ORIGINAL ARTICLE

Depression, Anxiety, Coping Skills, and Quality of Life Among Antenatal Women

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ABSTRACT

Introduction: Untreated antenatal depression and anxiety strongly reduce the quality of life and create a considerable economic and social burden on the individual, family, and community. Whilst there were few studies conducted on mental health among antenatal women in Malaysia, variables such as coping skills and quality of life were neglected in those studies. The aim of this study was to determine the prevalence of depression and anxiety among antenatal women in Kuantan, Pahang and its association with coping skills and quality of life. **Methods:** A quantitative cross-sectional study was conducted at seven antenatal clinics in Kuantan, Pahang. Participants were selected based on the inclusion and exclusion criteria. The questionnaire consisted of four parts: sociodemographic profiles, Edinburgh Postnatal Depression Scale (EPDS), Depression, Anxiety Stress Scale (DASS-21), Coping Skills questionnaire and Quality of Life and health literacy questionnaire. Data were analysed using descriptive statistics, Mann Whitney test and Spearman correlation. **Result:** A total of 224 antenatal women responded to the survey. The prevalence of depression and anxiety among antenatal women in Kuantan, Pahang was 29.9% (n=67) and 20.5% (n=46), respectively. The mean for coping skills and quality of life recorded was 39.75 (10.48) and 89.31 (16.60), respectively. The study also proved that there was an association between depression and anxiety with quality of life (p=0.000). A correlation was found between coping skills and quality of life (r=0.540, p=0.001). **Conclusion:** This study calls for a mental health screening during pregnancy, periodically counselling session and promoting mental health awareness can reduce depression and anxiety among antenatal women.

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INTRODUCTION

Antenatal depression and anxiety are the most common psychiatric disorder during pregnancy (1,2). The prevalence of antenatal depression ranges from 15% to 65%, while antenatal anxiety ranges from 16% to 47% (3). The mean weighted prevalence of antenatal depression is approximately 20% in Asia and 12% in high-income countries (4). Low- and middle-income countries (LMIC) typically have greater rates of antenatal depression and anxiety prevalence than high-income

ones (4). Factors contribute to antenatal depression and anxiety may include lack of social support, particularly from partners and family members, unplanned or unwanted pregnancies, financial strain, pregnancy complications such as obstetrics and medical illness, history of miscarriage, and societal expectations about motherhood (5,6).

Both antenatal depression and anxiety have been linked to adverse outcomes in terms of births, breastfeeding, mother-infant relations, children's behaviours and emotions, as well as suicidal and infanticidal ideation (7). Preterm delivery, low birth weight, early neonatal developmental disorders, adolescent neurodevelopmental problems, and mental and social concerns in young adults have been well documented as consequences of poor mental health (8). Untreated anxiety and depression during antenatal period could lead to postpartum depression, which may influence the mother interaction with her infant (9).

To deal with antenatal depression and anxiety, women require an effective coping skill. Coping skills can be classified into positive and negative coping, problem-focused and emotion-focused coping, approach coping and avoidance coping (10,11). Without appropriate coping skills, women with antenatal depression and anxiety may have a significantly lower QoL, placing an extreme economic and social burden on the person, family, and community (12). For a pregnancy to have a positive outcome, antenatal women's QoL must be protected (13).

Previous studies indicated an association between coping skills and QoL, where antenatal women who frequently utilise negative coping mechanisms have lower QoL (14). In the study that was conducted by Chen et al (11), it was found that antenatal women who reported less social support were more likely to use avoidant coping strategies, which exacerbated their depression. Conversely, antenatal women who receive good social support and positive coping strategies were less likely to experience antenatal depression. A successful pregnancy can be obtained by a good social support which not only strengthen the social relationships but also promotes health and well-being (14). Aside from social support, poor coping was also the main causes that can lead to antenatal depression regardless of race and population (15). It has been demonstrated that enhancing QoL, health status, and coping mechanisms can lessen women's distress and mental health issues.

The quality of life among antenatal women with depression will decrease as well as lead to the poor infant development, emotional and attachment issues, malnutrition, respiratory problems, and increased risk of mental health disorders later in life (15,16). Whilst various studies have been conducted on mental health among antenatal women, coping skills and QoL were neglected in these studies. Rather, those studies focused on prevalence and its associated factors such as age, marital status, education, employment status and obstetric history. Therefore, the specific objective of this study was to determine the prevalence of depression and anxiety among antenatal women in Kuantan, Pahang and its association with coping skills and quality of life.

MATERIALS AND METHODS

This study used a cross-sectional study to assess the prevalence of depression, anxiety, together with the level of coping skills and QoL among antenatal women. The design was chosen as this study involved analysing information about a population at a specific point in time (17). The sample size was determined using a sample size calculator, Openepi with a 5% of margin error, 90% confidence interval and 50% of response rate. This resulted in a sample size of 298 participants along with 10% of dropout rate. The participants were recruited using convenience sampling method from April until June 2023 at seven antenatal clinics in Kuantan, Pahang. Antenatal women who were Malaysian, 18 years old and above, below 25 weeks gestational age, completed primary school and above, able to read Bahasa Malaysia and English, owned smart phone with stable internet (since the questionnaire was provided online so the participants need the stable internet to answer the questionnaire without any interruption of the internet) and without history of major mental disorder were invited to join the study.

The questionnaires used in this study were divided into three parts. Part A included demographic data of respondents (age, ethnicity, religion, employment status, level of education, marital status, medical problem, number of pregnancies, number of children, husband's employment status, husband's level of education and types of support). Part B consisted of Edinburgh Postnatal Depression Scale score (EPDS) (Cronbach's alpha 0.86) and Depression Anxiety Stress Scale (DASS) (Cronbach's Alpha value of 0.81 (depression), 0.89 (anxiety) and 0.78 (stress)). The EPDS is widely used for detecting depressive symptoms not only in the postpartum period but also antenatal period (18). Coping skills and QoL were measured in Part C. The internal consistencies (coefficient alphas) for Coping Skills Questionnaire were 0.91 while 3 main domains of QoL: Physical, Spirituality and Subjective well-being have excellent Cronbach alpha value of 0.81, 0.85 and 0.94, respectively.

Data were collected upon obtaining approval from the Medical Research Ethics Committee (MREC) the Medical Research Ethics Committee (NMRR ID-22-02876-VOE (IIR)) and IIUM Research Ethics Committee (IREC 2023-KON/NURF67). The data collection process was performed at registration desk of the antenatal clinics. Antenatal women who met the criteria were identified based on antenatal records. A brief verbal

description of the study was given to the women along with the information sheet. They were offered to scan a barcode based on their willingness to participate in the study. The barcode connected the antenatal woman to the online form of the questionnaire. Informed consents were obtained from the respondents prior to their participation in this study. Personal information about the respondents was kept confidential and was not revealed to any stakeholders other than the researchers who were involved directly with the study. Their participation was entirely voluntary.

RESULTS

The target population in this study was pregnant women who attended the selected antenatal clinics. A total of 224 antenatal women who attended the seven antenatal clinics in Kuantan, Pahang participated in this study with a response rate 75%. Despite not reaching the target sample size of 298, our achieved sample size still provides sufficient statistical power for meaningful analysis. Furthermore, this rate is considered good for healthcare-related surveys using online research, where it is typically range from 46% to 51% (19).

The average age of the antenatal women with mean 29.66 (4.90) were attending the antenatal clinics. Majority of the antenatal women were Malay (94.2%, n=211), Muslim (95.5%, n=214), employed (58.9%, n=132) and housewife (41.1%, n=92), have tertiary education (57.6%, n=129) and were married (100%, n=224), had no medical problem (88.4%, n=198), and multigravida (62.9%, n=141). Details of the sociodemographic profile are presented in Table I.

Table II shows the prevalence of depression among antenatal women, divided into two groups namely asymptomatic and symptomatic group. A total of 29.9% (n=67) women were having symptoms of depression while 20.5% (n=46) had anxiety symptoms.

Table III indicates the level of coping skills and QoL. The mean of total score for coping skills among antenatal women was 39.75 (10.48) whereas the mean of total score for QoL among respondents was 89.31 (16.60, reflecting the fair level of coping skills and good QoL. The association between depression and anxiety with QoL were tested using Mann Whitney test method, as the data did not follow a normal distribution. Based on Table IV, the p value indicates that there is a significant difference between the mental disorders (depression and anxiety) with the QoL.

Table I: Sociodemographic profiles of participants (n=224)

Variables	Characteristics	Frequency (n)	Percentage (%)	Mean	SD
Sociodemographic profiles (N=224)					
Age				29.66	4.90
Ethnicity	Non-Malay	13	5.8		
	Malay	211	94.2		
Religion	Non-Muslim	10	4.5		
	Muslim	214	95.5		
Employment status	Housewife	92	41.1		
	Employed	132	58.9		
Level of education	Secondary	95	42.4		
	Tertiary	129	57.6		
Marital status	Married	224	100.0		
	Unmarried	0	0.0		
Duration of marriage				5.00	4.04
Medical problem	No	198	88.4		
	Yes	26	11.6		
	Primigravida	80	35.7		
	Multigravida	141	62.9		
	Grand multigravida	3	1.3		
Number of children	0	91	40.6		
	1 or above	133	59.4		
Gestational age				18.07	4.84
Husband's employment status	Unemployed	1	0.4		
	Employed	223	99.6		
Husband's level of education	Secondary	124	55.4		
	Tertiary	100	44.6		
Support from others	No	17	7.6		
	Yes	207	92.4		

Table II: Prevalence of depression and anxiety (n=224)

Characteristics	Depression		Anxiety	
	n	%	n	%
Asymptomatic	157	70.1	178	79.5
Symptomatic	67	29.9	46	20.5

Table III: Coping skills and QoL of antenatal women (n=224)

Characteristics	Coping Skills			Quality of Life		
	Mean (SD)	Minimum	Maximum	Mean (SD)	Minimum	Maximum
Total Score	39.75 (10.48)	13.00	65.00	89.31 (16.60)	40.00	115.00

Table IV: The association between depression and anxiety level with QoL (n=224)

Characteristics	Median (IQR)	Z-statistics	p-value*
Depression			
Asymptomatic	98.00 (18.50)	-7.530	0.001
Symptomatic	77.00 (22.00)		
Anxiety			
Asymptomatic	96.50 (22.25)	-5.125	0.001
Symptomatic	78.50 (25.25)		

*Mann-Whitney test

Table V: The association between coping skills and QoL (n=224)

Variable	Coping skills (n=224)
Quality of life	0.540[a] (0.001)[b]

[a] Spearman correlation
[b] p-value

The association between coping skills and QoL was analysed by using Spearman Correlation Coefficient, as the data did not follow a normal distribution. This test was used to examine the strength between two numerical groups. From Table V, p-value indicted that there is an association between coping skills and QoL among antenatal women with fair correlation (r=0.540).

DISCUSSION

This study showed that the prevalence of antenatal depression was higher than antenatal anxiety (29.9% versus 20.5%). The result was contradicted from the studies conducted in Malaysia, where they have found that antenatal anxiety was higher than antenatal depression (28.8% versus 12.2%) (4). Possible reasons for this difference could be due to the post-pandemic changes and adaptations. The prevalence of maternal mental disorders significantly growing during pandemic of COVID-19, recorded 36.3% antenatal women with anxiety (20). The lockdown due to COVID-19 disease have ill effects on mental health of women because of deprivation of sufficient availability and access to basic needs of life and pregnancy care. In the study reported by Yang et al. (21) it was stated that antenatal women who are at risk of experiencing severe stress and psychological problems throughout their pregnancy have clearly been significantly affected by the COVID-19 pandemic. Previous study reported that low socioeconomic position, being exposed to marital or relationship abuse, and a lack of social support were factors contributing to perinatal mood and anxiety disorders (22). Stressors related to the COVID-19 pandemic have the potential to worsen these risk factors, perhaps increasing the incidence of PMADs in a group that is already at high risk.

The study revealed that the total mean score of coping skills among antenatal women was fair, range in the middle (39.75 ± 10.48) where it should range between 13.00 and 65.00. The higher scores indicate higher levels of coping. The level of coping skills among antenatal women decreasing in about one year. In India, 80% of antenatal women have good coping skills and the remaining have excellent coping skills (23). It was reported in their study that good coping skills can be obtained with regular exercise, eat healthy, write a daily journal, taking vacations or long weekends, and take regular naps. Lack of exposure on how these steps can reduce the stress during pregnancy may contribute to the problem. Previous study reported that antenatal women who had poor coping skills and used a negative coping style to deal with stress were more likely experience psychological disorders which include depression and anxiety (24).

This study revealed that the mean of QoL score among antenatal women was good (89.31 ± 16.60), toward the highest, within range 40.00 to 115.00. Most of the women scored the highest on the spiritual well-being of QoL, followed by subjective and physical. Correspondingly, Daglar et al. (25) reported that the score of physical well-being was the lowest among antenatal women. Lower score on their subjective physical QoL could be due bodily changes unpleasant event during pregnancy such as morning sickness, backache, constipation and frequency of micturition (26).

Consistent with the previous studies, this study showed that there is an association between antenatal depression and anxiety (27, 28). The findings indicate that women with depression had lower QoL in the physical, psychological, social, and environmental domains than those women without depression. If stressful elements (such as frequent sleep problems, exhaustion, and physical discomfort brought on by depression) outweigh overprotective factors (such as higher social support from social networks), QoL tends to be lower. It needs to be emphasized that QoL is the one who influence the mental disorders, therefore, women with lower QoL tends to increase the levels of anxiety, sadness, and stress. In the study conducted by Kiyak (29), antenatal women who apply emotion-focused coping strategies (e.g self-blame, self-pity, avoidance helplessness and resignation), may be more likely to experience anxiety and depression than those who use problem-focused methods of coping (e.g confronting problems immediately, adapting to pressure quickly and displaying moderate stress reactions) (29).

This present study found a positive but fair correlation between coping skills and QoL among antenatal women (r=0.540, p=0.000). Correspondingly, Elshaer (30) reported that maladaptive coping strategies, (avoidance), are correlated with negative mental health outcomes and decreased QoL. The researcher emphasized the importance of adaptive-coping strategies, such as seeking social support, and problem-solving in promoting positive mental health outcomes. In contrast, Al-Shannaq et al. (31) reported that there was no significant correlation between coping skills scores and total QoL scores. This may be explained the fact that Arab culture is more focused on the family and community needs than individuals. Hence, women coped with their stress by spending with and caring their families during the lockdown period.

Considering the high prevalence of antenatal depression (29.9%) and anxiety (20.5%) found in this study, we recommend that available mental health screening tools such as the EPDS, DASS-21 or Patient Health Questionnaires (PHQ-9) to be integrated into routine antenatal check-ups at the national level, promoting early detection and timely intervention for at-risk women. Additionally, given the positive correlation between coping skills and quality of life (r=0.540, p=0.001) a structured psychological intervention periodic counselling session, mindfulness training or resilience-building workshops should be made available

to support women coping more effectively. Promoting mental health awareness through can help reduce stigma and encourage women to seek help. Mental health awareness programs through social media campaigns, and collaboration with non-governmental organizations (NGOs) would be beneficial to facilitate outreach to at marginalised populations. Future studies could explore the mental health trajectory of pregnant women across different trimesters and postpartum periods, and evaluate the impact of structured psychosocial support programs such as digital intervention or culturally adapted counselling techniques on reducing perinatal mental health disorders.

CONCLUSION

This study showed that the prevalence of antenatal depression is higher than antenatal anxiety. Results of the study reflected that there was an association between depression and anxiety with the antenatal women's QoL. Mental health screening during pregnancy, periodically counselling session and promoting mental health awareness can be beneficial to reduce the percentage of mental disorders especially depression and anxiety among antenatal women. Further research is required to develop an appropriate plan of action for antenatal women. It is important to protect the mental of wellbeing of all antenatal women for them to have a good QoL and successfully taking care of their child.

CONFLICT OF INTEREST

The author declares that they have no conflict of interest.
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