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Research Article

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Psychosocial Support and Antenatal Care: A Case Study in Palu City, Indonesia

Muhammmad Jushman Rau*, Dilla Srikandi Syahadat, & Marselina

Faculty of Public Health, Tadulako University, Palu 94118, Central Sulawesi, Indonesia

***Corresponding author:** Muhammmad Jushman Rau, Faculty of Public Health, Tadulako University, Palu 94118, Central Sulawesi, Indonesia.

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Abstract

Mental health problems are currently not considered an important thing and not even considered as a disease like other physical diseases, even though if it is underestimated it will be dangerous for human life. This study aims to examine the relationship between psychosocial support and antenatal care (ANC) compliance among pregnant women in Palu City, Indonesia. Specifically, it investigates: the role of family support in influencing ANC attendance; the impact of health worker support on pregnant women's willingness to undergo ANC; and the association between anxiety levels and ANC participation. By addressing these aspects, the study provides insights into how social and emotional factors contribute to maternal health outcomes, helping inform future healthcare policies. The study design used in the research was analytical observational with crossectional study design with a total sample of 436 respondents living in Palu City, Central Sulawesi. Data were gathered through direct interviews with respondents and secondary data collection on the number of third-trimester pregnant women undergoing examinations at eight public health centers in Palu City. Based on the research findings and statistical tests using Pearson correlation, the results showed that family support (p = 0.002), health worker support (p = 0.000), and anxiety level (p = 0.016) had a statistically significant relationship with pregnant women undergoing antenatal care (ANC) examinations at public health centers in Palu City.

Keywords: Family, Health Worker, Anxiety, ANC.

Introduction

Mental health problems are currently undervalued and often not considered as significant as physical illnesses, despite their potentially severe consequences [1]. Psychosocial vulnerability during pregnancy significantly increases the risk of both short- and long-term health complications for both mother and child. This vulnerability can negatively affect parent-child bonding and hinder parental competence [2].

Pregnancy mental health disorders are frequently triggered by excessive concerns about fetal safety, fear of death, limitations in daily activities, or unwanted pregnancies, which can lead to depression during pregnancy and labor [3]. Labor itself is a profoundly significant and stressful experience, marked by a mix of joy, hope, pain, and fear [4].

Pregnancy, childbirth, and the postpartum period are critical periods for maternal psychological health, with increased susceptibility to mental health disorders. These issues can be exacerbated by insufficient family and social support during these crucial phases. Psychological disorders during pregnancy have been linked to various complications, including preterm birth, low birth weight, impaired fetal growth, and postnatal health issues [5]. In Indonesia, reducing maternal mortality is a top health priority. According to the 2023 Population Census, the maternal mortality rate is 189 per 100,000 live births, placing Indonesia second highest in ASEAN, significantly exceeding rates in Malaysia, Brunei, Thailand, and Vietnam, where rates are below 100 deaths per 100,000 live births. Additionally, the infant mortality rate stands at 16.85 per 1,000 live births.

Enhancing access to skilled birth attendants at healthcare facilities and promoting maternal awareness and participation in antenatal check-ups (ANC) are crucial strategies to reduce maternal mortality. ANC involves a series of pregnancy examina-

tions designed to optimize the physical and mental well-being of expectant mothers [6].

Anxiety is a common psychological disorder among pregnant women and a significant public health concern. To effectively navigate the challenges of pregnancy, women need robust support from both their families and healthcare providers. Given this context, the researcher is interested in conducting a study on the Analysis of Psychosocial Support for Pregnant Women in Attending Pregnancy Check-Ups at the Palu City Public Health Center.

Materials and Methods

Study Design

This study employed an analytical observational cross-sectional design, conducted from July to October 2021 across eight public health centers in Palu City, Indonesia. The dependent variable was antenatal care (ANC) attendance during the third trimester, while the independent variables included family support, health worker support, and anxiety levels. The study was conducted in eight public health centers: Birobuli, Singgani, Talise, Sangurara, Kamonji, Mamboro, Tawaeli, and Tipo, each representing a sub-district within Palu City.

Sampling Method

The total population in this study consist of 4,732 pregnant women. A final sample of 436 respondents (selected using the Slovin formula with a 5% margin of error). The inclusion criteria were pregnant women in their third trimester, registered at one of the selected public health centers. The exclusion criteria were women not fluent in Indonesian or lacking complete medical records.

Data Collection

Primary Data

Primary data included direct interviews with structured questionnaires using the Family Support Questionnaire (10 items) and the Hamilton Rating Scale for Anxiety (HRS-A 14). Secondary data were obtained from patient records on ANC visits from each health center.

Secondary Data

- Patient records on ANC visits from each health center.

Data Analysis

The statistical test used were Pearson Correlation Analysis to assess relationships between variables and Multiple Regression Analysis to determine the effect of independent variables on ANC participation, with statistical significance level of $p < 0.05$. This methodology ensures replicability and statistical rigor, enabling further validation of results.

Results

The analysis results in Table 1 indicate that the largest number of respondents belonged to the 24-26 age group, totaling 98 participants (22.5%), while the smallest number was in the 42-44 age group, with 8 participants (1.8%). The distribution of education levels showed that most respondents had a senior high school education level, with 220 participants (50.5%), while respondents with no formal education were the least represented in this study, totaling 4 participants (0.9%). The distribution of respondents' occupations showed that the majority of respondents were housewives, with 362 participants (83.02%). The family member who accompanied the respondents to the public health center for ANC examination was most frequently the husband, with 337 participants (77.3%), and the frequency of ANC visits was < 8 times in the third trimester for 380 participants (87.2%).

Table 1: Characteristics of Respondents

Socio-Demographics	n (%)
Age group (year)	
15-17	9 (2.1)
18-20	30 (6.9)
21-23	71 (16.3)
24-26	98 (22.5)
27-29	78 (17.9)
30-32	56 (12.8)
33-35	47 (10.8)
36-38	24 (5.5)
39-41	15 (3.4)
42-44	8 (1.8)
Education	
No formal education	4 (0.9)
Elementary school	26 (6.0)
Junior high school	64 (14.7)
Senior high school	220 (50.5)

Associate degree	14 (3.3)
Bachelor's degree (Applied)	1 (0.2)
Bachelor's degree	101 (23.2)
Master's degree	6 (1.4)
Occupation	
Housewife	362 (83.02)
Self-employed	32 (7.33)
Non-permanent employment	27 (6.19)
Civil servant	9 (2.06)
Private sector employee	6 (1.37)
Family members	
Alone	66 (15.1)
Husband	337 (77.3)
Parent (Mother)	7 (1.6)
Parents-in law	4 (0.9)
Sibling	17 (3.9)
Children	2 (0.5)
Neighbor	1 (0.2)
Frequency of ANC Visits	
≥ 8 times	56 (12.8)
< 8 times	380 (87.2)

Table 2 presents bivariate analysis showing that family support variables have a p-value of 0.002 and r = 0.863, health worker support (p = 0.000; r = 0.790), and anxiety level (p = 0.016; r = 0.819), indicating a statistically significant correlation and positive correlation direction with a very strong correlation strength with ANC examination in third-trimester pregnant women.

Table 2: Pearson Correlation Test Results Family Support, Health Worker Support and Anxiety Level with Pregnancy Check-up (ANC)

Variables	p	Correlation Coefficient (r)
Family support	0.002	0.863
Health worker support	0.000	0.790
Anxiety level	0.016	0.819

Table 3 shows that the three independent variables, namely family support (p = 0.000), health worker support (p = 0.013), and anxiety level (p = 0.014) have a p-value < 0.05, meaning that there is a statistically significant effect between the three independent variables on ANC examination. The regression coefficient of the family support variable is 10.913 with a positive sign, stating that every increase in family support will affect the increase in ANC examination of pregnant women by 10.913. The positive sign means that it shows a unidirectional influence between the independent variable and the dependent variable. The variable regression coefficient of health worker support (-13.277) and anxiety level (-13.998) is negative (opposite direction), stating that every time there is an increase in the variable of health worker support and anxiety level, the ANC examination variable will decrease by 13.277 and 13.998, respectively.

Table 3: Multiple Regression Test Results

Variables	Unstandardized Beta	Std. Error	Standardized Beta	t	Sig.
(Constant)	100.123	71.408		1.916	0.173
Family Support	10.913	1.279	0.869	8.533	0
Health worker support	-13.277	4.969	-0.271	-2.674	0.013
Anxiety level	-13.998	5.263	-0.265	-2.659	0.014

Discussion

The findings indicate a significant correlation between psychosocial support and ANC participation, consistent with previous research. Pregnant women undergo various psychological changes, both positive and negative. Husband support plays a crucial role, as husbands are responsible for providing encouragement and motivation for their wives to attend ANC visits and maintain a healthy pregnancy. Furthermore, when the entire family desires and supports the pregnancy, offering encouragement to the expectant mother, she is more likely to feel confident and prepared for pregnancy, childbirth, and the postpartum period.

Support plays a crucial role in shaping an individual's actions and behavior, serving as a source of encouragement and motivation to fulfill needs and achieve goals. It acts as a driving force that influences decisions and actions necessary for meeting life's requirements [7]. One of the key factors affecting antenatal care (ANC) visits is support from husbands and family members. A husband's support significantly impacts a woman's physical and mental well-being during pregnancy, particularly in ensuring consistent ANC visits for fetal development [8].

The findings indicate a significant correlation between psychosocial support and ANC participation, consistent with previous research [9].

Family Support & ANC

Similar to, this study confirms that strong family support—especially from husbands—enhances ANC compliance [9].

In contrast, found no significant relationship, suggesting that cultural factors may influence the role of family support in ANC participation [10]. Nevertheless, a strong support system from family members contributes to a sense of care, prompting pregnant women to prioritize both their own health and that of their fetus through regular ANC visits.

Health Worker Support & ANC

Our findings align with Ainun (2022), who emphasized that reminders and emotional support from healthcare providers significantly increase ANC adherence [11]. Health professionals assist expectant mothers by reminding them via WhatsApp or phone calls to attend ANC check-ups, providing nutritional consultations, and offering emotional support throughout pregnancy [9].

However, Tarafa et al., (2022) argue that access to healthcare facilities remains a stronger determinant than provider support alone [9]. Good healthcare provider support is a key factor in ensuring comprehensive ANC visits. Another study also emphasizes that pregnant women who receive strong support from healthcare providers are more likely to attend ANC check-ups than those who do not [12].

Anxiety & ANC

The negative correlation between high anxiety levels and ANC visits is supported by previous studies (Shrestha & Pun, 2020) [13]. Pregnancy-related anxiety is specifically associated with fears about labor, fetal well-being, maternal health, healthcare accessibility, and parenting readiness [14]. Unlike generalized anxiety, it is directly linked to pregnancy and has a stronger connection to preterm birth (<37 weeks gestation) than generalized anxiety or depression. Severe stress and anxiety during pregnancy are significantly associated with mental health issues, emotional disturbances, and obstetric complications, including preeclampsia, preterm labor, intrauterine growth restriction, low birth weight, and cesarean delivery [15].

This study found a relationship between ANC visits and anxiety levels in pregnant women. Anxiety is a common experience during pregnancy, though the intensity varies among individuals. Research conducted in Moniya, Nigeria, also supports this finding, indicating that women undergoing ANC often feel anxious or depressed due to psychological stress [14]. Anxiety and depressive symptoms affect 10-25% of pregnant women and are associated with preterm birth, postpartum depression, and behavioral issues in children [13].

Similar results were observed in a study conducted in Kebunrejo, which identified a strong correlation between anxiety levels and ANC compliance in third-trimester pregnant women [16]. Factors contributing to pregnancy-related anxiety include discomfort, work-related stress, concerns about labor, hormonal changes, and fetal health. Additionally, age, education, past trauma, emotional conflicts, self-concept issues, frustration, physical conditions, and family coping mechanisms all influence anxiety levels in pregnant women. Anxiety risk is particularly high among primigravida women and those under 20 years old.

These results suggest that a combined approach addressing both psychosocial support and mental health interventions is necessary to improve maternal healthcare outcomes.

Conversely, some studies report no significant relationship between ANC visits and anxiety levels. Research conducted at the Bahukota Manado Public Health Center suggests that maternal compliance with ANC visits can help reduce anxiety [17]. Expectant mothers who attend regular ANC check-ups receive important information about fetal development, early detection of complications, and healthy pregnancy practices. Compliance with ANC visits reduces anxiety because these services include counseling sessions designed to help expectant mothers understand their condition, address concerns, and develop coping strategies [18].

Pregnancy counseling, facilitated by midwives, involves face-to-face sessions where expectant mothers can discuss their pregnancy-related challenges, gain self-awareness, and develop solutions tailored to their circumstances. This guidance helps pregnant women navigate their pregnancy with confidence and better mental well-being [19, 20].

Conclusion

This study highlights the crucial role of psychosocial support in antenatal care (ANC) compliance. Key findings include that strong family support (especially from husbands) significantly increases ANC attendance. Additionally, health worker support plays a crucial role in reinforcing ANC adherence. The study also found that higher anxiety levels are associated with lower ANC compliance, emphasizing the need for mental health support during pregnancy.

The policy implications recommended by this study are as follows: health service providers should implement community-based awareness programs to encourage family involvement in ANC; ANC programs should integrate psychosocial counseling and mental health interventions to address anxiety-related barriers; and future studies should explore socioeconomic factors that influence ANC adherence to develop holistic maternal health strategies. By addressing these factors, maternal and infant health outcomes can be significantly improved.

1. Strong Family Support (Especially from Husbands) Significantly Increases ANC Attendance: The presence of robust family support, particularly from husbands, serves as a significant motivator for pregnant women to attend regular ANC visits. This support fosters a sense of security and encouragement, which are vital during pregnancy.
2. Health Worker Support Plays a Crucial Role in Reinforcing ANC Adherence: Effective communication, reminders, and emotional support from healthcare providers are essential in ensuring consistent ANC attendance. This support helps pregnant women feel valued and informed, leading to better adherence to recommended care.
3. Higher Anxiety Levels are Associated with Lower ANC Compliance, Emphasizing the Need for Mental Health Support During Pregnancy: Elevated anxiety levels can act as a barrier to ANC participation. Addressing mental health concerns during pregnancy is critical for improving maternal health outcomes.

Policy Implications

- Healthcare providers should implement community-based awareness programs to encourage family involvement in ANC: Engaging families, especially husbands, in ANC education can enhance their understanding of the importance of prenatal care and their role in supporting pregnant women.
- ANC programs should integrate psychosocial counseling and mental health interventions to address anxiety-related barriers: Incorporating mental health screening and counseling into ANC services can help identify and manage anxiety, thereby improving ANC attendance and overall maternal well-being.
- Future research should explore socioeconomic factors affecting ANC adherence to develop holistic maternal health strategies: Investigating the impact of socioeconomic factors, such as income, education, and access to resources, can provide a more comprehensive understanding of barriers to ANC and inform the development of targeted interventions.

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Conflict of Interest

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

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Ethical Clearance

All collected data will be kept confidential and used solely for research purposes.

References

1. Gram, P., Andersen, C. G., Petersen, K. S., Frederiksen, M. S., Thomsen, L. L. H., & Overgaard, C. (2024). Identifying Psychosocial Vulnerabilities in Pregnancy: A Mixed-Method Systematic Review of the Knowledge Base of Antenatal Conversational Psychosocial Assessment Tools. In Midwifery (Vol. 136). Churchill Livingstone. https://doi.org/10.1016/j.midw.2024.104066
2. Utomo, N. K. P., Gafur, M., Ma'rifah, N. N., Putri, D. R., Hidayat, C. T., & Asih, S. W. (2024). The Influence of Health Education on Knowledge of Antenatal Care in Pregnant Women in Rural Areas. Journal of Rural Community Nursing Practice, 2(1), 70–81. https://doi.org/10.58545/jrcnp.v2i1.86
3. Chewe, V. M., & Mathibe-Neke, J. M. (2024). Holistic Antenatal Care During Pregnancy: A Systematic Review. In MedRxiv. https://doi.org/10.1101/2024.04.30.24306612
4. Heim, M. A., & Makuch, M. Y. (2024). Evaluation of a Short in-person and Online Antenatal Educational Intervention for High-risk Pregnant Women Linked to Antenatal Consultation. European Journal of Midwifery, 8(January). https://doi.org/10.18332/ejm/175927
5. Wulandari, R. D., Laksono, A. D., & Rohmah, N. (2021). Urban-rural Disparities of Antenatal Care in South East Asia: A Case Study in the Philippines and Indonesia. BMC Public Health, 21(1). https://doi.org/10.1186/s12889-021-11318-2
6. Sumiatik. (2023). The Relationship Between Husband Support And Antenatal Care Compliance In Pregnant Women At The Puskesmas Tanjung Selamat, Langkat District, 2022. Jurnal Eduhealth, 14. http://ejournal.seaninstitute.or.id/index.php/healt
7. Nath, S., Lewis, L. N., Bick, D., Demilew, J., & Howard, L. M. (2021). Mental Health Problems and Fear of Childbirth: a Cohort Study of Women in an Inner-city Maternity Service. Birth, 48(2), 230–241.
8. Siti Zaimatul Aiunun, Gadis Meinar Sari, & Endyka Erye Frety. (2022). Anxiety and Relationship with Adherence to Visit Antenatal Care in Pregnant Women. Journal of Maternal and Child Health, 07(01), 90–99.
9. Arafat, S. M. Y., & Tarafa, H. (2022). Factors associated with pregnancy-related anxiety among pregnant women attending antenatal care follow-up at Bedelle general hospital and Metu Karl comprehensive specialized hospital, Southwest Ethiopia
10. Ekawati, Dian, Salfia Darmi, & Retno Sugesti. (2023). The Relationship between Knowledge, Family Support and Accessibility to K4 Pregnancy Check-up Visits. Journal of Midwifery Science, 2(1), 184–191.
11. Rizki, F. (2022). Application of antenatal care with a holistic approach in reducing anxiety. Jurnal Kesehatan Ibu Dan Anak, 16(1), 33–40. https://doi.org/10.29238/kia.v16i1.1148

12. Zhou C, Weng J, Tan F, Wu S, Ma J, & Zhang B. (2020). Pregnancy Related Anxienty Among Chinese Pregnant Woman in Mid-late Pregnancy Under the Two-Child policy and its significant correlates. Journal AffectDisord, 1(8), 272–276
13. Shrestha S, & Pun KD. (2020). Anxienty on Primigravid Women Attending Antenatal Care A Hospital Based Cross-Sectional Study. Kathamandu Univ Med J, 16(61), 23–27.
14. Busari, A. O. (2018). Prevalence and Associated Factors of Anxiety and Depression Among Pregnant Women. Open Access Journal of Neurology & Neurosurgery, 9(2). https://doi.org/10.19080/oajnn.2018.09.555758
15. Silwal, A., Bhetwal, J., & Ojha, B. (2021). Anxiety among Pregnant Women Visiting a Tertiary Hospital. A Descriptive Cross-Sectional Study, 4(2), 1–5.
16. Suarayasa, K., Fery, P., White, I., Fitriani, J., & Wandira, B. A. (2022). Factors Associated with the Preparedness for Birth of Primigravida Pregnant Women at the Kamonji Health Center, Palu City. International Journal of Health, Economics, and Social Sciences, 4(4), 306–311.
17. Wang, Y., Gu, J., Zhang, F., & Xu, X. (2024). Path Analysis of Influencing Factors For Maternal Antenatal Depression in the Third Trimester. Scientific Reports, 14(1). https://doi.org/10.1038/s41598-024-55355-4
18. Habibah, M., Haderiansyah, H., Setiawan, A., & Kurniawati, M. F. (2021). Efektivitas Konseling Antenatal Care dalam Menekan Kejadian Baby Blues pada Pasien Postpartum. Jurnal Sains Sosio Humaniora, 5(1), 346–351. https://doi.org/10.22437/jssh.v5i1.14147
19. Kasujja, M., Omara, S., Senkungu, N., Ndibuuza, S., Kirabira, J., Ibe, U., & Barankunda, L. (2024). Factors Associated With Antenatal Depression Among Women Attending Antenatal Care at Mubende Regional Referral Hospital: a cross-sectional study. BMC Women's Health, 24(1). https://doi.org/10.1186/s12905-024-03031-0
20. Ainun, S. Z., Sari, G. M., & Frety, E. E. (2022). Anxiety and It'sRelationship With Adherence to Visit Antenatal Care in Pregnant Woman. Journalof Maternatal And Child Health, 7(1), 90–99