ORIGINAL ARTICLE

Antenatal Depressive Symptoms in Asian Women: A Review of the Articles

PERWITASARI[1], UMU HANI EDI N[2]
[1]Student of Magister of Midwifery Study Program, Universitas' Aisyiyah Yogyakarta, Ringroad Barat 63 Mlangi Street Nogotirto Gamping Sleman 55292, Yogyakarta, Indonesia
[2]Teaching Staff of Magister of Midwifery Study Program, Universitas'Aisyiyah Yogyakarta, Ringroad Barat 63 Mlangi Street Nogotirto Gamping Sleman 55292, Yogyakarta, Indonesia
Correspondence to PerwitaSari, Email: perwitasari91@gmail.com

ABSTRACT

Background: Mental health problems during pregnancy have a significant negative impact on the mother, fetus, and the health of the child after birth. Depression is a symptom of mental health disorders that often occurs in the antenatal period.

Aim: The objective of this study was to determine the prevalence, related factors, and the influence of social support on AD symptoms in pregnant women in Asian countries.

Method: This study was an article review. The articles were searched using the MEDLINE (Pubmed), Google Scholar, Plos One database published from 2008-2018. The keywords used included "antenatal depression," "Asia," "social support."

Results: Overall, the prevalence of AD symptoms in Asian countries varied from 6.5% to 46.8%. The factors most associated with AD symptoms were categorized into five elements, namely socio-demography (age and income), biology (history of previous depression and PMS (premenstrual syndrome), genetic (history of depression in the family), psychosocial (history of sexual violence, adverse events/stressors in life, relationship in marriage, and social support), and obstetric factors (unplanned pregnancy). Low social support has a strong influence on the occurrence of AD symptoms. The prevalence of symptoms of antenatal depression in Asian countries is reported to increase more than that in Western countries.

Conclusion: Social support is one of the psychosocial factors that can be modified to prevent antenatal depression. This study recommends policymakers in Asian countries to make policies regarding maternal mental health screening, especially in the antenatal period through continuity of care by midwives.

Keyword: antenatal depression, social support, Asian women

INTRODUCTION

The most critical period in a woman's life cycle is pregnancy and after childbirth. At this stage, there are changes in physiology and psychology that can impact the mother's life because she must be able to adapt to her environment with her new role. The pregnancy period increases a woman's vulnerability to the incidence of depression due to hormonal changes in the reproductive cycle. This psychological disorder is often called antenatal depression (AD) [1].

Symptoms of antenatal depression that are often felt include an atmosphere of depression, loss of interest, disappointment, and worthlessness. The deeper stages of depression make the mother think that she does not have a beautiful future, is helpless and desperate to live her life. Critical conditions of depression will cause death in the mother or child. This situation often arises with other symptoms due to stimulation of the autonomic nervous system [2].

Studies reveal that depression occurring in pregnancy will tend to persist in the postnatal period. Thus this problem becomes a vital health case to note, especially in developing countries with low income. However, based on available research data, most of the researches on antenatal depression is centered in western and developed countries, such as in Europe and North America. The prevalence of depression during pregnancy among these countries varies from 10% to 52%. Studies on this case use a cross-cultural approach, so the number of events in each country can be different [3].

Globally, poverty is one factor that causes the burden of this case to occur unevenly. The prevalence of depression in high-income countries is estimated to be 18.4% in the antenatal period and 19.2% in the postnatal period. The incidence rate in low-income countries has a significant difference, i.e., antenatal depression, which is higher at 25.3%, but postnatal depression shows a slightly lower rate of 19.0% [4]. Several studies report that the incidence of perinatal depression is increasing in developing countries [5].

The prevalence of antenatal depression symptoms in Asian women occurs as much as 8% to 45%. In general, these symptoms vary in each trimester, namely the first trimester by 7.4%, second trimester by 12.8%, and third trimester by 12% [6]. Early detection at each trimester is needed so that symptoms of antenatal depression do not worsen. Government policies regarding antenatal and postnatal mental health screening have been carried out in western countries. It has a psychosocial assessment program and perinatal depression screening in Australia, namely The National Perinatal Depression Initiative (NPDI) [7]. In the United Kingdom, screening policies are at the National Institute for Health and Care Excellence (NICE) [8]. The United States recommends screening at least once in the perinatal period, as stated in The American College of Obstetricians and Gynecologists (ACOG) [9].

Mental health problems during pregnancy have a significant negative impact on the mother's condition, fetus in the womb, and the child's health after birth. The effect of pregnancy in pregnancy is to have a high risk of

miscarriage, elective termination in pregnancy, preterm birth, Low Birth Weight (LBW), and intra-therapeutic growth restriction (IUGR), and operative delivery. As many as two-thirds of premature pregnancy contractions are caused by psychosomatic factors, which are psychosocial stressors [9] [10]. Effects in children born include stunting, weak physical health, emotional and behavioral problems, cognitive impairment, and neurodevelopmental disorders. If the diseases develop, those problems can affect social life when a child grows up. Sedentary symptoms in the mother can cause a low quality of life, failure in the care period, disturbed mother and child relationship, decreased work ability, and increased risk of suicide [11].

Social support is one of the risk factors for AD events in high and low-income countries. The impact tends to vary due to differences in culture and family, and social context. In terms of family context, nuclear family structure is standard in western countries, while large family structures are common elsewhere. The number of family members who live in one house will affect the status of social relations. This will have an impact on the incidence of depression experienced by pregnant women [5]. A previous review study states that social support has an essential role in maternal mental health status both in Western and Asian settings [12] [5].

Asia is the largest continent and has the most crowded population globally, reaching more than 4 million people. This continent contains 30% of all land area on earth. The Asian region is categorized into six parts, including Central Asia, North Asia, South Asia, Southeast Asia, and West Asia. Countries in Asia have differences in various aspects of life such as language, religion, culture, ethnicity, socio-economic background, education [13]. Variations in this context cause differences in perceptions of mental health.

The Asian term is used because it reviews the occurrence of symptoms of Antenatal Depression (AD) in women from several countries representing six regions in Asia. Studies on the articles were carried out in Korea, China, Taiwan, Malaysia, Thailand, Pakistan, India, Bangladesh, Jordan, Turkey, and Kuwait. This review's objective was to determine the variation of prevalence of AD symptoms in countries that represent the Asian region, the associated factors, and the influence of social support on AD symptoms. Identifying modifiable risk factors is a significant effort to prevent antenatal depression and improve maternal mental health in Asian women.

METHODS

The type of this study was article review research. The research method was done by looking for articles in the journal database, namely MEDLINE (Pubmed), Google Scholar, and Plos One. The keywords used included "antenatal depression", "Asia," "social support." Other words representing countries in Asia were used to find articles that fit the research criteria, such as countries' names in Asia / developing countries and middle-income countries. The report's search's inclusion criteria were published in the last ten years (2008-2018) in English, and the original articles were conducted in Asian countries. The study outcome must be reported as the percentage of the incidence of depression from the total samples examined, the time of the study (trimester in pregnancy), and the instruments used. Based on these criteria, 12 articles were found that matched the characteristics of the researchers.

RESULTS

A. Prevalence: As many as 10 of the 12 original articles used the Edinburgh Perinatal Depression Scale (EPDS) to assess the symptoms of antenatal depression. Jeong et al.'s study in Korea revealed that antenatal depression (AD) incidence was 20.2% of all pregnant women in the first, second, and third trimester. In TM I, AD is 7.1%, TM II is 59.3%, while in TM III, it has decreased to 33.6% [14]. Shin and Shin conducted a study on pregnant women from Southeast Asia (Vietnam, Cambodia, Philippines) who lived in Korea. Being categorized based on the severity, AD's incidence rate is 17.2% experiencing mild symptoms and 33.3% experiencing severe symptoms [15]. The number of ads based on research in China equals 35.9% with mild symptoms and 7.3 with severe symptoms [3]. Tsao stated that in Taiwan, the number of AD in TM III pregnant women was 20.7% [16]. The study results in Malaysia also received almost the same number of 20% [17]. The prevalence of AD in Thailand was the highest compared to other countries, which amounted to 46.8% [6]. Waqas used the Hospital Anxiety and Depression Scale (HADS) instrument to assess AD symptoms in 500 pregnant women in trimester I, II, and III in Pakistan[18]. The study results show that the number of ads is relatively high at 31.8%. Studies conducted in India have low yields than other countries, with only 6.5% of 589 samples [19]. In Bangladesh, there was 17% of 720 TM III pregnant women had AD [20]. The incidence of AD in Turkey was found to be slightly lower at 13.9% [5]. In Jordan, Mohammad states that AD rates occur in 19% of pregnant women TM III [21]. In Kuwait, the study used a structured questionnaire, and 13.4% of AD cases were found [22].

B. Factors associated with AD symptoms: These significantly associated factors with AD symptoms are divided into five categories, including socio-demographic, biological, genetic, psychological, and obstetric characteristics. Socio-demographic factors associated with AD include age, education, occupation, smoker, knowledge, ownership of health insurance, marital status, and income. Biological factors associated with AD were not widely studied in the article. Only two factors were identified: the previous history of depression and PMS history (premenstrual syndrome) [14].

Genetic factors that are the main predictors are a family history of depression. Judging from the psychosocial aspects, there are several factors such as the history of physical violence, history of sexual violence, adverse events/ stressors in life, relationship in marriage, relationship with parents in law, low self-esteem, and self-Obstetric factors such as parity, history of abortion, history of SC, unintended pregnancy have a negative relationship with AD events [14].

C. Factors of Social Support: Social support factors for pregnant women in Asia also showed significant results on the incidence. Only one study from all articles in this review reported that social support was not related to AD, namely a study in Thailand. This may be caused by most samples having a high level of social support (63.4%) [6]. A survey

from Jordan did not assess the social support variable, but the results of data analysis reported that the relationship with parents was related to AD [21]. In this article, it was concluded that the source of social support expected by the mother was from her husband, biological mother, and mother-in-law. Social support is one of the risk factors that can be modified to prevent maternal mental health disorders.

DISCUSSION

Reviewing articles about AD in Asian countries confirms the results of research in Western countries. The prevalence of depressive symptoms during pregnancy looks fairly balanced between Asian and Western countries. However, there are several studies in Asia that report a lower incidence of AD than western countries. These differences may be caused by research methodology, instrument cut-off values, sample characteristics, and cultural factors.

The incidence of AD in several Asian countries varies from 6.5% to 46.8%. The number of cases is not significantly different from studies in western countries such as New Zealand, Australia, Canada, and United States. Another study investigating the prevalence of AD in multiethnic populations shows that the incidence of AD is more significant in pregnant women from the Asian continent, namely South Asia (17.5%) and the Middle East (19.5%) compared to countries in Western Europe (8, 6%) [23]. Mental health disorders in the antenatal period can occur in women who have eastern and western cultures regardless of the characteristics of the area settings they occupy.

Age during pregnancy has an impact on the condition of a mother's physical and psychological readiness. Given that pregnancy at the age of fewer than 20 years old and more than 35 years old is included in the high risk of pregnancy. A study reported that teenage pregnancy had a chance of AD symptoms as much as 2.6 times higher than pregnant women aged 30-39 years old [6]. However, this result contrasts with research conducted in pregnant women in Vietnam that higher age is also a factor in the risk of AD incidence [24]. Some countries in Asia do not allow early marriages because of the cultural values that they have. Judging from psychological health, a young pregnancy causes a sudden change to become a parent, which will cause the mother's mental condition to be disrupted [25].

Low income is one of the economic problems that cause stress conditions during pregnancy. In Western countries, it is also reported that low income appears consistently in mothers with AD symptoms [12]. It is also reported thatunplanned pregnancy is a risk factor for prenatal mental disorders in low-income countries. Unplanned pregnancy is three times more likely to develop AD symptoms in Ethiopia. Those problems encourage WHO to make some recommendations for new couples, for example, discussing family planning and financial issues to maintain maternal welfare.

The previous history of depression is a biological factor that can occur during pregnancy. The report was supported by the research result conducted in Brazil. The research involved 4,130 pregnant women saying that mothers with a history of previous depression had three times higher risk of developing antenatal depression symptoms [26]. Biological factors cannot be modified but can be intervened as early as possible to avoid biological factors. These factors need to be identified before the mother enters the maternal period to prevent potential consequences that can interfere with fetal development [20].

The main genetic factor causing AD symptoms is a history of depression in the family. This factor has a high risk of developing during pregnancy. Study Jeong et al. provide recommendations to investigate AD cases' association with specific genetic factors such as serotonin hormone and estrogen-related genes [14]. The family has an essential role as a mediator so that this genetic factor does not become an obstacle to maternal welfare during pregnancy.

Psychosocial factors such as sexual violence, bad events/stressors in life, marital relationships, and social support often occur in Asian women who experience AD symptoms. Physical violence in matrimonial relationships reflects the relationship status of the mother and husband. A multi-country study by WHO indicates that 50% - 90% of women experience violence by their husbands. Violence is often regarded as standard. A husband will do violence if his wife leaves the house without permission from her husband, abandons the child, argues with the husband, refuses to have sexual relations, and burns food [27]. Mothers who get physical violence during pregnancy can experience AD symptoms. Therefore, identifying domestic violence during prenatal care is an important thing to know whether mothers have psychosocial problems or not.

Bad life events associated with depression include; marriage life (such as marital harmony, debating with the spouse, spouse employment), in-laws relationship, financial burden, other changes (such as debt, changes in living conditions, changes in working hours or working conditions, health changes on family members, the death of the closest friend). The terrible event memory increases simultaneously with hormonal changes in a woman's body. This process causes the mother to experience symptoms of depression in the early trimester of pregnancy. However, these stressors' impact can be reduced by increasing social support for mothers [19].

A marriage relationship represents the relationship between a mother and her partner. The literature that analyzes marital relations with couples from Vietnam and Taiwan reveals that cultural differences increase the risk of family conflict or domestic violence. This event can be a source of life stressors that impact maternal welfare for immigrant women living in Taiwan [16]. Therefore, the marital relationship can be one of the risk factors associated with AD symptoms requiring special attention. Prevention programs and early intervention on marital conflicts during pregnancy are the recommendations for improving maternal mental health [3].

Social support during pregnancy is the foremost essential factor in the incidence of AD. One article in Thailand reported that social support had no relationship with AD [6]. This result is consistent with the research of Della Vedova [28]. These results can be influenced by the high level of social support that comes from couples and

families. However, social support factors remain a constant predictor of research in eastern or western countries. The type of support that is expected in western countries was from a partner and various sources. Support from partners has a strong relationship to both bivariate and multivariate analysis [12].

A large amount of social support during pregnancy provides a protective effect on pregnant women who have depression or without depression. Thus, social support networks have an influential role in preventing the development of pregnancy depression. Psychosocial interventions that focus on social support can solve AD symptoms do not continue to postpartum depression [11]. Identifying aspects of social support during pregnancy can help health workers, especially midwives, to detect pregnant women at risk of depression [5].

CONCLUSION

It is reported that the prevalence of symptoms of antenatal depression in Asian countries increases more than that in western countries. An undetectable AD symptom will develop into postpartum depression and harm the pregnancy outcome and the child born. Social support is one of the main psychosocial factors that can be modified to fight antenatal depression. Midwives have an essential role in maintaining and improving maternal psychological well-being. The potential of midwives is that the frequency of meeting face to face with pregnant women is higher than that of other health workers, and it is easy for them to establish trust with mothers. Therefore, midwives must have the ability to explore predictors and AD symptoms to help seek behavior in pregnant women can be improved. The results of this study recommend that policymakers in Asian countries make policies regarding maternal mental health screening, especially in the antenatal period, through sustained care by midwives (continuity of care). Given that "no health without mental health," mental health needs to be comprehensively integrated into maternal and child health programs to create productive and qualified generations.

REFERENCES

[1] D. B. Schatz, M.-C. Hsiao, and C.-Y. Liu, "Antenatal Depression in East Asia: a Review of the Literature," *Psychiatry Investig.*, vol. 9, no. 2, p. 111, 2012.

[2] L. Yuan, Z. Gu, H. Peng, and L. Zhao, "A Paternal-Fetal Attachment Pilot Intervention on Mental Health for Pregnant Mothers," *NeuroQuantology*, vol. 16, no. 1, 2018.

[3] G. Fellmeth *et al.*, "Migrant Perinatal Depression Study: a Prospective Cohort Study of Perinatal Depression on the Thai-Myanmar Border," *BMJ Open*, vol. 8, no. 1, p. e017129, 2018.

[4] V. S. Cankorur, M. Abas, O. Berksun, and R. Stewart, "Social Support and the Incidence and Persistence of Depression Between Antenatal and Postnatal Examinations in Turkey: a Cohort Study," *BMJ Open*, vol. 5, no. 4, p. e006456, 2015.

[5] N. Phoosuwan, L. Eriksson, and P. C. Lundberg, "Antenatal Depressive Symptoms During Late Pregnancy Among Women in a North-Eastern Province of Thailand: Prevalence and Associated Factors," *Asian J. Psychiatr.*, vol. 36, pp. 102–107, 2018.

[6] H. Kalra, N. Reilly, and M.-P. Austin, "An Evaluation of Routine Antenatal Depression Screening and Psychosocial Assessment in a Regional Private Maternity Setting in Australia," *Aust. New Zeal. J. Obstet. Gynaecol.*, vol. 58, no. 6, pp. 629–635, 2018.

[7] N. I. for Health and C. E. (Great Britain), *Antenatal and Postnatal Mental Health: Clinical Management and Service Guidance*. National Institute for Health and Clinical Excellence, 2007.

[8] A. C. of Obstetricians, Gynecologists, and others, "Screening for Perinatal Depression. Committee Opinion No. 630," *Obs. Gynecol*, vol. 125, no. 630, pp. 1268–1271, 2015.

[9] A. Stein *et al.*, "Effects of Perinatal Mental Disorders on the Fetus and Child," *Lancet*, vol. 384, no. 9956, pp. 1800–1819, 2014.

[10] E. Abbasi, M. Tafazzoli, H. Esmaily, and H. Hasanabadi, "The Effect of Maternal-Fetal Attachment Education on Maternal Mental Health," *Turkish J. Med. Sci.*, vol. 43, no. 5, pp. 815–820, 2013.

[11] M. Morikawa *et al.*, "Relationship Between Social Support During Pregnancy and Postpartum Depressive State: a Prospective Cohort Study," *Sci. Rep.*, vol. 5, p. 10520, 2015.

[12] C. A. Lancaster, K. J. Gold, H. A. Flynn, H. Yoo, S. M. Marcus, and M. M. Davis, "Risk Factors for Depressive Symptoms During Pregnancy: a Systematic Review," *Am. J. Obstet. Gynecol.*, vol. 202, no. 1, pp. 5–14, 2010.

[13] K. Jung and A. K. Kau, "Culture's Influence on Consumer Behaviors: Differences Among Ethnic Groups in a Multiracial Asian Country," *ACR North Am. Adv.*, 2004.

[14] H.-G. Jeong, J.-S. Lim, M.-S. Lee, S.-H. Kim, I.-K. Jung, and S.-H. Joe, "The Association of Psychosocial Factors and Obstetric History with Depression in Pregnant Women: Focus on the Role of Emotional Support," *Gen. Hosp. Psychiatry*, vol. 35, no. 4, pp. 354–358, 2013.

[15] H. H. Shin and Y. H. Shin, "Life Stress, Social Support, and Antepartum Depression among Married Immigrant Women from Southeast Asia," *J. Korean Acad. Community Heal. Nurs.*, vol. 26, no. 2, pp. 108–118, 2015.

[16] Y. Tsao, D. K. Creedy, and J. Gamble, "A Comparison of Life Stress and Depressive Symptoms in Pregnant Taiwanese and Immigrant Women," *J. Nurs. Res.*, vol. 24, no. 3, pp. 272–281, 2016.

[17] A. Rashid and R. Mohd, "Poor Social Support as a Risk Factor for Antenatal Depressive Symptoms among Women Attending Public Antennal Clinics in Penang, Malaysia," *Reprod. Health*, vol. 14, no. 1, p. 144, 2017.

[18] A. Waqas, N. Raza, H. W. Lodhi, Z. Muhammad, M. Jamal, and A. Rehman, "Psychosocial Factors of Antenatal Anxiety and Depression in Pakistan: is Social Support a Mediator?," *PLoS One*, vol. 10, no. 1, p. e0116510, 2015.

[19] M. T. Kishore *et al.*, "Life Events and Depressive Symptoms among Pregnant Women in India: Moderating Role of Resilience and Social Support," *Int. J. Soc. Psychiatry*, vol. 64, no. 6, pp. 570–577, 2018.

[20] H. E. Nasreen, Z. N. Kabir, Y. Forsell, and M. Edhborg, "Prevalence and Associated Factors of Depressive and Anxiety Symptoms During Pregnancy: a Population-Based Study in Rural Bangladesh," *BMC Women's. Health*, vol. 11, no. 1, p. 22, 2011.

[21] K. I. Mohammad, J. Gamble, and D. K. Creedy, "Prevalence and Factors Associated with the Development of Antenatal and Postnatal Depression among Jordanian Women," *Midwifery*, vol. 27, no. 6, pp. e238--e245, 2011.

[22] S. O. Handady, H. H. Sakin, K. Y. M. Ahmed, and A. A. M. Alawad, "Prevalence of Antenatal Depression Among Pregnant Women in Khartoum Maternity Hospital in Sudan."

[23] N. Shakeel *et al.*, "A prospective Cohort Study of Depression in Pregnancy, Prevalence and Risk Factors in a Multiethnic Population," *BMC Pregnancy Childbirth*, vol. 15, no. 1, p. 5, 2015.

[24] J. Fisher *et al.*, "Prevalence and Risk Factors for Symptoms of Common Mental Disorders in Early and Late Pregnancy in

Vietnamese Women: a Prospective Population-Based Study," *J. Affect. Disord.*, vol. 146, no. 2, pp. 213–219, 2013.

[25] A. Sriyasak, A.-L. Almqvist, C. Sridawruang, W. Neamsakul, and E. Häggström-Nordin, "Struggling with Motherhood and Coping with Fatherhood--A Grounded Theory Study among Thai Teenagers," *Midwifery*, vol. 42, pp. 1–9, 2016.

[26] C. de V. N. Coll *et al.*, "Antenatal Depressive Symptoms among Pregnant Women: Evidence from a Southern Brazilian Population-Based Cohort Study," *J. Affect. Disord.*, vol. 209, pp. 140–146, 2017.

[27] C. Garcia-Moreno, H. A. F. M. Jansen, M. Ellsberg, L. Heise, C. H. Watts, and others, "Prevalence of Intimate Partner Violence: Findings from the WHO Multi-Country Study on Women's Health and Domestic Violence," *Lancet*, vol. 368, no. 9543, pp. 1260–1269, 2006.

[28] A. M. Della Vedova, B. Ducceschi, B. M. Cesana, and A. Imbasciati, "Maternal Bonding and Risk of Depression in Late Pregnancy: A Survey of Italian Nulliparous Women," *J. Reprod. Infant Psychol.*, vol. 29, no. 3, pp. 208–222, 2011.