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Perceptions of Pregnant Women Regarding Husbands' Support for Maternal Health Care in Bandung City, Indonesia

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Abstract
Maternal mortality remains a significant public health issue in Indonesia, with pregnancy complications such as anemia, hypertension, and inadequate antenatal care (ANC) contributing to adverse maternal outcomes. Husband involvement has been recognized as an important social determinant influencing maternal health behaviors; however, empirical evidence regarding the extent and determinants of spousal support during pregnancy, particularly in urban settings, remains limited. This study aimed to examine pregnant women's perceptions of their husbands' support and to identify factors associated with supportive behaviors. A cross-sectional study was conducted among 104 pregnant women attending routine ANC services at seven Community Health Centers in Bandung City. Participants were recruited using accidental sampling over three months. Data were collected using a validated, structured questionnaire assessing four domains of husband support: emotional, informational, institutional, and achievement-related. Descriptive statistics and multivariate logistic regression analysis were performed to identify factors associated with positive husband support. The results showed that 75.9% of respondents perceived their husbands' overall support as inadequate. Institutional support was the most frequently reported domain, while emotional support was the least practiced. The most commonly perceived supportive behavior was husbands listening to their wives' concerns, whereas joint physical exercise during pregnancy was reported least frequently. Multivariate analysis demonstrated that husbands aged ≥35 years and wives with lower educational attainment were significantly associated with higher perceived support from husbands. In conclusion, husband involvement during pregnancy remains suboptimal, particularly in emotional and preventive behavioral domains. These findings highlight the need for structured, couple-focused interventions within ANC services that actively engage husbands, address socio-demographic determinants, and promote comprehensive support to improve maternal health behaviors in urban settings.

Keywords: Husband Support, Maternal Health Care, Pregnancy Complications, Antenatal Care, Indonesia, Multivariate Analysis.

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1. INTRODUCTION

The Maternal Mortality Rate (MMR) in Indonesia remains a focus public health priority. According to the 2020 Population Census, the national MMR was 189 deaths per 100,000 live births (Mahmood et al., 2021). While this indicates a downward trend compared to previous decades, it remains well short of the Sustainable Development Goals (SDGs) 2030 target of 70 per 100,000 live births (WHO., 2023). Even though Indonesia and all countries in South East Asia are reporting declines in maternal deaths, the rate of decline is slow. Most maternal deaths in Indonesia, 70,5%, occur in health facilities (Syairaji et al., 2024). In Indonesia, particularly in West Java province, the highest absolute number of maternal deaths was 1,095 cases recorded in 2020 (Kemenkes, 2020). Some clinical evidence has demonstrated that maternal morbidity and mortality are associated with obstetric hemorrhage, sepsis, hypertensive disorder of pregnancy (eclampsia), obstructed labor, and unsafe practices. To address these risks, the Indonesian Ministry of Health updated its national standards in 2021, mandating at least 6 Antenatal Care (ANC) visits (the K6 protocol) throughout pregnancy to ensure early detection and intervention (Mahmood et al., 2021).

Furthermore, the World Health Organisation (2022) emphasises that a "positive pregnancy experience" requires more than clinical care; it necessitates comprehensive lifestyle management and robust social support (WHO Recommended preventive measures include: 1) nutritional optimization: sufficient intake of calcium, vitamin D, and iron-folic acid supplements; 2) hydration and activity: maintaining a minimum intake of 2-3 litres of water daily and engaging in regular low-impact exercise; 3) social support: The role of the family and environment is critical in ensuring the mother's adherence to these health protocols and her ability to access emergency care when necessary (WHO., 2022).

Pregnant women generally expect to experience a healthy pregnancy free from complications. To achieve this expectation, pregnant women need to actively engage in preventive behaviors to reduce the risk of pregnancy-related complications. However, efforts to support maternal health care are influenced by both internal and external factors (Sun et al., 2023).

Internal factors originate with the pregnant woman and include maternal age, educational level, employment status, income, nutritional status, and prior pregnancy history. These factors influence health awareness, decision-making, and the ability to adopt healthy behaviors during pregnancy (Damayanti et al., 2023). Meanwhile, external factors are closely related to the surrounding environment, including accessibility and quality of health services, workload and availability of healthcare providers, socio-cultural norms, economic conditions, and family support systems, particularly support from husbands (Mane et al., 2024).

Husbands' support has been identified as one of the most influential external factors in preventing pregnancy complications (Yemata et al., 2023). Evidence suggests that spousal involvement significantly improves maternal health service utilization, including antenatal care attendance, health-seeking behavior, and access to maternal health services, thereby contributing to better maternal outcomes (Sitepu et al., 2023). Husbands, as the closest family members, play a crucial role in providing emotional reassurance, instrumental assistance, informational support, and motivation, which help pregnant women feel protected and confident throughout pregnancy (Lestari et al., 2025)

Several studies conducted after 2020 have shown that husbands' involvement in pregnancy care - such as accompanying wives to antenatal visits, ensuring adequate nutrition, supporting physical activity, assisting with household tasks, and providing financial and emotional support - contributes to improved maternal health care outcomes and reduced pregnancy complications (Paul & Pandey, 2023). Positive husband support has also been associated with better maternal self-care behaviors, increased utilization of antenatal services, and improved psychological well-being during pregnancy (Khanna et al., 2023).

Physiological and hormonal changes during pregnancy increase women's vulnerability to health problems, making social and psychological support even more essential. Evidence suggests that consistent emotional and practical support from husbands can reduce maternal stress, enhance coping mechanisms, and lower the risk of pregnancy complications (Hoffmann et al., 2023). When support is perceived positively by pregnant women, it strengthens adaptive behaviors and contributes to better maternal and fetal outcomes (Huo et al., 2024).

Local health data also demonstrates the urgency of strengthening preventive efforts. Particularly in the Bandung district of West Java province, Indonesia, regional health authorities indicate that anemia and Chronic Energy Deficiency (CED) remain dominant pregnancy-related problems, reflecting gaps in early detection, nutritional intervention, and family involvement (Kemenkes, 2020). Limited compliance with antenatal care visits further exacerbates these conditions, highlighting the need for stronger family engagement in maternal health care programs.

Other evidence from self-reports obtained through preliminary interviews among inpatient pregnant women revealed that they did not receive complete and accurate information regarding the prevention of pregnancy complications. This finding is consistent with previous research indicating gaps in communication and health education during pregnancy, in which counseling provided by healthcare workers is often limited to general advice rather than comprehensive, prevention-oriented information (Engelbrecht et al., 2024). In addition, husbands frequently rely entirely on healthcare professionals due to their limited understanding of maternal health issues. Limited knowledge and traditional perceptions of men's roles during pregnancy have been shown to contribute to more passive forms of involvement, particularly in low- and middle-income settings (Paul & Pandey, 2023). Consequently, husbands' support is largely confined to financial assistance and reminders about antenatal care visits, rather than to active participation in preventive health behaviors (Muhabaw et al., 2024).

These findings indicate that husbands' contributions to support maternal health care remain suboptimal and require further exploration. Previous studies have shown that inadequate informational, emotional, and instrumental support from husbands is associated with poorer maternal health care outcomes (Gessesse et al., 2024). Therefore, strengthening husband involvement through targeted education and collaborative efforts between community health centers and families is essential.

Effective maternal health care requires synergy between primary healthcare services and family support systems, especially husbands (Galle et al., 2021). A harmonious partnership between husband and wife plays a critical role in reducing maternal morbidity and mortality related to pregnancy complications (Mane et al., 2024).

2. RESEARCH METHOD

This study employed a quantitative cross-sectional design to assess pregnant women's perceptions of their husbands' involvement in maternal health care. A cross-sectional approach was selected because it allows the simultaneous examination of exposure and outcome variables and is appropriate for identifying associated factors within a defined population at a specific point in time. The study was conducted between January and March 2020 at seven Public Health Centers (PHCs) in Bandung City, West Java, Indonesia. These centers were purposively selected for high rates of antenatal care (ANC) attendance, representation of diverse urban subdistricts, and provision of standardized ANC services in accordance with national maternal health guidelines.

The study population consisted of all pregnant women attending ANC services during the study period. Accidental sampling was applied, whereby respondents were recruited based on their availability during data collection. Inclusion criteria were married pregnant women aged ≥18 years, in any trimester, living with their husbands, attending ANC, and willing to provide informed consent. Women were excluded if they had obstetric emergencies, severe medical

conditions, or were unable to complete the questionnaire. A total of 104 pregnant women met the eligibility criteria and agreed to participate. As accidental sampling was used, the sample size was determined by the number of eligible respondents encountered during the study period.

Data were collected using a structured, closed-ended questionnaire comprising two sections: respondent characteristics (15 items) and husband support (32 items). The instrument was developed based on social support theory and maternal health care guidelines, and it covered four dimensions of husband support: emotional, informational, instrumental, and appraisal. Overall husband support was categorized as positive or negative using a 75% cut-off point. The questionnaire demonstrated high reliability, with a Cronbach's alpha of 0.924. Prior to data collection, participants were informed about the study, and researchers accompanied respondents while they completed the questionnaire to ensure data accuracy.

Data analysis was conducted using descriptive statistics and frequency distributions. Bivariate analysis was performed using the Chi-square test to examine associations between respondent characteristics and husband support, with crude Odds Ratios (ORs) and 95% Confidence Intervals (CIs) calculated. Multivariate logistic regression analysis was subsequently conducted to identify independent predictors of positive husband support. All statistical tests were two-tailed, and statistical significance was set at $p < 0.05$.

Ethical approval was obtained from the Universitas Padjadjaran Research Ethics Committee (Reference No. 1227/UN6.KEP/EC/2019). Written informed consent was obtained from all participants, and confidentiality and anonymity were maintained throughout the study.

3. RESULTS AND DISCUSSION

A total of 104 pregnant women participated in this study. Overall, respondents' demographic and obstetric profiles reflected a typical reproductive-age population attending community health centers, with most women and husbands falling within the ideal reproductive age range and a mature secondary segment aged ≥35 years (Table 1).

A notable finding was the educational gap between spouses: while pregnant women were more likely to have completed only primary education, husbands were more likely to have completed secondary education. This imbalance may influence household health decision-making, maternal autonomy, and access to pregnancy-related information. In terms of employment, although most husbands worked full-time to support household financial stability, a meaningful proportion remained unemployed, potentially constraining access to nutritious food, supplements, and transportation for antenatal care.

Regarding obstetric history, the predominance of multigravida respondents suggests prior pregnancy experience within the sample; however, this does not necessarily indicate adequate maternal health literacy or preventive behavior. Most respondents were in their second and third trimesters, a period when physiological demands and the risk of complications tend to intensify, underscoring the importance of husbands' support during this stage.

Table 1. Characteristics of Respondents and Their Husbands at Seven Community Health Centers.

Respondents Characters	Frequency (f)	Percentage (%)
Wife's Age (Years)		
< 20 Years old	8	7.7
20-34 Years old	60	57.7
≥35 Years old	36	34.6
Husband's Age		
< 20 Years old	5	4.8
20-34 Years old	63	60.6
≥35 Years old	36	34.6

Wife's educational background		
Primary	44	42.3
Secondary	38	36.5
Higher	22	21.2
Husband's educational background		
Primary	19	18.3
Secondary	62	59.6
Higher	23	22.1
Wife's employment status		
Full time	21	20.2
Part-time	5	4.8
Not working	78	75.0
Husband's employment status		
Full time	58	55.8
Part-time	32	30.8
Not working	14	13.5
Gravida status		
Primigravida	23	22.1
Multigravida	81	77.9
Gestational Age		
Trimester I (1-13 weeks)	14	13.5
Trimester II (14-26 weeks)	52	50.0
Trimester III (27-40 weeks)	38	36.5
Current Pregnancy Problem		
No	46	44.2
Yes	58	55.8
Anemia	28	48.3
Chronic Energy Deficiency (CED)	6	10.3
Vertigo, Hyperemesis, others	24	41.4
History of Pregnancy Complication		
No	94	90.4
Yes	10	9.6
Use of Contraception Before Pregnancy		
No	42	40.4
Yes	62	59.6

As shown in Table 2, in response to the first research objective (examining pregnant women's perceptions of husbands' support), the majority of pregnant women perceived their husbands' support in maternal health care as negative. Table 2. Pregnant Women's Perceptions of Husbands' Support in Maternal Health Care (n=104).

Table 2. Pregnant Women's Perceptions of Husbands' Support in Maternal Health Care

Variable (n = 104)	**Category**	**N**	**%**
Overall Husband's Support	Positive	25	24.1
	Negative	79	75.9
Emotional Support	Positive	25	24.1
	Negative	79	75.9
Appraisal (Achievement) Support	Positive	27	25.9
	Negative	77	74.1
Institutional Support	Positive	38	37.0
	Negative	66	63.0
Informational Support	Positive	37	35.2
	Negative	67	64.8
Total		104	100

Across the five support dimensions, Institutional Support recorded the highest proportion of positive perceptions (37.0%). In contrast, Overall Support and Emotional Support showed the lowest proportions (24.1% each), indicating that these areas warrant particular attention in subsequent analysis.

Table 3 shows a multivariate logistic regression for pregnant women's perceptions of husbands' support and maternal characteristics. The bivariate analysis showed that current pregnancy problems and a history of pregnancy complications were significantly associated with pregnant women's perceptions of overall husband's support. Similarly, a significant association was found between a history of pregnancy complications and pregnant women's perceptions of their husbands' support (p = 0.010). These findings indicate that pregnancy-related complications, both current and previous, may influence how pregnant women perceive husbands' support during pregnancy.

Table 3. Bivariate Analysis of Pregnant Women's Perceptions of Overall Husband's Support and Maternal Pregnancy Characteristics

Maternal Characteristics	Perceived Husband's Support: Positive N (%)	Perceived Husband's Support: Negative N (%)	P-value
Gravida status			
Primigravida	7 (7)	14 (14)	1.245
Multigravida	14 (14)	65 (65)	
Gestational age			
Trimester I (1–13 weeks)	5 (4.8)	9 (8.7)	1.720
Trimester II (14–26 weeks)	13 (12.5)	39 (37.5)	
Trimester III (27–40 weeks)	7 (6.7)	31 (29.8)	
Current Pregnancy Problem			
No	18 (17.3)	21(20,2)	**0.040**
Yes	7 (6.7)	58 (55.8)	
History of Pregnancy Complication			
No	18 (17.3)	76 (73.1)	
Yes	9 (8.7)	1 (1.0)	**0.010**

The characteristics of respondents in this study indicate that both husbands and pregnant women were within reproductive age, with most husbands aged ≥34 years and most pregnant women aged 20–34 years. From a developmental perspective, respondents fall within Erikson's stage of early to middle adulthood, a period characterized by greater psychosocial maturity, responsibility, and decision-making capacity regarding family, pregnancy timing, and health behaviors (Osuafor et al., 2023). This age pattern should, in principle, support more effective shared decision-making between spouses regarding pregnancy and health practices.

However, the findings of this study revealed that the majority of pregnant women perceived their husbands' overall support as negative (75.9%), with insufficient support reported across the institutional, informational, achievement, and emotional domains. The predominance of negative perceptions regarding husband support suggests substantial gaps in husbands' roles in promoting maternal health care during pregnancy. This gap was most pronounced in emotional and informational support domains, which may reflect limited spousal involvement in the psychosocial and knowledge-sharing aspects of antenatal care, areas often overlooked in favor of more visible or practical forms of support such as institutional facilitation (e.g., accompanying wives to health facilities).

Institutional support was perceived as the most positive, whereas emotional support was the least positive. This pattern is consistent with global evidence indicating that male partners tend to participate more readily in logistical or instrumental aspects of pregnancy care, while remaining comparatively disengaged from emotional communication and daily preventive behaviors (Niwarinda et al., 2024). The relatively stronger perception of institutional support may be shaped by underlying factors such as husbands' employment status, income stability, and educational attainment. Given that many husbands in this study had limited formal education, this may have constrained their awareness of preventive behaviors, such as encouraging physical activity during pregnancy.

Recent studies affirm that husbands with higher education and health literacy are more likely to encourage maternal exercise and healthier lifestyle practices during pregnancy (Rhodes et al., 2021). As husbands are typically the closest companions throughout pregnancy, their understanding of the benefits of exercise and adequate nutrition is essential to motivating supportive maternal health behaviors. Husbands' involvement in pregnancy care extends beyond household task-sharing; it plays a formative role in shaping, directing, and sustaining maternal health behaviors more broadly.

Financial support from family directly influences a woman's ability to access nutritious food and essential health services, which, in turn, affects her nutritional status during pregnancy. Open-access research demonstrates that pregnant women in low-income settings face considerable nutritional barriers linked to socioeconomic hardship, including limited dietary diversity and food insecurity, both of which heighten the risk of anemia and other adverse maternal outcomes (Agho & van der Pligt, 2023). It aligns with the present findings, in which husbands earning below the regional minimum wage may have contributed to inadequate maternal nutritional intake and to the elevated prevalence of anemia observed among respondents.

Variations in emotional maturity may further explain the comparatively low perceived emotional support. Emotional maturity reflects one's capacity to regulate emotions and respond empathetically to a partner's needs; it develops with age and life experience, so developmental gaps between spouses can lead to mismatches in emotional readiness during pregnancy. Recent evidence indicates that pregnant women who perceive strong partner support experience lower emotional distress and engage more positively with antenatal care recommendations and self-care practices (Bedaso et al., 2021). In this study, many pregnant women aged 20–34 years were still in early adulthood and emotionally developing, while a substantial proportion of husbands aged ≥35 years were already in mid-adulthood. This gap may have contributed to differing expectations regarding communication and emotional responsiveness.

Family support theory holds that family interactions, particularly spousal support, meaningfully shape health outcomes during pregnancy (Suryaningsih et al., 2022). As a primary support figure, the husband plays a critical role in promoting maternal well-being, facilitating preventive behaviors, and participating actively in maternal care. Pregnancy itself is widely recognized as a period of heightened vulnerability, marked by physiological, hormonal, and psychological change that can precipitate a range of health problems (Jee & Sawal, 2024).

Supportive husbands have been shown to enhance women's motivation to adopt healthy behaviors, foster a sense of being valued, and sustain overall well-being throughout pregnancy (van Lonkhuijzen et al., 2023). Consistent with this, the World Health Organization continues to recommend active partner involvement in promoting healthy lifestyle practices, including adequate nutrition, supplementation, physical activity, hydration, and regular attendance at antenatal care (WHO, 2022). The importance of husband support for maternal health care observed in this study is consistent with the broader global literature, which links strong partner involvement to reduced maternal morbidity and mortality (Osuafor et al., 2023).

Indonesian open-access research similarly confirms that supportive husbands and family members meaningfully improve women's antenatal care utilization and their readiness to detect pregnancy complications early. Qualitative findings indicate that positive partner involvement is a primary motivator for antenatal care attendance, facilitating earlier recognition of pregnancy risks and greater adherence to recommended examinations (Nurfatimah et al., 2025). Taken together, these findings suggest that the inadequate husband support identified in this study may be contributing to the high prevalence of anemia and other complications among the pregnant women surveyed. Therefore, strengthening male involvement across the emotional, informational, and preventive domains appears essential to improving maternal health outcomes in this population.

The bivariate analysis further showed that neither gravida status nor gestational age was significantly associated with pregnant women's perceptions of their husbands' overall support, indicating that perceived support did not differ meaningfully across the first, second, or third trimester or by parity. This suggests that basic maternal or obstetric characteristics alone do not necessarily determine how supported a woman feels by her partner. It aligns with previous findings that husband support is more strongly shaped by psychosocial, educational, and awareness-related factors than by obstetric characteristics alone (Wood et al., 2024).

By contrast, current pregnancy problems and a history of pregnancy complications were both significantly associated with pregnant women's perceptions of their husbands' support. Women who did not report current pregnancy problems were more likely to perceive their husbands' support positively compared with those experiencing pregnancy-related problems. One plausible explanation is that pregnancy complications introduce emotional stress and uncertainty for both partners, which may, in some cases, constrain how support is expressed or perceived. Other evidence, however, suggests the opposite dynamic: that complications can heighten partner awareness and prompt greater involvement. For instance, one study found that partner awareness of pregnancy risk can directly increase engagement in supporting maternal health needs.

Notably, this study also found that women with a history of pregnancy complications were more likely to perceive their husbands' support positively compared with those without such a history. Prior adverse experiences heighten husbands' awareness of risk, prompting more deliberate and visible support in subsequent care. Increased partner involvement following a history of complications is similarly documented in the maternal health literature. According to the WHO and the UN Population Fund, male partner involvement is a critical component of maternal health programming, as supportive partners can improve maternal psychological well-being, encourage health-seeking behavior, and contribute to safer pregnancy outcomes (Atif et al., 2023).

4. CONCLUSION

The findings indicate that husband involvement remains inadequate, particularly in emotional, informational, and achievement-related domains, despite relatively higher institutional support. Obstetric characteristics such as gravida status and gestational age were not associated with husband support. In contrast, pregnancy-related risk conditions and a history of complications significantly increased partner involvement, suggesting that support is more likely to be reactive than preventive. These findings highlight the importance of strengthening proactive male involvement through couple-based antenatal care and targeted educational interventions to improve maternal health outcomes.

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