Prevalence and factors associated with maternal loneliness during the postpartum period in Gondar city

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ABSTRACT

Background: Mental health problems have increased worldwide, particularly in developing countries. Currently, loneliness is widely understood as a painful subjective experience when the social connections a person has do not meet their interpersonal needs in respect to the quality or quantity of friendship or social interaction. It has been linked to unpleasant health consequences for both the mother and child. Therefore, this study aimed to assess maternal loneliness during the postpartum period and associated factors in Gondar city.

Methods: A community-based cross-sectional study was conducted from July 1st to August 30th, 2021 in Gondar city. A cluster sampling technique was employed to select 858 postpartum women. Data were entered into epidemiological data (EPI data) version 4.6 and exported to SPSS 25 for further cleaning and analysis. The multivariable logistic regression analysis was fitted to identify factors associated with maternal loneliness during the postpartum period. The adjusted odds ratio (AOR) with its 95% confidence interval (CI) was performed and the level of significance was claimed based on a p-value of ≤0.05.

Results: A total of 858 women were included in the analysis, giving a response rate of 98.4%. Two-fifths (40.9%) of the study participants have experienced loneliness during the postpartum period (95% CI: 37.6, 44.2). Low household decision-making power (AOR = 11.2; 95% CI: 7.59, 16.4) and poor social support (AOR = 2.44; 95 CI: 1.58, 3.76) were significantly associated with maternal loneliness.

Conclusion: In this study, 4 out of 10 women have experienced loneliness during the postpartum period. Thus, it highlights the potential risks of the mother’s loneliness on her postnatal well-being, particularly if the woman has poor social support and low household decision-making power. Encouraging women to be involved in all aspects of the household decision-making and promoting the need for social support for all women during the postpartum period may be optimal initial targets to reduce the impact of loneliness.

1. Introduction

Loneliness is a subjective feeling about the gap between a person’s expected level of social interaction and the actual level of social relations, which is a major risk factor for both psychological disturbance and poor health outcomes [1, 2]. It can be normal and transient, but physical, mental, and social problems can unfold over long periods. Loneliness also refers to the quality of people’s perception of interpersonal relationships or dealings [3]. Being alone is undesirable and it may take a long time to relieve this state of mind. As a result, it has become today’s top public

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health issue worldwide [4]. About 10% of pregnant women and 13% of postpartum women have experienced mental health problems such as depression, anxiety, self-harm, and loneliness [5].

Loneliness and social isolation studies across the lifespan have connected the condition of perceived deficiencies in personal networks (i.e. friends, family members, co-workers, etc.) to far-reaching physical and mental effects [6]. Similarly, there is evidence that the experience of pregnancy and childbirth are also affected by one’s social environment, age, and mental state [7, 8].

In resource-limited countries, including Ethiopia, 1 in 5 women and approximately 1 in 10 women in developed countries experience mental health problems during pregnancy and the postpartum period, respectively [5]. If not detected and treated early, women can even commit suicide, which remains one of the leading causes of maternal death within one year following pregnancy [9]. Nowadays, maternal self-harm during the maternal continuum of care, particularly the postnatal period is alarming and even this is the most neglected issue in the continuum of maternal health care that harms the growth and development of children too [10].

The prevention and treatment of loneliness are often challenging because there is no single identified cause for its occurrence. However, it has been evidenced that many of the factors are personal and social related. These factors include health risky behaviors [11], being divorced/widowed [12], low social support [2, 13], and low socioeconomic status [8].

According to evidence starting from pregnancy to the first year after delivery, 34–38% of women feel lonely [7]. This will account for 4–5% of planned self-harm that could lead to death [14]. In the continuum of care given for pregnant women, efforts should be made for this neglected issue. Given that one of the global goals to be achieved by 2030 is to overcome maternal and neonatal deaths caused by different preventable causes, including mental health problems [15]. Despite enormous global and national efforts, little is known (key gaps) about mental health problems during pregnancy and the postpartum period.

Literature regarding maternal mental health problems is scarce in Ethiopia, particularly regarding maternal loneliness during pregnancy and the postnatal period. Because of Ethiopia’s limited focus on maternal mental health, there is a need to examine maternal loneliness and influencing factors during the postpartum period. Therefore, this study will fill the gaps and assess the maternal feeling of loneliness and identify associated factors in Gondar city, northwest Ethiopia. Besides, doing the research may offer basic evidence for any interventions aimed at preventing the effect of loneliness.

2. Methods and materials

2.1. Study design, period, and area

A community-based cross-sectional study was conducted in Gondar city from July 1st to August 30th, 2021. The City is found in Amhara’s national regional state, Central Gondar Zone. It is located 750 km Northwest of Addis Ababa (the capital city of Ethiopia). There are 1 governmental referral hospital, 8 governmental health centers, 22 health posts, 1 private primary hospital, and 1 general hospital serving the city. The estimated total population of the city was 432,191, of whom, 224,508 are females. From this, about 133, 477 (30.88%) of females are in the reproductive age group (unpublished data by Amhara regional state, 2021). Besides, about 6791 women gave birth in the last one year in Gondar city (unpublished data from Gondar city health bureau).

2.2. Study population and eligibility criteria

All women who gave birth in the last 12 months in the selected clusters of Gondar city at the time of the data collection and residing for at least six months before the data collection period were included in the study.

2.3. Sample size determination and sampling procedure

The single population formula was used to calculate the sample size for the current study by considering the following assumptions: the proportion of loneliness-50%, level of confidence-95%, and margin of error-5%. Therefore, the sample size (n) = (2Zα/2)² * p * (1-p)/(m²(0.5)²) – 384. After considering a design effect of 2 (cluster sampling) and a non-response rate of 10 %, we have obtained a total sample size of 845. Gondar city has 22 kebeles. Seven kebeles (30% of the total kebeles) were selected by the lottery method. A house-to-house visit was carried out in the selected kebeles (clusters) to find eligible women for the study. All eligible women in the selected clusters were interviewed. Finally, due to the nature of cluster sampling, 858 women were interviewed (Figure 1).

2.4. Variables of the study

Maternal loneliness was the outcome variable whereas maternal age, maternal occupation, monthly income, religion, mother’s educational status, marital status, family size, parity, ANC visit, the number of ANC visits, PNC visits, Number of PNC visits, place of the recent delivery, assistant of the delivery, history of neonatal death or congenital anomaly, pregnancy planeness, intimate partner violence, husband educational status, husband occupation, household decision-making power, social support, and partner involvement in maternal, neonatal and child health (MNCH) services were the independent variables.

2.5. Operational definitions and measurements

Loneliness: The University of California Los Angles (UCLA-3) 20-item Loneliness Scale (Version 3) was used to measure maternal loneliness during the postpartum period. UCLA-3 is currently the most widely used loneliness measurement tool, with high test-retest reliability, high internal consistency, and validity [17]. The cut-offs for loneliness severity on the UCLA-3 scale were made based on the total score obtained. Thus, a code of “1” was given for women who had loneliness (i.e. total score ≥28) and a code of 0 was given for those women who didn’t have loneliness (i.e. total score <28) [17].

Intimate partner violence: Intimate partner is considered as a current spouse, co-habited, current boyfriends, former partner, or spouse. If the respondent said “Yes” to any one of the ranges of sexual, psychological, and physical or any combination of the three coercive acts regardless of the legal status of the relationship with current/former intimate partner during pregnancy, it was considered as intimate partner violence [18].

Household decision-making power: The ability of women to act independently on the household activities including their health, children’s health, freedom of movement, and control over finance without asking permission from another person [19]. Thus, based on the summative score of variables designed to assess household decision-making power, women who were answered above the mean value were considered as having higher decision-making power [19, 20].

Partner involvement: A total of nine questions were prepared to assess partner involvement in MNCH services. An individual who was able to score above the mean value was considered as involved in the services [21].

Social support: The Oslo-3 Social Support Scale (OSSS-3) scores ranged from 3-14 with a score of 3-8, poor support; 9–11, moderate support; and 12–14, strong support [22].

Known medical illness: women who have medical illnesses such as diabetes mellitus, renal disease, liver disease, heart disease, tuberculosis, hypertension, etc. which is confirmed by a medical doctor in health institutions were considered as having a medical illness.

Known psychiatric problem: women who have mood disorders including major depressive and bipolar disorders, schizophrenia, anxiety,
etc., which are diagnosed by psychiatrist professionals were considered as having known psychiatric problems.

2.6. Data collection tool and quality assurance

Literature review has been done to develop the data collection instrument [13, 23, 24, 25, 26] and the data were collected using a structured questionnaire through face-to-face interviews. Before data collection, the questionnaire was checked by a research experts for further enhancement and possible amendments. Fourteen BSc and 4 MSc in Midwifery graduates, trained about the interview technique, collected and supervise the data, respectively. To ensure the data quality, the English version of the questionnaire was organized and converted to the local Amharic language and back English to possess uniformity. On 5% of the calculated sample size, the pretest was done outside the study area. The language clarity and validity of the tool were checked and required amendments were made after the pretest. Training regarding the overall data collection process was provided for two days. The completeness of the questionnaire was checked by the supervisors daily.

2.7. Data processing and analysis

Data were checked, coded, and entered into EPI DATA version 4.6 and exported to SPSS version 25 for further cleaning and analysis. The respondents' information were displayed using frequency, mean, and percentages. Binary logistic regression was performed to ascertain likely independent variables and variables having a p-value of less than 0.25 in the bivariable logistic regression analysis were included in the multivariable logistic regression analysis for controlling possible confounders. In the multivariable logistic regression analysis, the AOR was used to show the strength of association and a p-value of ≤0.05 was used to declare the level of significance. Multicollinearity assumption was checked and was acceptable with a variance inflation factor of <10. Hosmer Lemeshow goodness of fit was used to ensure the model fitness.

2.8. Ethical considerations

Ethical approval was obtained from the Institutional Review Board of the University of Gondar (reference number: V/P/RCS/05/2710/2021). Official organizational authorizations were obtained from each selected kebeles (clusters). After clearly explaining the purpose of the study, each study participant declared their consent in writing.

3. Results

3.1. Sociodemographic characteristics of respondents

A total of 858 women were interviewed, giving a response rate of 98.4%. The mean age of the women was 29.5 years (SD ± 4.78) and more than two-thirds (67.7%) of the participants were aged between 26-35 years old. Slightly more than two-fifths (43.3%) of the women had accomplished diploma and above by education. Majorities (90.8%) of the study participants were married and about 44.4% of them were housewives by occupation (Table 1).
3.2. Reproductive, maternity health service, and medical-related characteristics

In this study, slightly more than half (53.9%) of women had a parity of 2–4. Most (97.3%) of the study subjects had at least one ANC in the most recent pregnancy and 68.8% of them gave birth at a governmental hospital. Nearly two-thirds (65.5%) of women got their partner’s support in maternal and child health services. About 2.2% of women had known psychiatric problems and nearly half of them had experienced intimate partner violence in the most recent pregnancy (Table 2).

### Table 1. Sociodemographic characteristics of study participants in Gondar city, northwest Ethiopia, 2021 (n = 858).

| Characteristics                        | Frequency | Percentage (%) |
|----------------------------------------|-----------|----------------|
| Age of women in years                  |           |                |
| 19–25                                  | 183       | 21.3           |
| 26–35                                  | 581       | 67.7           |
| ≥36                                    | 94        | 11             |
| Religion                               |           |                |
| Orthodox Christian                     | 706       | 82.3           |
| Muslim                                 | 107       | 12.5           |
| Othersa                               | 45        | 5.2            |
| Current marital status                 |           |                |
| Married                                | 779       | 90.83.5        |
| Divorced                               | 30        | 0.81           |
| Widowed                                | 7         | 4.99           |
| Single                                 | 42        |                |
| Educational status of the women        |           |                |
| No formal education                    | 105       | 12.2           |
| Primary education                      | 140       | 16.3           |
| Secondary education                    | 242       | 28.2           |
| Diploma and above                      | 371       | 43.3           |
| Occupation of the women                |           |                |
| Housewife                              | 381       | 44.4           |
| Merchant                               | 105       | 12.2           |
| Self-employed                          | 99        | 11.5           |
| Daily laborer                          | 34        | 4.0            |
| Government employee                    | 239       | 27.9           |
| Husband educational status (n = 779)   |           |                |
| No formal education                    | 59        | 7.6            |
| Primary                                | 55        | 7.1            |
| Secondary                              | 156       | 20             |
| Diploma and above                      | 509       | 65.4           |
| Husband occupation (n = 779)           |           |                |
| Government employee                    | 353       | 45.3           |
| Merchant                               | 177       | 22.7           |
| Self-employed                          | 164       | 21.1           |
| Daily laborer                          | 56        | 7.2            |
| Student                                | 29        | 3.7            |
| Access to media                        |           |                |
| Yes                                    | 802       | 93.5           |
| No                                     | 56        | 6.5            |
| Average monthly income of the family   |           |                |
| <1500 ETB                              | 63        | 7.3            |
| 1501–5000 ETB                          | 372       | 43.4           |
| >5000 ETB                              | 423       | 49.3           |
| Family size                            |           |                |
| <3                                     | 53        | 6.2            |
| 3–5                                    | 652       | 76             |
| >5                                     | 153       | 17.8           |

| a Protestant and Adventist. |

### Table 2. Reproductive and maternity health service characteristics of study participants in Gondar city, northwest Ethiopia, 2021 (n = 858).

| Characteristics                        | Frequency | Percentage |
|----------------------------------------|-----------|------------|
| Parity                                 |           |            |
| 1                                      | 364       | 42.4       |
| 2–4                                    | 462       | 53.9       |
| ≥4                                     | 32        | 3.7        |
| Had ANC                                |           |            |
| Yes                                    | 835       | 97.3       |
| No                                     | 23        | 2.7        |
| Number of ANC follow up (n = 835)      |           |            |
| <4                                     | 320       | 38.3       |
| ≥4                                     | 515       | 61.7       |
| Place of delivery                      |           |            |
| Government hospital                    | 590       | 68.8       |
| Health center                          | 210       | 24.5       |
| Private hospital/clinic                | 26        | 3          |
| At home                                | 32        | 3.7        |
| Birth assistant                        |           |            |
| Health professionals                   | 828       | 96.5       |
| Othersb                               | 30        | 3.5        |
| Was the most recent pregnancy planned  |           |            |
| Yes                                    | 745       | 86.8       |
| No                                     | 113       | 13.2       |
| Was the most recent pregnancy supported by your husband/partner | | |
| Yes                                    | 794       | 92.5       |
| No                                     | 64        | 7.5        |
| Had PNC                                |           |            |
| Yes                                    | 450       | 52.4       |
| No                                     | 408       | 47.6       |
| Number of PNC (n = 450)                |           |            |
| <3                                     | 214       | 47.5       |
| ≥3                                     | 236       | 52.5       |
| Husband/partner involvement in MNCH    |           |            |
| Involved                               | 562       | 65.5       |
| Not involved                           | 296       | 34.5       |
| Most recent pregnancy outcome          |           |            |
| Healthy alive baby                     | 836       | 97.4       |
| Neonatal death                         | 22        | 2.6        |
| Social support                         |           |            |
| Poor support                           | 247       | 28.8       |
| Moderate support                       | 392       | 45.7       |
| Strong support                         | 219       | 25.5       |
| Women’s household decision making power|           |            |
| Higher                                 | 580       | 67.6       |
| Lower                                  | 278       | 32.4       |
| Intimate partner violence              |           |            |
| Yes                                    | 417       | 48.6       |
| No                                     | 441       | 51.4       |
| Known medical illness                  |           |            |
| Yes                                    | 86        | 10         |
| No                                     | 772       | 90         |
| Known psychiatric problem              |           |            |
| Yes                                    | 19        | 2.2        |
| No                                     | 839       | 97.8       |

b Family and traditional birth attendants.

3.3. Maternal loneliness and associated factors during the postpartum period

The prevalence of loneliness among postpartum women was found to be 40.9% (95% CI: 37.6, 44.2). A multivariable logistic regression analysis has been performed to identify significantly associated factors
with maternal loneliness during the postpartum period. Accordingly, having low household decision-making power and low social support was found to be independent predictors of maternal loneliness.

The odds of having loneliness among women who had low household decision-making power was 11 times higher as compared to those women having higher household decision-making power (AOR = 11.2; 95% CI: 7.59, 16.4). Likewise, the odds of having loneliness was 2.44 times higher among women who have had poor social support compared with those women who had strong social support (AOR = 2.44; 95 CI: 1.58, 3.76) (Table 3).

4. Discussion

Mental health problems including loneliness have become one of the global concerns regarding maternal health. Hence, this study assessed maternal loneliness during the postpartum period and associated factors in Gondar city, northwest Ethiopia. Accordingly, this study indicated that two-thirds of women have experienced loneliness during the postpartum period. In addition, low household decision-making power and low social support were significant predictors of maternal loneliness.

In this study, the prevalence of maternal loneliness was found to be 40.9%, which is lower than a study conducted in the United States of America (USA)-76% [17]. Inconsistencies in the degree of loneliness can be due to differences in time gaps and socio-demographic differences between the study participants. The survey in the USA includes both male and female participants who were aged between 21-100 years, while our study includes women of reproductive age. Empirical evidence shows that being older age is associated with loneliness as compared to younger counterparts [27].

In addition, since the study participants in this study were females, the likelihood of engaging in health risky behaviors like smoking, alcohol drinking, and chat chewing is less likely compared with male counterparts [28]. Literature indicates that smoking and alcohol consumption increase the likelihood of loneliness [29]. Moreover, maternal health becomes one of the current issues globally, in which different strategies have been endorsed to improve maternal and child health compared with

| Variables                     | Loneliness | COR (95% CI) | AOR (95% CI) | P-value |
|-------------------------------|------------|--------------|--------------|---------|
| Age in years                  |            |              |              |         |
| 19-25                         | High       | 91           | 2.01 (1.19,3.37) | 1.79 (0.94, 3.38) | 0.234 |
| 25-35                         | High       | 229          | 1.32 (0.83, 2.09) | 1.68 (0.96, 2.95) | 0.073 |
| >36                           | Low        | 31           | 1            | 1       |
| Household decision-making power | High     | 138          | 10.5 (7.49, 14.9) | 11.2 (7.59, 16.4)** | 0.001 |
|                               | Low        | 213          | 1            | 1       |
| Social support                |            |              |              |         |
| Poor support                  | High       | 176          | 3.29 (2.24, 4.84) | 2.44 (1.98, 3.67)** | 0.001 |
|                               | Low        | 81           | 0.34 (0.24, 4.90) | 0.25 (0.16, 3.88) | 0.068 |
| Moderate support              | High       | 94           | 1            | 1       |
|                               | Low        | 4           | 1            | 1       |
| Women’s occupation            |            |              |              |         |
| Housewife                     | High       | 167          | 1.38 (0.99, 1.93) | 0.64 (0.41, 1.99) | 0.120 |
|                               | Low        | 41           | 1.14 (0.71, 1.82) | 0.86 (0.47, 1.57) | 0.224 |
| Merchant                      | High       | 41           | 1.06 (0.65, 1.72) | 0.78 (0.42, 1.44) | 0.086 |
|                               | Low        | 37           | 1.25 (1.22, 5.28) | 1.68 (0.27, 11.66) | 0.456 |
| Self-employed                 | High       | 94           | 1            | 1       |
|                               | Low        | 94           | 1            | 1       |
| Daily laborer                 | High       | 20           | 2.54 (1.22, 5.28) | 1.68 (0.27, 11.66) | 0.456 |
| Women’s occupation            |            |              |              |         |
| Housewife                     | High       | 167          | 1.38 (0.99, 1.93) | 0.64 (0.41, 1.99) | 0.120 |
|                               | Low        | 41           | 1.14 (0.71, 1.82) | 0.86 (0.47, 1.57) | 0.224 |
| Women’s occupation            |            |              |              |         |
| Educational status of the women |            |              |              |         |
| No formal education           | High       | 53           | 1.8 (1.16, 2.79) | 0.88 (0.44, 1.75) | 0.069 |
|                               | Low        | 60           | 1.32 (0.89, 1.97) | 1.13 (0.61, 2.07) | 0.067 |
| Primary education             | High       | 104          | 1.33 (0.95, 1.85) | 0.97 (0.57, 1.65) | 0.094 |
|                               | Low        | 134          | 2.57 (1.22, 5.28) | 1.68 (0.27, 11.66) | 0.456 |
| Secondary education           | High       | 134          | 2.57 (1.22, 5.28) | 1.68 (0.27, 11.66) | 0.456 |
| Known medical illness         |            |              |              |         |
| Yes                           | High       | 26           | 3.2 (1.21, 8.53) | 1.09 (0.29, 3.92) | 0.072 |
| No                            | Low        | 325          | 1            | 1       |
| Most recent pregnancy outcome |            |              |              |         |
| Healthy alive baby            | High       | 337          | 1            | 1       |
| Neonatal death/congenital anomaly | High     | 14           | 2.59 (1.10, 6.24) | 2.08 (0.71, 6.13) | 0.381 |
| Birth assistant               | High       | 333          | 1            | 1       |
| Othera                        | High       | 18           | 2.23 (1.06, 4.69) | 1.56 (0.63, 3.84) | 0.644 |
| Had PNC                       |            |              |              |         |
| Yes                           | High       | 146          | 1            | 1       |
| No                            | Low        | 205          | 2.10 (1.59, 2.77) | 1.23 (0.85, 1.77) | 0.632 |
| Intimate partner violence     |            |              |              |         |
| Yes                           | High       | 200          | 1.77 (1.34, 2.33) | 1.33 (0.93, 1.88) | 0.078 |
| No                            | Low        | 151          | 1            | 1       |

AOR = Adjusted odd ratio, COR = Crude odd ratio, CI = Confidence interval, PNC = Post-natal care, 1 Reference category, b = Family members and traditional birth attendants, **P < 0.001.
the previous time. This will have a positive impact on the low proportion of loneliness in this study.

However, the result of this study is higher than studies conducted in Finland-32% [30], Canada-20% [28], and the United Kingdom-27% [12]. The possible explanation for the discrepancy might be due to variations in measuring the outcome variable and participant’s characteristics. The United Kingdom and Canada studies used a 3-point loneliness scale and 6 as a cut-off point for measuring the outcome variable. However, the current study uses the 20 item loneliness scales and 28 as a cut-off point to measure the outcome variable as in previous studies [17]. Besides, in the current study, 48.6% of women had intimate partner violence in their last pregnancy. There is evidence that intimate partner violence is associated with mental health problems, including loneliness [31, 32]. Loneliness could be attributed to the study participant’s characteristics like parity and occupation (domestic work) [33, 34]. In the current study, 44.4% and 42.4% of women were housewives by occupation and primiparous, respectively.

Regarding the factors affecting maternal loneliness, poor social support was significantly associated in the final model. Thus, the odds of having loneliness was 2.44 times increased among women who have had poor social support as compared to those women who had strong social support. This finding is consistent with a study conducted in the United Kingdom where individuals having higher social support were less likely to experience loneliness [12]. This could be explained by the fact that loneliness is a subjective feeling of being alone or separated, which generates unnecessary psychological problems [7, 16]. Hence, individuals having strong social support will not be victims of subjective feelings of being untreated or stigmatized. Available evidence concluded that strong social support has been associated with mental health problems reduction including loneliness [35, 36]. In this regard, health education and promoting the need for engaging in social support groups and involvement in some local society works will be crucial.

The study also found that women with lower decision-making power were 11.2 times more likely to have a feeling of loneliness compared with those women having higher decision-making power. This can happen if the mother does not decide on her health, her baby’s health, and other household purchases; this may make the woman feel despised and subordinate in the household. Eventually, the woman might experience loneliness, thereby manifesting other negative health outcomes. Evidence supports the above finding that lower decision-making power was previously associated with postpartum mental health problems [37]. This signifies that empowering women and encouraging them to be part of a decision will increase the mind of having strong social support, thereby reducing feelings of loneliness.

The authors would like to acknowledge some of the limitations of the current study. First, the cross-sectional nature of the study design might not be a guarantee to infer causality between loneliness and the suggested explanatory variables. Second, recall bias might be introduced since the study includes women in the last 12 months of postpartum. Third, the study answers reflect on a single moment in time that we could not substantiate the true characteristics of participants and may not be generalizable over time variations. Finally, we didn’t get enough related articles to compare our results. Despite the above-mentioned limitations, this study sought to assess rarely addressed issues of maternal health and was able to provide important information to health policymakers and other stakeholders.

4.1. Implication for policymakers

This study procures evidence on maternal loneliness and associated factors during the postpartum period. Therefore, the results of this study are looking for relevant stakeholders and health policymakers who pay particular attention to mental health issues, including the use of screening mechanisms for mental health problems throughout the maternal continuum of care. In addition, the findings call for increased education and community promotion as a standard program of community services, thereby enhancing the decision-making power of women in the household and social support both in the household and in the community.

5. Conclusion

In the current study, maternal loneliness was found to be prevalent. In addition, poor social support and low decision-making power were significantly associated factors influencing maternal loneliness. Thus, special attention has to be given to maternal loneliness during the postpartum period for the optimal health of the mother and children. Besides, preventive strategies and interventions centering on the empowerment of women to ensure women’s decision-making power in the household and social support groups need to be advocated.

Declarations

Author contribution statement

Azmeraw Ambachew Kebede: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

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Data availability statement

Data will be made available on request.

Declaration of interest’s statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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