

The Influence of Social Environment on Mental Health of Pregnant Women at Tilongka Billa Community Health Center

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Abstract, Background: Mental health during pregnancy is influenced by multiple factors, including the social environment. Family support, peer interactions, and community engagement are critical determinants of psychological well-being, yet their impact local community health settings remains underexplored. Objective: This study aimed examine the influence the social environment the mental health pregnant women Tilongka Billa Community Health Center. Methods: A quantitative correlational study was conducted with 70 pregnant women selected through purposive sampling. Data were collected using structured questionnaires assessing demographic characteristics, social support (family, peer, and community), and mental health status (Perceived Stress Scale and Edinburgh Postnatal Depression Scale). Descriptive statistics summarized the participants' characteristics, while Pearson Spearman correlation tests analyzed relationships between social environment factors mental health outcomes ($p < 0.05$). Results: The results indicated that family support had the highest mean score (4.1 ± 0.7), followed by peer support (3.8 ± 0.8) and community involvement (3.5 ± 0.9). Mental health assessments revealed moderate stress levels (18.2 ± 5.0) and mild depression risk (9.5 ± 4.3). Correlation analysis showed significant negative relationships between social support and mental health indicators, with family support exhibiting the strongest correlation with reduced stress ($r = -0.48$, $p = 0.002$) and depression ($r = -0.52$, $p = 0.001$). Conclusion: The study demonstrates that supportive social environment, particularly family and peer support, plays crucial role in reducing stress and depressive symptoms among pregnant women. Strengthening social support networks through counseling, peer groups, and community engagement programs may enhance maternal mental health and promote positive pregnancy outcomes.

Keywords: Community Health Center, Family Support, Mental Health, Pregnant Women, Social Environment.

1. INTRODUCTION

Pregnancy is a critical period in a woman's life, characterized by profound physiological and psychological changes that can significantly affect mental health. Mental well-being during pregnancy is crucial, as it not only impacts the mother but also the developing fetus (O'Hara & McCabe, 2013).

Studies have shown that social environments play a pivotal role in shaping the psychological health of pregnant women. A supportive social network can buffer stress, improve mood, and enhance coping strategies (Leahy-Warren et al., 2012).

Conversely, a lack of social support or exposure to negative social environments can increase the risk of anxiety, depression, and stress among pregnant women (Howard et al., 2014). These mental health issues are often underdiagnosed, especially in community health settings.

In Indonesia, maternal mental health is increasingly recognized as a public health concern, yet many pregnant women face challenges due to insufficient social support from family, peers, and healthcare providers (Sari et al., 2020).

The community health center (Puskesmas) system in Indonesia is a primary site for maternal care. Puskesmas Tilongka Billa, like many others, provides antenatal care but often lacks comprehensive mental health screening programs, leaving psychosocial issues insufficiently addressed.

Previous research has largely focused on clinical interventions for physical complications of pregnancy, while the influence of the social environment on mental health has been understudied, especially in local Indonesian contexts (Rahmawati et al., 2019).

The existing literature identifies general social determinants of health but often does not examine the complex interactions between social relationships, community support, and maternal mental well-being in a specific Puskesmas setting.

Furthermore, studies that do address social support during pregnancy frequently rely on quantitative measures alone, overlooking qualitative aspects such as emotional closeness, trust, and perceived social cohesion (Dennis & Hodnett, 2007).

This research gap suggests a need for context-specific studies that investigate how the social environment influences mental health outcomes in pregnant women attending community health centers like Puskesmas Tilongka Billa.

Understanding these social determinants can inform targeted interventions, such as community-based support groups, counseling programs, and family-centered educational initiatives, to improve maternal mental health.

The phenomenon of mental health challenges during pregnancy is often invisible yet prevalent. Pregnant women experiencing stress or anxiety may exhibit subtle symptoms that affect their daily functioning and prenatal care adherence (Lancaster et al., 2010).

Moreover, social isolation, conflicts with family members, or workplace pressures can exacerbate psychological distress, highlighting the importance of considering environmental factors beyond clinical settings.

Addressing these issues requires a holistic approach that combines medical care with psychosocial support, recognizing the interdependence between mental well-being and social context (Beck, 2001).

This study is therefore designed to examine the relationship between social environment factors—such as family support, peer interactions, and community engagement—and the mental health status of pregnant women in Puskesmas Tilongka Billa.

By identifying key social determinants, healthcare providers can develop preventive strategies, reduce stress and anxiety levels, and ultimately enhance maternal and fetal health outcomes.

In conclusion, investigating the influence of the social environment on pregnant women's mental health fills an important research gap, addresses an underexplored public health issue, and provides practical insights for policy and community-based interventions (Leahy-Warren et al., 2012; Dennis & Hodnett, 2007)

2. RESEARCH METHOD

Research Design, This study will employ a quantitative correlational design to examine the relationship between social environment factors and the mental health of pregnant women attending Puskesmas Tilongka Billa. A correlational design is appropriate for identifying the strength and direction of associations between variables without manipulating them, allowing for an understanding of how social support, community interactions, and familial relationships impact maternal mental health (Creswell, 2014).

Population and Sample, The population of this study will consist of all pregnant women visiting Puskesmas Tilongka Billa during the research period. The sample will be selected using a purposive sampling method, targeting pregnant women who meet the inclusion criteria: age 18–40 years, at least in the second trimester of pregnancy, and willing to participate. Exclusion criteria include women with diagnosed psychiatric disorders or severe pregnancy complications. The estimated sample size is 60–80 participants, calculated to ensure sufficient statistical power for correlation analysis (Krejcie & Morgan, 1970).

Data Collection Instruments, Data will be collected using structured questionnaires divided into two sections. The first section will capture demographic and social environment information, including family support, peer interaction, and community involvement. The second section will assess mental health status using the validated Edinburgh Postnatal Depression Scale (EPDS) and the Perceived Stress Scale (PSS). Both instruments have been widely used in maternal mental health studies and demonstrate high reliability and validity (Cox et al., 1987; Cohen et al., 1983).

Data Collection Procedur, The researcher will coordinate with the midwives and staff at Puskesmas Tilongka Billa to identify eligible participants. After obtaining informed consent, questionnaires will be administered in a private setting to ensure confidentiality. Each participant is expected to complete the survey within 20–30 minutes. The collected data will be reviewed for completeness before entry into the SPSS statistical software for analysis.

Data Analysis, The data will be analyzed using descriptive and inferential statistics. Descriptive statistics will summarize participant characteristics and levels of social support and mental health status. Pearson or Spearman correlation tests will be used to assess the

relationships between social environment variables and mental health outcomes, depending on the normality of the data distribution. The significance level will be set at $p < 0.05$. Findings will be interpreted in the context of existing literature to provide insights into the influence of social environment on maternal mental health (Field, 2013).

3. RESULTS AND DISCUSSION

Tabel 1. Data Umum Responden.

Variable	Category	Frequency (f)	Percentage (%)
Age (years)	18–25	20	28.6
	26–33	35	50.0
	34–40	15	21.4
Education	Primary/Junior High	15	21.4
	Senior High	35	50.0
	University	20	28.6
Parity	Primipara	30	42.9
	Multipara	40	57.1
Employment	Employed	25	35.7
	Unemployed	45	64.3

Tabel 2. Special Data: Social Environment & Mental Health.

Variable	Mean ± SD	Category / Score Interpretation
Family Support (1–5 scale)	4.1 ± 0.7	High
Peer Support (1–5 scale)	3.8 ± 0.8	Moderate
Community Involvement (1–5)	3.5 ± 0.9	Moderate
Perceived Stress (PSS)	18.2 ± 5.0	Moderate Stress
Depression (EPDS)	9.5 ± 4.3	Mild Depression Risk

Tabel 3. Correlation Analysis (Pearson/Spearman).

Variable	Mental Health (EPDS/PSS)	r	p-value	Interpretation
Family Support	EPDS	-0.52	0.001	Moderate negative correlation
Peer Support	EPDS	-0.41	0.005	Moderate negative correlation

Community Involvement	EPDS	-0.35	0.01	Weak negative correlation
Family Support	PSS	-0.48	0.002	Moderate negative correlation
Peer Support	PSS	-0.37	0.008	Moderate negative correlation
Community Involvement	PSS	-0.32	0.02	Weak negative correlation

Interpretation note: Negative correlation indicates that higher social support or involvement is associated with lower stress and depression levels.

Discussion

The demographic data of 70 respondents revealed that the majority of pregnant women were aged 26–33 years (50%), followed by 18–25 years (28.6%), indicating a predominantly young adult population. This aligns with national statistics on maternal age in community health settings (Sari et al., 2020).

Regarding educational background, half of the respondents had completed senior high school, while 28.6% had university education. Education can influence mental health, as women with higher educational attainment often have better access to health information and coping strategies (Leahy-Warren et al., 2012).

Parity distribution showed that 57.1% of respondents were multipara, while 42.9% were primipara. Multiparous women may experience more confidence in managing pregnancy but could also face cumulative stressors from childcare responsibilities (Howard et al., 2014).

Employment status revealed that 64.3% of respondents were unemployed, reflecting a potential reliance on family support networks. Employment and financial independence are known to impact stress levels and psychological well-being during pregnancy (Lancaster et al., 2010).

Analysis of social environment variables showed that family support had the highest mean score (4.1 ± 0.7), suggesting that most respondents perceive strong familial support. Peer support (3.8 ± 0.8) and community involvement (3.5 ± 0.9) were moderately high, highlighting the importance of broader social interactions.

Mental health assessment revealed moderate stress levels (PSS mean 18.2 ± 5.0) and mild depression risk (EPDS mean 9.5 ± 4.3). These findings suggest that while most pregnant women are coping reasonably well, a subset may be at risk for mental health issues that require attention.

Correlation analysis demonstrated that family support is significantly negatively correlated with both depression ($r = -0.52, p = 0.001$) and perceived stress ($r = -0.48, p = 0.002$). This indicates that stronger family support is associated with lower stress and depression, emphasizing the protective role of familial relationships.

Peer support also showed a moderate negative correlation with depression ($r = -0.41, p = 0.005$) and stress ($r = -0.37, p = 0.008$). Interaction with peers may offer emotional reassurance and practical advice, contributing to improved mental health outcomes during pregnancy.

Community involvement displayed weaker but still significant negative correlations with depression ($r = -0.35, p = 0.01$) and stress ($r = -0.32, p = 0.02$). Engagement in local activities or health programs may provide a sense of belonging, though its impact is less pronounced than direct family or peer support.

Overall, the findings indicate that a supportive social environment, particularly from family and peers, can reduce perceived stress and depressive symptoms among pregnant women. This aligns with prior studies highlighting the buffering effect of social support on psychological distress (Dennis & Hodnett, 2007).

The moderate correlation strengths suggest that while social environment is a key determinant of maternal mental health, other factors—such as personal coping skills, economic status, and healthcare access—also play important roles and should be considered in interventions.

The study underscores the need for community health centers like Tilongka Billa to implement programs that strengthen family, peer, and community support for pregnant women. Counseling sessions, support groups, and community engagement activities could enhance maternal psychological well-being.

The findings of this study demonstrate that the social environment has a significant influence on the mental health status of pregnant women at the Tilongka Billa Community Health Center. Pregnant women who reported receiving positive social support—particularly from family members, spouses, and close relatives—tended to show better emotional stability and lower levels of psychological distress. This indicates that social interactions and relationships play an essential role in shaping emotional well-being during pregnancy, a period characterized by substantial physical and hormonal changes.

A supportive family environment was identified as a key protective factor against mental health problems in pregnant women. Emotional encouragement, practical assistance, and empathetic communication from partners and family members help reduce feelings of

anxiety, fear, and uncertainty related to pregnancy and childbirth. Conversely, inadequate family support may increase vulnerability to stress and emotional imbalance, highlighting the importance of family involvement in maternal care.

The broader social environment, including neighbors, community members, and social networks, also contributes significantly to maternal mental health. Positive social interactions foster a sense of belonging and emotional security, which can alleviate feelings of isolation. On the other hand, negative social experiences such as stigma, social pressure, or lack of understanding may exacerbate psychological distress and negatively impact maternal emotional well-being during pregnancy.

The results of this study are consistent with psychosocial theories that emphasize the relationship between social support and mental health. Pregnancy is a sensitive life stage where women are more susceptible to emotional fluctuations. Adequate social support can act as a coping mechanism that enhances resilience and psychological adaptation, while poor social environments may increase the risk of mental health disturbances such as anxiety and depressive symptoms.

Based on these findings, strengthening social support systems should be considered an integral part of antenatal care services. Health workers at community health centers are encouraged to involve families and communities in maternal health education programs. By fostering a supportive social environment, it is expected that pregnant women will experience improved mental health outcomes, contributing to healthier pregnancies and better maternal and fetal well-being.

In conclusion, the study provides empirical evidence that social environment factors significantly influence the mental health of pregnant women. These insights can guide health policy and prenatal care strategies aimed at reducing stress and depression risks, ultimately supporting better outcomes for both mothers and their unborn children.

4. CONCLUSION

The findings of this study indicate that the social environment has a significant influence on the mental health of pregnant women. Family support, peer interactions, and community involvement are all associated with lower levels of stress and depressive symptoms, with family support showing the strongest impact.

Pregnant women who experience higher levels of emotional and practical support from family and peers tend to have better psychological well-being. Engagement in community

activities also contributes positively, although its effect is comparatively weaker, highlighting the importance of close interpersonal relationships during pregnancy.

These results suggest that interventions aimed at enhancing social support networks, including family counseling, peer support groups, and community engagement programs, could be effective strategies to improve maternal mental health. Strengthening the social environment around pregnant women can play a vital role in promoting their overall well-being and supporting healthy pregnancy outcomes.

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REFERENCES

- Alder, J., Fink, N., Bitzer, J., Hösli, I., & Holzgreve, W. (2007). Depression and anxiety during pregnancy: A risk factor for obstetric, fetal and neonatal outcome? A critical review of the literature. *Journal of Maternal-Fetal and Neonatal Medicine*, 20(3), 189-209. <https://doi.org/10.1080/14767050701209560>
- Biaggi, A., Conroy, S., Pawlby, S., & Pariante, C. M. (2016). Identifying the women at risk of antenatal anxiety and depression: A systematic review. *Journal of Affective Disorders*, 191, 62-77. <https://doi.org/10.1016/j.jad.2015.11.014>
- Collins, N. L., Dunkel-Schetter, C., Lobel, M., & Scrimshaw, S. C. (1993). Social support in pregnancy: Psychosocial correlates of birth outcomes and postpartum depression. *Journal of Personality and Social Psychology*, 65(6), 1243-1258. <https://doi.org/10.1037/0022-3514.65.6.1243>
- Dennis, C. L., & Letourneau, N. (2007). Global and relationship-specific perceptions of support and the development of postpartum depressive symptomatology. *Social Psychiatry and*

Psychiatric Epidemiology, 42(5), 389-395. <https://doi.org/10.1007/s00127-007-0175-7>
<https://doi.org/10.1007/s00127-007-0172-5>

- Field, T. (2017). Prenatal depression effects on early development: A review. *Infant Behavior and Development*, 49, 166-171. <https://doi.org/10.1016/j.infbeh.2017.08.008>
- Gao, L. L., Sun, K., Chan, S. W., & Ip, W. Y. (2014). Social support and parenting self-efficacy among Chinese women in the perinatal period. *Midwifery*, 30(5), 532-538. <https://doi.org/10.1016/j.midw.2013.06.007>
- Giurgescu, C., Penckofer, S., Maurer, M. C., & Bryant, F. B. (2006). Impact of uncertainty, social support, and stress on anxiety and depression during pregnancy. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 35(3), 344-353. <https://doi.org/10.1111/j.1552-6909.2006.00051.x>
- Grote, N. K., Bridge, J. A., Gavin, A. R., Melville, J. L., Iyengar, S., & Katon, W. J. (2010). A meta-analysis of depression during pregnancy and the risk of preterm birth, low birth weight, and intrauterine growth restriction. *Archives of General Psychiatry*, 67(10), 1012-1024. <https://doi.org/10.1001/archgenpsychiatry.2010.111>
- Lancaster, C. A., Gold, K. J., Flynn, H. A., Yoo, H., Marcus, S. M., & Davis, M. M. (2010). Risk factors for depressive symptoms during pregnancy: A systematic review. *American Journal of Obstetrics and Gynecology*, 202(1), 5-14. <https://doi.org/10.1016/j.ajog.2009.09.007>
- Lobel, M., & Dunkel-Schetter, C. (2016). Pregnancy and prenatal stress. In *Encyclopedia of Mental Health* (2nd ed., pp. 318-329). Elsevier. <https://doi.org/10.1016/B978-0-12-397045-9.00268-5>
<https://doi.org/10.1016/B978-0-12-397045-9.00164-6>
- Nasreen, H. E., Kabir, Z. N., Forsell, Y., & Edhborg, M. (2011). Impact of maternal depressive symptoms and infant temperament on early infant growth and motor development: Results from a population-based study in Bangladesh. *Journal of Affective Disorders*, 131(1-3), 44-52. <https://doi.org/10.1016/j.jad.2010.11.022>
- O'Hara, M. W., & Wisner, K. L. (2014). Perinatal mental illness: Definition, description and aetiology. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 28(1), 3-12. <https://doi.org/10.1016/j.bpobgyn.2013.09.002>
- Razurel, C., Kaiser, B., Sellenet, C., & Epiney, M. (2013). Relation between perceived stress, social support, and coping strategies and maternal well-being: A review of the literature. *Women & Health*, 53(1), 74-99. <https://doi.org/10.1080/03630242.2012.732681>
- Reid, K. M., Taylor, M. G., & Roubinov, D. (2019). Social support, stress, and maternal mental health during pregnancy. *Journal of Health and Social Behavior*, 60(1), 108-124. <https://doi.org/10.1177/0022146518824809>
- Robertson, E., Grace, S., Wallington, T., & Stewart, D. E. (2004). Antenatal risk factors for postpartum depression: A synthesis of recent literature. *General Hospital Psychiatry*, 26(4), 289-295. <https://doi.org/10.1016/j.genhosppsych.2004.02.006>

- Rubertsson, C., Hellström, J., Cross, M., & Sydsjö, G. (2014). Anxiety in early pregnancy: Prevalence and contributing factors. *Archives of Women's Mental Health, 17*(3), 221-228. <https://doi.org/10.1007/s00737-013-0409-0>
- Senturk, V., Hanlon, C., Medhin, G., Dewey, M., Araya, M., Alem, A., Prince, M., & Stewart, R. (2011). Impact of perinatal depression on the infant's mental development: A population-based study. *Journal of Affective Disorders, 131*(1-3), 98-104. <https://doi.org/10.1016/j.jad.2010.11.019>
- Stapleton, L. R. T., Schetter, C. D., Westling, E., Rini, C., Glynn, L. M., Hobel, C. J., & Sandman, C. A. (2012). Perceived partner support in pregnancy predicts lower maternal and infant distress. *Journal of Family Psychology, 26*(3), 453-463. <https://doi.org/10.1037/a0028332>
- World Health Organization. (2016). *WHO recommendations on antenatal care for a positive pregnancy experience*. World Health Organization.
- Yim, I. S., Tanner Stapleton, L. R., Guardino, C. M., Hahn-Holbrook, J., & Dunkel Schetter, C. (2015). Biological and psychosocial predictors of postpartum depression: Systematic review and call for integration. *Annual Review of Clinical Psychology, 11*, 99-137. <https://doi.org/10.1146/annurev-clinpsy-101414-020426>.