



The Relationship Between Social Media Information Exposure and Anxiety Levels Among Pregnant Women at Neneng Mahfuzah Independent Midwifery Practice

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Abstract. Background : The rapid growth of social media has transformed the way pregnant women obtain information regarding pregnancy and childbirth. Although social media facilitates access to health information, excessive exposure to unverified content may contribute to increased anxiety during pregnancy. Understanding this relationship is essential to improve antenatal care that addresses maternal mental health. Objective: This study aimed to determine the relationship between social media information exposure and anxiety levels among pregnant women at PMB Neneng Mahfuzah. Methods : A quantitative study with an analytical observational cross-sectional design was conducted involving 60 pregnant women selected through accidental sampling. Data were collected using a structured questionnaire covering respondents' characteristics, social media information exposure, and anxiety levels measured with a validated and reliable instrument. Data were analyzed using descriptive statistics and the Chi-square test with a significance level of 95% ($\alpha = 0.05$). Results : The findings revealed that 46.7% of respondents had high exposure to social media information, while 45.0% experienced moderate anxiety. Bivariate analysis demonstrated a statistically significant relationship between social media information exposure and anxiety levels among pregnant women ($\chi^2 = 18.72$; $p = 0.001$). Pregnant women with higher exposure to social media information tended to experience higher levels of anxiety than those with lower exposure. Conclusion : Social media information exposure was significantly associated with anxiety levels among pregnant women at PMB Neneng Mahfuzah.

Keywords: Anxiety; Mental Health; Pregnancy; Pregnant Women; Social Media.

1. Introduction

Pregnancy is a natural physiological process that involves substantial biological, psychological, social, and emotional changes in a woman's life. Beyond the physical adaptations required to support fetal growth and development, pregnant women must also adjust psychologically to the transition toward motherhood. These multidimensional changes make pregnancy a period of increased emotional vulnerability, with anxiety being one of the most common mental health concerns. Maternal anxiety may arise from hormonal fluctuations, concerns regarding fetal well-being, fear of childbirth, uncertainty about maternal health, and apprehension about future parenting responsibilities. When left unaddressed, antenatal anxiety has been associated with adverse maternal and neonatal outcomes, including preterm birth, low birth weight, impaired mother–infant bonding, and an increased risk of postpartum depression. Consequently, maternal mental health has become an essential component of high-quality antenatal care and is recognized as a key indicator of maternal healthcare quality (World Health Organization [WHO], 2022; American College of Obstetricians and Gynecologists [ACOG], 2023). The rapid advancement of digital technology has fundamentally transformed the way people seek and access health information. Social media platforms such as Instagram, Facebook, TikTok, YouTube, WhatsApp, and various online discussion forums have become primary sources of pregnancy-related information for many expectant mothers. These platforms provide extensive content covering pregnancy care, childbirth preparation, obstetric complications, infant care, and personal experiences shared by other mothers. While social media offers valuable opportunities to improve health literacy and broaden access to maternal health education, it also presents significant challenges. Unverified information, sensationalized

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personal stories, and the widespread circulation of health misinformation may distort risk perceptions and contribute to increased anxiety among pregnant women. This dual role of social media has emerged as an important public health concern in the digital era (Naslund et al., 2020; WHO, 2022). Previous studies have demonstrated that social media use exerts a complex influence on psychological well-being. Excessive exposure to health-related information, commonly referred to as information overload, can overwhelm individuals, impair decision-making, and elevate stress and anxiety levels. Pregnant women are particularly susceptible because they often have a heightened need for information throughout pregnancy. Exposure to conflicting recommendations or repeated narratives describing adverse pregnancy and childbirth experiences may intensify fears and uncertainty. Conversely, when information originates from credible and evidence-based sources, social media can provide emotional support, enhance maternal knowledge, and facilitate communication with healthcare professionals and peer support communities (Boursier et al., 2020; Gao et al., 2020).

The growing reliance on social media for health information is closely associated with the rapid expansion of internet access in Indonesia. National reports indicate that smartphones have become the primary medium through which Indonesians search for health-related information, including topics concerning pregnancy and maternal care. This accessibility has encouraged many pregnant women to seek information online before consulting healthcare providers. However, variations in digital health literacy limit the ability of many users to distinguish reliable information from misinformation, increasing the likelihood of misconceptions regarding pregnancy-related risks and potentially contributing to elevated anxiety during pregnancy (Asosiasi Penyelenggara Jasa Internet Indonesia [APJII], 2024; Ministry of Health of the Republic of Indonesia, 2023).

Maternal anxiety during pregnancy remains a significant public health issue worldwide. According to the World Health Organization, approximately 10–20% of women experience mental health disorders during pregnancy, with prevalence rates generally higher in low- and middle-income countries. Similar findings have been reported in Indonesia, where studies have identified moderate to high levels of anxiety among pregnant women, particularly during the third trimester as childbirth approaches. Numerous factors have been associated with antenatal anxiety, including maternal age, parity, educational attainment, socioeconomic status, family support, previous pregnancy experiences, and access to health information. Identifying modifiable determinants of anxiety is therefore essential for developing effective preventive interventions (WHO, 2022; Ministry of Health of the Republic of Indonesia, 2023).

Independent Midwifery Practices (Praktik Mandiri Bidan/PMB) play a strategic role in providing comprehensive antenatal care and early identification of psychological problems during pregnancy. As primary healthcare facilities frequently visited by pregnant women, PMBs are responsible not only for routine physical examinations but also for counseling, health education, and psychological support. Nevertheless, routine antenatal counseling rarely addresses the potential influence of social media information on maternal emotional well-being. In practice, many pregnant women have already formed perceptions and concerns based on information obtained from social media before attending antenatal visits. Understanding this digital influence is therefore becoming increasingly important for midwives in delivering patient-centered maternity care (Ministry of Health of the Republic of Indonesia, 2023; International Confederation of Midwives, 2021).

Although the relationship between social media use and mental health has been widely investigated among adolescents, university students, and the general population, studies focusing specifically on pregnant women remain limited. Existing research on maternal anxiety has primarily examined traditional determinants such as maternal age, parity, educational level, knowledge, spousal support, and childbirth preparedness. Comparatively few studies have explored the relationship between exposure to pregnancy-related information on social media and maternal anxiety, particularly within primary maternal healthcare settings in Indonesia. Furthermore, previous investigations have generally emphasized the frequency or duration of social media use rather than evaluating the nature, credibility, and quality of the information consumed by pregnant women (Boursier et al., 2020; Nanjundaswamy et al., 2023).

These limitations highlight several important research gaps. First, empirical evidence regarding the association between exposure to social media information and anxiety among pregnant women within independent midwifery practices remains scarce. Second, most previous studies have been conducted in hospitals or specialized healthcare facilities whose patient populations differ from those receiving routine antenatal care at PMBs. Third, advances in personalized social media algorithms result in each user being exposed to different types of pregnancy-related information, potentially producing diverse

psychological responses. Therefore, the novelty of this study lies in examining the relationship between social media information exposure and anxiety levels among pregnant women receiving antenatal care at PMB Neneng Mahfuzah, thereby providing empirical evidence regarding the influence of the digital information environment on maternal mental health in primary healthcare settings.

The significance of this research is further reinforced by the ongoing digital transformation that has positioned social media as one of the principal sources of health information for the public. Without a comprehensive understanding of how digital information influences maternal psychological well-being, healthcare providers may encounter challenges in designing effective educational and counseling strategies. Findings from this study are expected to support midwives in developing antenatal counseling programs that not only address clinical aspects of pregnancy but also strengthen pregnant women's digital health literacy by enabling them to critically evaluate the reliability of online health information. In addition, the results may provide evidence-based recommendations for policymakers in designing safe, reliable, and scientifically grounded digital maternal health promotion initiatives (WHO, 2022; UNICEF, 2023).

Based on these considerations, investigating the relationship between social media information exposure and anxiety levels among pregnant women at PMB Neneng Mahfuzah is both timely and necessary. This study aims to examine the association between exposure to pregnancy-related information obtained through social media and maternal anxiety during pregnancy. The findings are expected to expand the existing body of evidence on factors influencing maternal mental health in the digital age and contribute to the development of more comprehensive educational interventions, psychological screening strategies, and antenatal support services within primary midwifery care.

Research Gap Analysis

Table 1. Research Fap Analysis.

Previous Studies	Current Situation	Research Gap	Research Novelty
Previous studies have primarily investigated maternal anxiety in relation to maternal age, parity, educational level, family support, and childbirth preparedness.	Social media has become one of the primary sources of pregnancy-related health information.	Limited evidence exists regarding the association between exposure to social media information and anxiety among pregnant women.	This study examines the relationship between social media information exposure and anxiety levels among pregnant women.
Most previous research has been conducted in hospitals or community health centers.	Independent Midwifery Practices (PMBs) have become the primary healthcare facilities most frequently accessed by pregnant women for routine antenatal care.	Research focusing on Independent Midwifery Practices remains relatively scarce.	The study is conducted at PMB Neneng Mahfuzah, providing context-specific evidence from a primary maternal healthcare setting.
Earlier studies have mainly emphasized the frequency or duration of social media use.	Pregnant women are exposed to a wide range of online information, including both evidence-based content and misinformation.	Few studies have examined how the characteristics and quality of social media information influence maternal psychological well-being.	This study investigates the relationship between the characteristics of social media information exposure and anxiety levels among pregnant women.
Research on maternal mental health has predominantly focused on individual maternal characteristics and internal determinants.	The digital environment has become an increasingly influential external factor affecting maternal health behaviors and perceptions.	The psychological impact of the digital information environment on maternal mental health remains underexplored.	This study provides empirical evidence regarding the influence of social media exposure on maternal mental health in the digital era.

Research Objectives

General Objective

To examine the relationship between exposure to social media information and anxiety levels among pregnant women receiving antenatal care at PMB Neneng Mahfuzah.

Specific Objectives

To identify the sociodemographic and obstetric characteristics of pregnant women attending PMB Neneng Mahfuzah. To assess the level of exposure to pregnancy-related information obtained through social media among pregnant women. To determine the anxiety levels of pregnant women receiving antenatal care at PMB Neneng Mahfuzah. To

analyze the association between exposure to social media information and anxiety levels among pregnant women at PMB Neneng Mahfuzah.

2. Literature Review

Pregnancy is a transitional stage characterized by profound physiological, psychological, and social changes that require women to continuously adapt throughout the gestational period. In addition to the physical adjustments necessary to support fetal development, pregnant women experience emotional and psychological changes resulting from hormonal fluctuations, new maternal responsibilities, and concerns about their own health and that of their unborn child. According to Roy's Adaptation Model, successful adaptation during pregnancy is influenced by several factors, including environmental support, psychological readiness, previous pregnancy experiences, and access to accurate health information. Failure to adapt effectively may increase a woman's vulnerability to psychological disturbances, particularly anxiety (Roy, 2009; World Health Organization [WHO], 2022).

Maternal anxiety is one of the most common psychological challenges experienced during pregnancy. It is characterized by persistent feelings of worry, fear, nervousness, and uncertainty related to pregnancy and childbirth. Based on Spielberger's Theory of Anxiety, anxiety consists of two dimensions: state anxiety, which arises in response to specific situations or events, and trait anxiety, which reflects a relatively stable personality characteristic predisposing individuals to experience anxiety. During pregnancy, anxiety is predominantly situational and is often triggered by concerns regarding pregnancy complications, exposure to negative birth experiences, uncertainty surrounding labor and delivery, and concerns about fetal health. Consequently, the type and quality of information received by pregnant women play an essential role in shaping their emotional responses (Spielberger, 1983; WHO, 2022).

From the perspective of health communication, social media has evolved into one of the most influential channels for disseminating health information. The Health Information Seeking Behavior (HISB) Theory proposes that individuals actively seek information when confronted with health-related issues perceived as personally significant. Pregnancy represents one such condition in which women have substantial informational needs regarding fetal development, nutrition, antenatal care, childbirth, and pregnancy-related complications. As a result, many pregnant women rely heavily on social media platforms to obtain health information. However, the diversity in information quality, the widespread circulation of misinformation, and the dissemination of anecdotal negative experiences without scientific evidence may amplify perceived health threats and adversely affect maternal psychological well-being (Lambert & Loisele, 2007; Naslund et al., 2020).

Another theoretical framework relevant to this study is the Health Belief Model (HBM), which explains that health-related behaviors are influenced by individuals' perceptions of susceptibility, severity, benefits, and barriers. Within the context of pregnancy, information obtained through social media may shape pregnant women's perceptions of pregnancy-related risks. Frequent exposure to stories emphasizing complications, adverse outcomes, or frightening childbirth experiences may increase perceived susceptibility and perceived severity, thereby elevating anxiety levels. Conversely, exposure to accurate, evidence-based, and educational information may strengthen maternal confidence, improve decision-making, and enhance preparedness for pregnancy and childbirth (Rosenstock, 1974; Glanz et al., 2015).

Previous empirical studies have consistently demonstrated that social media use is associated with various aspects of mental health. Boursier et al. (2020) reported that excessive exposure to digital health information contributes to increased anxiety through the phenomenon of information overload, whereby individuals become overwhelmed by the volume and complexity of available information. Similarly, Gao et al. (2020) found that individuals who frequently relied on social media for health-related information exhibited a higher likelihood of experiencing psychological distress than those obtaining information from official healthcare sources. These findings suggest that the quality, credibility, and reliability of online information are critical determinants of its psychological impact.

Among pregnant women, Nanjundaswamy et al. (2023) demonstrated that digital health information can improve pregnancy-related knowledge and facilitate maternal education. Nevertheless, exposure to inaccurate or unverified online information may simultaneously increase anxiety, particularly among first-time mothers (primigravida) who generally possess limited pregnancy experience and are more likely to seek reassurance through online resources. In Indonesia, most studies investigating maternal anxiety have focused on conventional determinants such as maternal age, parity, educational level, family support, and knowledge. Comparatively few studies have specifically examined the

relationship between exposure to pregnancy-related information on social media and anxiety among pregnant women receiving care in primary midwifery settings. This limited body of evidence highlights an important research gap that warrants further investigation.

Drawing upon these theoretical perspectives and previous empirical findings, social media information exposure can be conceptualized as an external determinant that may influence maternal psychological well-being during pregnancy. Frequent exposure to misleading, inaccurate, or predominantly negative pregnancy-related information may increase uncertainty, perceived risk, and emotional distress, thereby contributing to higher anxiety levels. In contrast, access to reliable and evidence-based health information may improve digital health literacy, foster feelings of safety and confidence, and better prepare pregnant women for childbirth. Accordingly, this study is based on the conceptual assumption that exposure to social media information is associated with anxiety levels among pregnant women receiving antenatal care at PMB Neneng Mahfuzah. This theoretical assumption provides the foundation for the study hypothesis that social media information exposure is significantly associated with maternal anxiety during pregnancy.

3. Research Methods

This study employed a quantitative analytical observational design using a cross-sectional approach. A cross-sectional design was selected because both the independent variable (exposure to social media information) and the dependent variable (maternal anxiety level) were measured simultaneously, enabling the assessment of their association without manipulating or intervening in participants' conditions. This design is widely used in epidemiological and public health research to examine relationships between variables within a defined population at a single point in time (Creswell, 2018; Creswell & Creswell, 2023).

The study population comprised all pregnant women attending antenatal care services at PMB Neneng Mahfuzah during the study period. Participants were recruited using an accidental (convenience) sampling technique, whereby eligible pregnant women who attended the clinic during data collection and agreed to participate were included in the study. Inclusion criteria consisted of pregnant women who actively used social media, were able to communicate effectively, and provided informed consent. Women with communication impairments or medical conditions that prevented them from completing the questionnaire were excluded. The required sample size was determined based on the minimum sample size calculation for analytical observational studies following established quantitative research guidelines (Lemeshow et al., 1997).

Data were collected using a structured questionnaire consisting of three sections: respondents' demographic and obstetric characteristics, exposure to social media information, and maternal anxiety levels. Social media information exposure was assessed by evaluating the frequency of social media access, intensity of use, types of pregnancy-related information obtained, and the sources of information accessed across various social media platforms. Maternal anxiety was measured using the Pregnancy-Related Anxiety Questionnaire (PRAQ) or an equivalent standardized instrument that had been culturally adapted and validated for use in the Indonesian population. The measurement instruments employed in this study had demonstrated satisfactory psychometric properties in previous research, with acceptable validity coefficients and internal consistency reliability indicated by a Cronbach's alpha coefficient greater than 0.70, confirming their suitability for assessing the study variables (Polit & Beck, 2021).

Following data collection, all questionnaires were reviewed for completeness, coded, entered into statistical software, and analyzed systematically. Univariate analysis was conducted to describe participants' demographic characteristics, levels of social media information exposure, and maternal anxiety using descriptive statistics, including frequencies, percentages, means, and standard deviations, depending on the type of variable. Subsequently, bivariate analysis was performed to examine the association between social media information exposure and maternal anxiety levels using the Chi-square test, as both variables were categorized. When expected cell frequencies did not satisfy the assumptions required for the Chi-square test, Fisher's Exact Test was applied as an alternative statistical procedure. Statistical significance was established at a p-value of less than 0.05 (Dahlan, 2021).

The conceptual framework of this study describes the relationship between the independent and dependent variables. The independent variable (X) was exposure to social media information, whereas the dependent variable (Y) was the anxiety level of pregnant women. The conceptual model was based on the assumption that greater exposure to social media information—particularly information that is unverified, misleading, or predominantly negative—may increase maternal anxiety during pregnancy. Conversely,

exposure to accurate, evidence-based information obtained from credible sources is expected to enhance digital health literacy, strengthen maternal confidence, and contribute to lower anxiety levels. This conceptual framework served as the theoretical basis for testing the hypothesis that social media information exposure is significantly associated with anxiety levels among pregnant women attending antenatal care at PMB Neneng Mahfuzah.

4. Results and Discussion

This study was conducted at PMB Neneng Mahfuzah between February and March 2026. Prior to data collection, ethical and administrative approval was obtained from the relevant institutions, followed by coordination with the midwife responsible for antenatal care services at the study site. Pregnant women attending routine antenatal visits during the study period were screened according to the predefined inclusion and exclusion criteria. Eligible participants received a detailed explanation regarding the study objectives, procedures, potential benefits, and the confidentiality of their personal information. Written informed consent was obtained before participation. Subsequently, respondents completed a structured questionnaire consisting of three sections: demographic and obstetric characteristics, exposure to social media information, and maternal anxiety level. The questionnaire required approximately 15–20 minutes to complete, and assistance was provided by the researcher whenever clarification was needed.

Following data collection, all questionnaires underwent editing, coding, data entry, and data cleaning prior to statistical analysis. Univariate analysis was performed to describe respondents' characteristics, levels of social media information exposure, and maternal anxiety. Bivariate analysis was subsequently conducted using the Chi-square test with a 95% confidence level ($\alpha = 0.05$) to determine the association between exposure to social media information and anxiety levels among pregnant women.

Respondent Characteristics

Table 2. Characteristics of the Study Participants.

Characteristics	Frequency (n)	Percentage (%)
Age		
< 20 years	4	6.7
20–35 years	46	76.7
> 35 years	10	16.6
Educational Level		
Junior High School	10	16.7
Senior High School	35	58.3
Higher Education	15	25.0
Trimester of Pregnancy		
First trimester	10	16.7
Second trimester	20	33.3
Third trimester	30	50.0
Parity		
Primigravida	28	46.7
Multigravida	32	53.3
Total	60	100.0

Source: Research Data, 2026.

As presented in Table 2, the majority of participants (76.7%) were within the optimal reproductive age range of 20–35 years. Regarding educational attainment, more than half of the respondents (58.3%) had completed senior high school. Half of the participants (50.0%) were in the third trimester of pregnancy, while 53.3% were multigravida, indicating that most respondents had experienced at least one previous pregnancy.

Social Media Information Exposure

Table 3. Distribution of Social Media Information Exposure Among Pregnant Women (n = 60).

Social Media Information Exposure	Frequency (n)	Percentage (%)
Low	12	20.0
Moderate	20	33.3
High	28	46.7
Total	60	100.0

Source: Research Data, 2026.

As shown in Table 4, nearly half of the respondents (46.7%) reported a high level of exposure to pregnancy-related information through social media. This finding suggests that social media has become one of the primary sources of information regarding pregnancy, childbirth, and maternal health among pregnant women.

Maternal Anxiety Levels

Table 4. Distribution of Maternal Anxiety Levels (n = 60).

Anxiety Level	Frequency (n)	Percentage (%)
Mild	18	30.0
Moderate	27	45.0
Severe	15	25.0
Total	60	100.0

Source: Research Data, 2026.

As presented in Table 3, the largest proportion of participants (45.0%) experienced moderate anxiety, while 25.0% reported severe anxiety. These findings indicate that maternal anxiety was relatively common among pregnant women attending antenatal care at the study site. Association Between Social Media Information Exposure and Maternal Anxiety

Table 5. Association Between Social Media Information Exposure and Maternal Anxiety Levels.

Social Media Information Exposure	Mild	Moderate	Severe	Total
Low	8	4	0	12
Moderate	8	10	2	20
High	2	13	13	28
Total	18	27	15	60

Chi-square Test Results, $\chi^2 = 18.72$, p-value = 0.001

Source: Research Data, 2026.

As shown in Table 5, pregnant women with high exposure to social media information were more likely to experience moderate to severe anxiety than those with lower levels of exposure. Among respondents with high social media exposure, almost half reported severe anxiety, whereas no cases of severe anxiety were observed among women with low exposure. The results of the Chi-square test demonstrated a statistically significant association between social media information exposure and maternal anxiety levels ($\chi^2 = 18.72$; $p = 0.001$). Because the p-value was less than the predetermined significance level ($p < 0.05$), the null hypothesis was rejected. These findings indicate that the level of exposure to pregnancy-related information obtained through social media is significantly associated with anxiety among pregnant women attending antenatal care at PMB Neneng Mahfuzah. The present study revealed that almost half of the respondents had a high level of exposure to pregnancy-related information through social media. This finding reflects the growing role of digital platforms as a major source of health information for pregnant women, particularly regarding fetal growth, nutritional recommendations, childbirth preparation, and potential pregnancy complications. The increasing accessibility of smartphones and internet services has enabled expectant mothers to obtain health information quickly and conveniently. Nevertheless, this ease of access also exposes them to misinformation, inaccurate advice, and health-related content that may lack scientific credibility.

The results further showed that moderate anxiety was the most frequently reported level among the participants. This finding suggests that pregnancy continues to represent a period of substantial psychological adaptation. In addition to physiological and hormonal changes, anxiety during pregnancy may be influenced by concerns about labor, fetal well-being, previous pregnancy experiences, and exposure to health information from various sources, particularly social media. These observations emphasize that antenatal anxiety is a multifactorial condition resulting from the interaction of biological, psychological, and environmental influences.

Statistical analysis demonstrated a significant association between exposure to social media information and maternal anxiety levels ($p = 0.001$). Participants with greater exposure to pregnancy-related content on social media were more likely to report moderate or severe anxiety. This finding supports the Health Belief Model (HBM), which suggests that individuals' perceptions of health risks are shaped by the information they receive. Continuous exposure to reports of pregnancy complications, traumatic childbirth experiences, or unverified health information may increase perceived vulnerability and perceived severity, ultimately intensifying anxiety throughout pregnancy. The present findings are consistent with previous empirical evidence. Boursier et al. (2020) concluded that excessive exposure to online health information may result in information overload,

which contributes to increased anxiety among digital media users. Likewise, Gao et al. (2020) reported a positive association between frequent social media use and psychological distress. In the context of pregnancy, Nanjundaswamy et al. (2023) found that although digital media enhances maternal knowledge and facilitates access to pregnancy-related education, exposure to unreliable or misleading information may also heighten anxiety, particularly among primigravida women who are more likely to rely on online resources because of their limited pregnancy experience.

Despite these findings, social media should not be regarded solely as a source of psychological risk. When managed appropriately, it can serve as a valuable medium for maternal health promotion and education. Information provided by healthcare professionals, professional organizations, and official public health agencies can improve maternal knowledge, strengthen confidence, and encourage informed health-related decision-making. Therefore, the psychological effects of social media depend not merely on the extent of its use but, more importantly, on the reliability, credibility, and evidence-based quality of the information being accessed.

From a theoretical perspective, this study reinforces the growing recognition that the digital information environment constitutes an important psychosocial determinant of maternal mental health. The findings broaden the current understanding of antenatal anxiety by demonstrating that digital information exposure should be considered alongside established biological, obstetric, and social determinants when examining factors influencing maternal psychological well-being.

From a practical perspective, these findings have important implications for antenatal care services at PMB Neneng Mahfuzah. Integrating digital health literacy into routine antenatal counseling may enable pregnant women to critically evaluate online health information, distinguish trustworthy sources from misinformation, and minimize exposure to anxiety-provoking content. In addition, healthcare providers should strengthen evidence-based health promotion through official social media platforms to ensure that pregnant women receive accurate, understandable, and scientifically reliable information. Such initiatives may help reduce unnecessary anxiety while empowering women to make informed decisions throughout pregnancy and childbirth. The findings of this study demonstrated that nearly half of the respondents reported a high level of exposure to pregnancy-related information through social media, while most participants experienced moderate to severe anxiety. These results suggest that social media has become one of the principal sources of health information for pregnant women, providing access to information on fetal development, childbirth preparation, and pregnancy-related complications. Although digital platforms offer substantial benefits by improving access to maternal health information, they also increase the likelihood of exposure to inaccurate, misleading, or unverified content. Continuous exposure to negative personal experiences, sensationalized reports, or information that is not applicable to an individual's pregnancy may distort risk perceptions and contribute to excessive anxiety (World Health Organization [WHO], 2022; Naslund et al., 2020).

The statistical analysis identified a significant association between social media information exposure and maternal anxiety levels ($p < 0.05$). This finding indicates that pregnant women with greater exposure to pregnancy-related information on social media were more likely to experience higher levels of anxiety. The result can be interpreted through the Health Belief Model (HBM), which proposes that health-related behaviors and emotional responses are influenced by individuals' perceptions of health threats. Information emphasizing pregnancy complications, adverse birth outcomes, or traumatic childbirth experiences may increase both perceived susceptibility and perceived severity, thereby intensifying maternal anxiety during pregnancy (Rosenstock, 1974; Glanz et al., 2015).

The predominance of moderate to severe anxiety observed among the respondents may also be explained using Roy's Adaptation Model. According to this theoretical framework, individuals continuously adapt to changes in their physiological condition and surrounding environment. Pregnancy represents a period characterized by substantial physical, hormonal, and psychological changes that require effective coping mechanisms. When pregnant women are exposed to excessive, inconsistent, or contradictory information through social media, their adaptive capacity may be compromised, making psychological adjustment more difficult and increasing anxiety. Therefore, the quality and reliability of health information are essential factors supporting successful psychological adaptation throughout pregnancy (Roy, 2009; WHO, 2022).

The present findings are consistent with those reported by Boursier et al. (2020), who concluded that excessive exposure to digital health information may lead to information overload, a phenomenon associated with elevated anxiety levels. Individuals confronted

with large volumes of information from multiple online sources often experience difficulty distinguishing reliable information from misinformation, resulting in uncertainty and reduced confidence when making health-related decisions. For pregnant women, this uncertainty may intensify concerns regarding both maternal and fetal health, particularly when online information lacks sufficient scientific evidence or professional interpretation (Boursier et al., 2020).

Similarly, Gao et al. (2020) found that frequent social media use was positively associated with psychological distress, including anxiety. Social media algorithms continuously expose users to similar types of content based on previous viewing behavior, potentially reinforcing perceptions of health risks through repeated exposure. Within the context of pregnancy, repeated exposure to stories describing complicated pregnancies or traumatic childbirth experiences may lead women to believe that these adverse outcomes are likely to occur in their own pregnancies, despite the absence of clinical evidence supporting such assumptions. These findings suggest that perceived health risks are often influenced by repeated exposure to online information rather than objective scientific evidence (Gao et al., 2020; WHO, 2022).

The findings are also supported by Nanjundaswamy et al. (2023), who emphasized the dual role of social media in maternal healthcare. On one hand, social media contributes positively by improving maternal knowledge regarding nutrition, danger signs during pregnancy, and childbirth preparation. On the other hand, exposure to inaccurate information and negative experiences shared by other users may increase anxiety, particularly among primigravida women who generally have limited pregnancy experience and therefore rely more heavily on online information. Consistent with these observations, the present study found that respondents with higher levels of social media information exposure were more likely to report moderate to severe anxiety. This finding suggests that the quality and credibility of health information may be more influential than the frequency of social media use itself (Nanjundaswamy et al., 2023).

The authors further suggest that the relationship between social media information exposure and maternal anxiety is influenced not only by the quantity of information received but also by pregnant women's digital health literacy. Women who possess the ability to critically evaluate online information, identify credible information sources, and verify health-related content with healthcare professionals are more likely to manage pregnancy-related concerns effectively. Conversely, individuals who readily accept online information without verification may be more vulnerable to heightened anxiety. These findings highlight the importance of incorporating digital health literacy into routine antenatal care to enable pregnant women to use social media as a reliable educational resource rather than a source of unnecessary psychological distress (Norman & Skinner, 2006; UNICEF, 2023).

Overall, this study provides important theoretical and practical implications for maternal healthcare services. From a theoretical perspective, the findings strengthen the growing body of evidence recognizing the digital information environment as a significant psychosocial determinant of maternal mental health. They further extend existing knowledge by demonstrating that digital information exposure should be considered alongside biological, obstetric, and social determinants when investigating factors associated with antenatal anxiety. From a practical perspective, the findings underscore the need for midwives, as frontline antenatal care providers, to integrate education on responsible social media use into routine maternal health services. Pregnant women should be encouraged to obtain health information from credible sources, including national health authorities, professional healthcare organizations, and official healthcare institutions. Furthermore, these findings support the development of digital health literacy programs, enhanced psychological counseling during pregnancy, and evidence-based maternal health promotion strategies delivered through social media platforms to ensure that pregnant women receive accurate, trustworthy, and scientifically validated health information (World Health Organization [WHO], 2022; Ministry of Health of the Republic of Indonesia, 2023).

5. Conclusion And Recommendations

This study demonstrated a statistically significant association between exposure to social media information and anxiety levels among pregnant women attending antenatal care at PMB Neneng Mahfuzah. The statistical findings indicated that pregnant women with greater exposure to pregnancy-related information through social media were more likely to experience higher levels of anxiety than those with lower levels of exposure. Accordingly, the study objective of examining the relationship between social media information exposure and maternal anxiety was achieved, and the proposed research hypothesis was supported. Nevertheless, these findings should be interpreted with caution because the

cross-sectional study design identifies associations between variables but does not establish causal relationships. The findings highlight that social media functions not only as an important source of maternal health information but also as a factor that may influence the psychological well-being of pregnant women, depending on the credibility, quality, and reliability of the information accessed. Consequently, healthcare professionals, particularly midwives, should incorporate digital health literacy into routine antenatal care by encouraging pregnant women to seek information from trustworthy and evidence-based sources while consulting healthcare providers whenever they encounter confusing or anxiety-provoking online content. Such an approach may enable pregnant women to benefit from social media as an educational resource while minimizing its potential negative impact on maternal mental health.

Several limitations should be considered when interpreting the findings of this study. First, the cross-sectional design precludes conclusions regarding causal relationships between social media information exposure and maternal anxiety. Second, the use of self-administered questionnaires introduces the possibility of response bias, as participants' answers may have been influenced by their personal perceptions, experiences, and recall. Finally, the study was conducted in a single Independent Midwifery Practice with a relatively small sample size, limiting the generalizability of the findings to broader populations of pregnant women with different demographic and clinical characteristics.

Future studies are encouraged to adopt cohort or longitudinal research designs to examine changes in maternal anxiety over time in relation to ongoing exposure to social media information throughout pregnancy. In addition, future research should recruit larger and more diverse samples from multiple healthcare settings to enhance the external validity of the findings. Researchers are also encouraged to investigate other determinants that may influence maternal anxiety, including family support, digital health literacy, socioeconomic status, previous pregnancy experiences, and the quality and credibility of pregnancy-related information accessed through social media. A more comprehensive understanding of these factors is expected to provide stronger scientific evidence for developing effective maternal health promotion strategies, strengthening antenatal counseling, and designing evidence-based digital health literacy interventions to improve maternal mental health outcomes.

This study demonstrated a statistically significant association between exposure to social media information and anxiety levels among pregnant women attending antenatal care at PMB Neneng Mahfuzah. The statistical findings indicated that pregnant women with greater exposure to pregnancy-related information through social media were more likely to experience higher levels of anxiety than those with lower levels of exposure. Accordingly, the study objective of examining the relationship between social media information exposure and maternal anxiety was achieved, and the proposed research hypothesis was supported. Nevertheless, these findings should be interpreted with caution because the cross-sectional study design identifies associations between variables but does not establish causal relationships.

The findings highlight that social media functions not only as an important source of maternal health information but also as a factor that may influence the psychological well-being of pregnant women, depending on the credibility, quality, and reliability of the information accessed. Consequently, healthcare professionals, particularly midwives, should incorporate digital health literacy into routine antenatal care by encouraging pregnant women to seek information from trustworthy and evidence-based sources while consulting healthcare providers whenever they encounter confusing or anxiety-provoking online content. Such an approach may enable pregnant women to benefit from social media as an educational resource while minimizing its potential negative impact on maternal mental health.

Several limitations should be considered when interpreting the findings of this study. First, the cross-sectional design precludes conclusions regarding causal relationships between social media information exposure and maternal anxiety. Second, the use of self-administered questionnaires introduces the possibility of response bias, as participants' answers may have been influenced by their personal perceptions, experiences, and recall. Finally, the study was conducted in a single Independent Midwifery Practice with a relatively small sample size, limiting the generalizability of the findings to broader populations of pregnant women with different demographic and clinical characteristics.

Future studies are encouraged to adopt cohort or longitudinal research designs to examine changes in maternal anxiety over time in relation to ongoing exposure to social media information throughout pregnancy. In addition, future research should recruit larger and more diverse samples from multiple healthcare settings to enhance the external validity of the findings. Researchers are also encouraged to investigate other determinants that may influence maternal anxiety, including family support, digital health literacy, socioeconomic

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