with psychiatric disorders or medical conditions contraindicating breastfeeding were excluded from the study.

A pre-tested, self-administered, structured questionnaire was used for data collection. The questionnaire consisted of two parts: Part A and

Part B. Part A assessed the socio-demographic data of the mother, while Part B focused on the sources and details of breastfeeding education received before hospital admission. Both parts were completed by the mother upon admission to the ward and before delivery.

Informed written consent was obtained prior to data collection after explaining the study's purpose. Data collection was conducted by the principal investigator using the self-administered questionnaire in the obstetric wards of the Teaching Hospital, Peradeniya. The questionnaire was pre-tested on 10 primiparous mothers admitted to the hospital a few months prior to the study, and these mothers were not included in the study sample. Modifications were made to the questionnaire based on the pre-test results to improve the clarity.

Ethical clearance was obtained from the Ethics Review Committee of the Faculty of Allied Health Sciences, University of Peradeniya. The administrative clearance was obtained to conduct the study from the director, of Teaching Hospital Peradeniya. Privacy and confidentiality were strictly maintained throughout the study.

The collected data were entered into an Excel spreadsheet and analysed using SPSS (Statistical Package for Social Sciences) version 22. Sociodemographic characteristics were analysed using frequency distributions, and summary statistics along with bar graphs were used for visual representation. The Chi-square test was applied to compare independent and dependent variables.

RESULTS

During the study period, data were collected from a total of 262 primiparous mothers who were admitted to the Teaching Hospital, Peradeniya for confinement. Data from 20 participants were excluded due to information errors. A total of 242 participant data were included in the final analysis.

Socio-demographic Characteristics

The demographic data were analysed using the information obtained through the first part of the questionnaire. There were 6 (2.47%) participants

less than 20 years in age, 214 (88.42%) belonged to the 20-35yr age group and 22 (9.09%) of the participants were older than 35 years. When considering the ethnic distribution of the study group; 80.16% were Sinhalese, 15.3% were Tamils and 4.54% were Muslims.

The education level of the mothers was analysed. Out of these 242 mothers, 94 (38.84%) had education up to (G.C.E) Ordinary level, the majority 102 (42.14%) had education up to (G.C.E) Advance Level and 46 (19%) had tertiary education (Diplomas or Degrees). Among the participants, 88 (36.36%) were employed while 154 (63.63%) were unemployed. Table 1 summarises the socio-demographic characteristics of the participants. $\alpha = 0.05$ was considered as the level of significance.

Table 1: Socio-demographic characteristics of the participants

Demographics	n (%)
Age	
- <20 years	6 (02.47)
- 20 – 35 years	214 (88.44)
- 35< years	22(09.09)
Ethnicity	
- Sinhalese	194 (80.16)
- Tamils	37 (15.30)
- Muslims	11 (04.54)
Education Level	
- G.C.E (O/L)	94 (38.85)
- G.C.E (A/L)	102 (42.15)
- Diploma/Degree	46 (19.00)
Employment status	
- Employed	88 (36.36)
- Unemployed	154 (63.64)

Breastfeeding-related Information Received by Primiparous Mothers from Non-Professionals

The majority of study participants, 111 (46.28%), were living with in-laws, while 68 (28.09%) were living with their parents. Another 50 (20.66%) participants lived with other family members, and only 12 (4.95%) mothers represented nuclear families. Of the 242 primiparous mothers, 230 (95.04%) received professional breastfeeding support and information from antenatal clinics or classes.

Upon analysing information regarding non-professional sources, 216 (89.2%) participants received some form of breastfeeding advice from close family members or friends, while only 26 participants (10.8%) did not report any such sources. Among the 216 mothers, 163 (75%) received advice from their own mother, 71 (33%) from their mother-in-law, 55 (25%) from an aunt, 91 (42%) from a sibling with previous childbirth experience, and 102 (47%) from friends or coworkers. (Note: Since participants were allowed to mention more than one source, the total percentage within parentheses exceeds 100%). The influence of "own mother" as a non-professional resource person was evaluated. Regardless of with whom they were living, most pregnant mothers received information or discussed matters related to breastfeeding with their mothers rather than any other family member. 48 (70.6%) out of 68 participants living with their parents reported receiving breastfeeding-related information from their mother and only 19 participants mentioned the mother-in-law as a resource. Although 111 participants were living with their in-laws, 76 (68.5%) of them reported obtaining breastfeeding-related information primarily from their mother while only 35 (32.4%) of them reported that the mother-in-law was also involved as an informant. This observed difference was statistically not significant ($P = 0.74$) but a preference to own mother is evident most likely due to the obviously stronger mother-child relation in comparison to the relationship with the in-laws. Even among the participants living in nuclear families, their mother was reported as the main informant (59.6%). Figure 1 summarises the above findings.

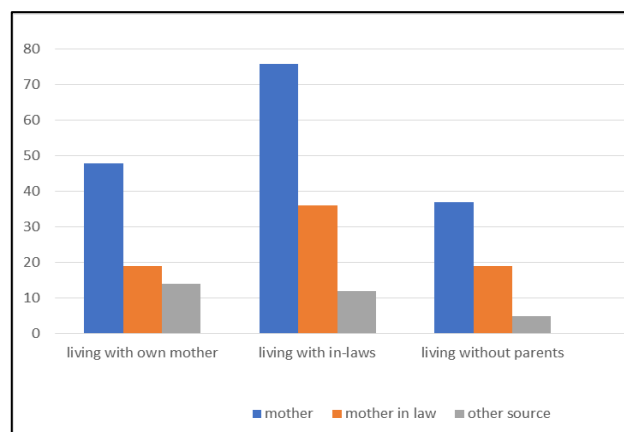


Figure 1: Main non-professional sources of breastfeeding information, based on participants' living arrangements.

Of the study sample, 88 were employed during their pregnancy and 56 (63.6%) of them received advice or information regarding breastfeeding from their workmates. Of the 154 unemployed mothers, 46 received information/ advice from non-family members in the form of friends. A statistical significance was seen for pregnant mothers to have a higher chance of receiving information from friends at the workplace in comparison to unemployed mothers ($P < 0.0001$).

Information was collected regarding the sub-topics related to breastfeeding that were discussed by family members or friends. Participants provided responses on five specific sub-topics, which were listed as options in the questionnaire. Out of these five, the participants reported that the most discussed topic either by family members or friends was the topic of information related to breastfeeding techniques. 63.7% of family members and 58.8% of friends/workmates discussed this topic when advising on breastfeeding. The topic of remedies for breastfeeding-related issues was the least discussed topic by both family members (41.2%) as well as friends (29.4%). The above findings are depicted in Table 2.

Table 2: Breastfeeding Sub-Topics Discussed by Non-Professional Sources

Sub-topic	Close family members (n=182)	Friends/workmates (n=102)
Breastfeeding techniques	116 (63.7%)	60 (58.8%)
Assess the adequacy of BF	96 (52.7%)	40 (39.2%)
Problems related to BF	110 (60.4%)	54 (52.9%)
Remedies for breastfeeding-related issues	75 (41.2%)	30 (29.4%)
Use of formula milk	78 (42.8%)	40 (39.2%)

* Please note that the total percentage exceeds 100%, as some informants provided information on more than one sub-topic

Breastfeeding-Related Information Retrieved by Primiparous Mothers Using Media and Other Materials

The participants were asked to provide details regarding the use of the media in obtaining information related to breastfeeding other than the professional and non-professional advice received in person. The internet and social media were reported as the most favoured media by 162 participants (66.9%). The other media reported by the participants were magazines (10.3%), books (25.2%), newspapers (30%), and television/radio (20.6%).

DISCUSSION

Inadequate breastfeeding advice can contribute to the low exclusive breastfeeding rates observed in many countries (13,14). This study aimed to evaluate the role of non-healthcare professionals in advising and supporting mothers toward successful breastfeeding during the antenatal period. The importance of professional support in establishing and maintaining successful breastfeeding practices has been well-documented. The current study found that 230 (95%) out of 242 mothers received professional breastfeeding advice during their antenatal health checks.

The current study found that 72% of participants received advice from at least one close family member, friend, or workmate. This is a notable percentage, consistent with findings from previous studies. For instance, a study conducted in a mid-western US community reported that pregnant women were four times more likely to initiate a conversation about breastfeeding with a close family member or friend than with a healthcare worker. (15). A similar study conducted in a Teaching Hospital in Southern Sri Lanka found that majority of the participants' (80%) main sources of information related to pregnancy were family members, visiting obstetrician and gynaecologist, antenatal clinical staff, and midwives (16). However, this study was not focused solely on breastfeeding; it also addressed various other aspects of antenatal advice received during pregnancy.

In this current study, mothers (75%) played a more prominent role in sharing experiences or offering advice on breastfeeding compared to mothers-in-law (33%). Additionally, it was encouraging to see younger generations, such as sisters (42%) and friends/workmates (47%) with prior breastfeeding experience, actively advising and sharing knowledge with the participants. These results also highlight that most pregnant mothers received advice from multiple sources. It is important to receive advice from both younger and older generations regarding breastfeeding. While older generations may have more experience, the younger generation can often establish a closer connection with the expectant mother and more freely discuss personal aspects of breastfeeding, particularly challenges related to it.

Participants were asked to select the topics discussed by non-professionals from a given list. Among the topics, the most commonly discussed was the correct technique for breastfeeding, with both close family members and friends/workmates offering advice on this topic. The least discussed topic was "remedies for breastfeeding problems," which may be more suited for healthcare professionals than for laypersons. Interestingly, a considerable proportion of family members and workmates/friends discussed formula feeding during the breastfeeding period, a topic that researchers generally consider to have a negative impact.

A study conducted among first-time African American mothers and their support persons in the United States described the use of social media during the antepartum and postpartum periods. The findings revealed that 91% of participants accessed mobile apps or websites on a daily or weekly basis to gather information about breastfeeding during their antenatal and postnatal periods. (17). Furthermore, a recent study conducted in Sri Lanka found that about one-fourth of the participants used pregnancy-related apps to retrieve information on various topics, including breastfeeding (16). In the current study, the contribution of various educational sources was evaluated to understand how mothers obtain additional information regarding breastfeeding. According to the data collected, 66.9% of mothers used the internet as their primary source of

information on breastfeeding. This figure significantly exceeds the use of other media, such as books, magazines, or television. These findings suggest that creating web pages, blogs, and social media groups by professionals would be an effective way to address breastfeeding topics and promote best practices. Non-healthcare professionals could also contribute by sharing peer experiences on these platforms.

The results of the present study can be utilised to design awareness programmes for primiparous mothers and their support groups, enhancing their knowledge about proper breastfeeding practices and addressing common breastfeeding issues. Further studies should evaluate the accuracy and content of the information provided by non-healthcare professionals to pregnant mothers. This would help eliminate misinformation and encourage the dissemination of correct guidance.

Strengths and Limitations

The Teaching Hospital Peradeniya receives patients from all over the central province of Sri Lanka. Therefore, the main strength of this study is that its findings can be generalised to a wider population in the country. However, this study had several limitations. It was conducted at Teaching Hospital Peradeniya, which primarily caters to patients from urban and suburban backgrounds. Including participants from rural and district hospitals across Sri Lanka could have yielded different results and potentially enhanced the generalisability of the findings. While this study assessed the contribution of non-professionals in advising and supporting mothers on breastfeeding, it did not evaluate the reliability and validity of the information received by the primiparous mothers from these non-professionals. To better understand the accuracy of this information, a qualitative study with in-depth interviews or discussions is recommended. Both the mothers and the non-professional sources should be interviewed for this purpose.

Initially, a postnatal follow-up was planned to assess both the mothers and their babies, to determine if the advice received during the antenatal period positively impacted the successful initiation of breastfeeding. Unfortunately, midway through the study, the global COVID-19 pandemic

led to the suspension of postnatal clinics. As a result, this part of the study could not be conducted, and the total number of participants was slightly reduced from the pre-determined sample size.

CONCLUSIONS AND RECOMMENDATIONS

The present study concludes that close family members, friends, and workplace colleagues play a significant role in providing information to expectant mothers regarding breastfeeding initiation, techniques, and managing breastfeeding-related issues in Sri Lanka. The close bonds between an expectant mother and these individuals likely contribute to this influence. Therefore, it is recommended that health promotion and social and behaviour change communication (SBCC) programmes on breastfeeding should also target secondary groups, such as mothers, mothers-in-law, and other relevant family members, in addition to primiparous mothers, who are the primary focus.

Furthermore, the study highlights that the internet is the most preferred source of information on breastfeeding for expectant mothers, surpassing traditional printed materials. Therefore, health promotion interventions via the internet and social media groups are recommended to enhance the knowledge of expectant mothers.

To gain a better understanding of the accuracy of the information provided to study participants, a qualitative study involving in-depth interviews or focus group discussions is recommended. Additionally, to improve the external validity, future studies should include multiple sites across the country to better represent Sri Lanka's diverse population.

Author declaration

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Authors' contributions:

Conceptualization and Design: BR, SN, PVD; Data collection: BR; Literature Review: BR; Initial Analysis: PVD; Statistical Data analysis: SN; Writing - Original Draft: BR; Writing - Review & Editing: SN, PVD; Supervision: SN, PVD.

Conflicts of interest:

The authors declare that there is no financial or non-financial conflict of interest.

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Ethical clearance was obtained from the Ethics Review Committee, Faculty of Allied Health Sciences, University of Peradeniya. Informed written consent was obtained prior to data collection. The researchers had no access to the personal data of the participants. (AHS/ERC/2019/076).

Statement on data availability:

Data generated or analyzed during this study are available from the corresponding author upon reasonable request.



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