Antenatal Depression and Its Determinant Factors in Urban Community Setting

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Background: Antenatal depression occurs in nearly 20% of pregnancies. There are various risk factors associated with antenatal depression. This study determined the risk factors for antenatal depression in urban community setting. Method: There were 107 pregnant mothers with median age 28 years old who utilized maternal health services in Primary Health Care of Matraman during April–August 2016. A cross sectional study with consecutive sampling method was used. Demographical characteristics were collected using identity form. Antenatal depression was determined using self-report questionnaire of Lembar Pengenalan Gejala Depresi with cut off ≥5 for the presence of depression, social support using Dukungan Sosial questionnaire, relationship situation with husband using Kesesuaian Hubungan Suami Istri questionnaire, and level of stress experienced in the past years using Holmes–Rahe questionnaire. Respondents took 25 minutes to complete the questionnaires. Data were analyzed using chi-square and logistic regression with 95% of confidence interval. Results: Antenatal depression occurred in 15% among the subjects. The risk for antenatal depression was five times higher in pregnant mothers with poor social support (OR: 4.79; 95% CI 1.18–19.43, \( p = 0.028 \)) and 14 times higher than those with stress (OR: 14.04; 95% CI 2.41–81.97, \( p = 0.003 \)). Conclusion: Psychosocial situation played major roles in determining antenatal depression. Poor social support increased risk of antenatal depression and stress during pregnancy. Identification of antenatal depression and its determinants is important to ensure a safe motherhood journey.

Keywords: Antenatal Depression, Risk Factors, Urban Setting, Pregnancy, Stress.

1. INTRODUCTION

Mental disorder can happen to anyone, including pregnant mothers. One of the most common mental disorder found in pregnant mothers is depression. Antenatal depression is known to affect around ten to twenty percent pregnant mothers. In Indonesia, the number of antenatal depression is predicted to affect one million mothers.

Antenatal depression is known to be related with various risk factors. The first is demographical characteristic including age, socio-economic status, marital status, and level of education. Second risk factors are psychosocial situation such as social support for pregnant mothers, pregnancy status (planned or unwanted pregnancy), and stress during pregnancy. The third risk factors associated with antenatal depression are medical history, including general medical condition, previous obstetric and psychiatric history.

Antenatal depression is known to affect not only mother’s health status but also the child. Mother with antenatal depression is at risk of spontaneous abortion, preterm labor, and low birth weight. During developmental period, baby who was born from depressed mother could have problem with temperament, attention, and low developmental score. Thus, it is important to identify antenatal depression and its associated risk factors to prevent the damaging effect.

In Indonesia, several instruments are available and known to be valid and reliable to use in hospital also in rural community setting. Those instruments are Lembar Pengenalan Gejala Depresi (LPGD) to screen antenatal depression, Kuesioner Dukungan Sosial (KDS) to identify social support for pregnant mothers, and Kuesioner Kesesuaian Hubungan Suami Istri (KHSI) to identify marital adjustment. This study will determine risk factors for antenatal depression in urban community setting.

2. METHOD

This is a cross-sectional study with consecutive sampling method. This study aimed for 107 pregnant mothers who utilized maternal health services in Matraman Primary Health Care during March–May 2016. All instruments are self-report questionnaire. We used patient’s identity form to collect demographical characteristics including age of mother, level of education, income generating activity, marital status, number of pregnancy, history of live and/or still birth, history of abortion, and gestational age.
To detect antenatal depression we used Lembah Pengenalan Gejala Depresi (LPGD), a self-reporting questionnaire aimed for pregnant mothers, served as a screening instrument altogether as an educational tool. It comprised four aspects of depression: affect, psychological, physical, and manifestation of complaints. The cut off score is ≥5 to screen antenatal depression. LPGD has a good reliability with Cronbach’s Alpha 0.8668. Sensitivity for LPGD was 55.6% and its specificity was 94.4%.11

Kuesioner Dukungan Sosial (KDS) is an instrument to assess social support for pregnant mothers. It has six components including support from husband, extended families from both sides, environmental support, mother’s preparedness, and traditional ritual. There are 24 statements with Likert scale to assess social support provided for pregnant mothers. KDS has good internal consistency with Cronbach’s Alpha 0.7887. Cut off score for KDS is ≥13 to determine social support status, with higher score describes less social support available.11

In this study, we used Kuesioner Kesesuaian Hubungan Suami Istri (KHSI) with cut off score ≥16 to determine relationship situation with husband. There are 15 statements in KHSI with Likert scale, which reflects the situation of marital relationship in the past two weeks. All statements included in KHSI are related with daily events between spouses.11

Holmes–Rahe questionnaire was used to assess the level of stress experienced in the past years. It was commonly known as Social Readjustment Rating Scale with 43 items about daily life events that might produce stress in the past year. Each item has certain score, with total score to determine the level of stress. Score <150 interpreted as no stress, 150–199 as mild stress, 200–299 as moderate stress, and score >300 considered as having severe stress.12,13

Respondents included in this study were pregnant mothers between 15–54 years old, able to speak Indonesian language, literate, in conscious state, and agree to participate in our study. Respondents took 25 minutes to complete all questionnaires. Data collected was analyzed using chi-square and further with logistic regression. We used 95% confidence interval in this study for statistical significance.

Dependent variable in this study was antenatal depression. Independent variable for the study were age of mother, level of education, income-generating activity, marital status, number of pregnancy, history of live birth and stillbirth, history of abortion, gestational age, availability of social support, presence of marital adjustment, and stress level during pregnancy.

This study was conducted after receiving ethical clearance by Health Research Ethical Committee-Faculty of Medicine, University of Indonesia.

3. RESULTS

One hundred and seven pregnant mothers were involved in this study. Antenatal depression was found in 15% (n = 16) respondents. All respondents were married adult, with minimum age was 18 and maximum age was 42 years old. Median age for respondents was 28 years old. Almost 80% (n = 83) of respondents were graduated from high school, and more than a half (n = 62) respondents were a stay-at-home mother with no income-generating activity. Finding from this study showed no significant association between demographic factors and antenatal depression.

One third of respondents (n = 32) were having their first pregnancy. Mostly they were in the second and third trimester (n = 93). Only 5% (n = 6) of mothers had experience of stillbirth, and 19% had abortion (n = 20). Our study showed no significant correlation between antenatal depression and obstetric history.

There were 53 pregnant mothers (49.5%) with poor social support. This study showed significant association between poor social support and occurrence of antenatal depression (p = 0.027). Eighty four respondents (78.5%) showed poor marital adjustment and 94.4% pregnant mothers experienced minor level of stress. Median score for stress level was 42. Stress during pregnancy was associated with antenatal depression (p = 0.000) in this study.

Multivariate analysis showed that risk for antenatal depression is nearly five times higher in mother with poor social support (95% CI 1.18–19.43, p = 0.028). Stress during pregnancy increased risk of antenatal depression by fourteen times (95% CI 2.41–81.97, p = 0.003). Table I showed the chosen model of antenatal depression and its determinant factors with Prob >Chi² = 0.0021 and Pseudo R² = 0.2290.

4. DISCUSSION

This study attempted to determine risk factors for antenatal depression in urban community setting. We found that fifteen percent of pregnant mothers in Matraman Primary Health Care showed tendency of having antenatal depression. This finding reflects similarities of antenatal proportion worldwide.14,17

There was no significant association between demographic factors with antenatal depression. Being a stay-at-home mother is common finding in low-middle income countries. Previous study showed that antenatal depression were more common among mother with no income generating activity.9 In our study, although more than half were stay-at-home mother, they might

<table>
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<th>Variable</th>
<th>Antenatal depression</th>
<th>Prevalence ratio (Adjusted)</th>
<th>95% confidence interval</th>
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<td>5</td>
<td>14.04</td>
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perceived this situation as an advantage. A stay-at-home mother is expected to have more time to take care of their families and this may affect their self-image as a perfect mother.

There was greater proportion of pregnant mothers in the third trimester. This might due to the national program that pregnant mothers in their third trimester to make minimum visits two times to health care facilities.\(^\text{18, 19}\) Mothers who live in urban area with easy access to health care facilities and educational institution tend to commit more for antenatal care.\(^\text{18}\) Therefore, the relationship between obstetric history and antenatal depression found to be not significant might due to good pregnancy outcome in Matraman area.

This study showed that social support played major role in determining antenatal depression. Pregnant mothers require social support to feel secure from abandonment. They need to be reassured that their husband, extended families, and peers are reliable to provide support and help.\(^\text{20}\) Social support is important to help mother pass through the transition period and have positive attitude towards her pregnancy.

Large proportion of mother with minor stress (median score = 42) reflects pregnancy as their primary source of stress during measurement periods. This might due to mother’s perception and acceptance with changes that occur along with their first pregnancy. Pregnancy is known to caused various changes in a woman’s life, therefore pregnancy period can be stressful.\(^\text{21–23}\) Mothers will need social support to put her through transition and accepting with changes that occur along with their first pregnancy.

5. CONCLUSION
This study showed that psychosocial situation played major roles in determining antenatal depression. Poor social support increased risk of antenatal depression by five times. Mother with stress during pregnancy has 14 times higher risk to develop antenatal depression. Identification of antenatal depression and its determinants is important to ensure a safe motherhood journey. To minimize the risk of antenatal depression, health care providers are encouraged to conduct a routine stress assessment and put a thorough obstetric history recording.

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References and Notes

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