Reliability Testing of Screening Instruments for Antenatal Depression and Associated Risk Factors in Urban Primary Care

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Background: Seven to twenty percent of pregnant mothers experienced antenatal depression symptoms, which were associated to various risk factors. Several questionnaires to screen antenatal depression and its associated risk factors are available and have been tested in few sites, but not in the primary care of urban area in Indonesia. This study will describe the reliability of using these instruments at urban primary health care. Method: This study was a cross-sectional study with convenient sampling method of 116 pregnant mothers who had antenatal care in Matraman Primary Health Care between March–May 2016. Respondents were asked to fill an identity form to get their demographical characteristic. They also filled Lembar Pengenalan Gejala Depresi to detect any symptom of antenatal depression with cut off score ≥5 for the presence of depression, social support using Kuesioner Dukungan Sosial, relationship situation with husband using Kuesioner Kesesuaian Hubungan Suami Istri. Respondents took 20 minutes to complete all of the questionnaires. The reliability of each questionnaire was tested. Results: This study showed the reliability for each questionnaire to be used in urban primary health care setting. Cronbach’s alpha for Lembar Pengenalan Gejala Depresi, Kuesioner Dukungan Sosial, and Kuesioner Kesesuaian Hubungan Suami Istri were 0.733, 0.877, and 0.890 respectively. For each questionnaire, there was no multicollinearity for each item. Conclusion: Lembar Pengenalan Gejala Depresi, Kuesioner Dukungan Sosial, and Kuesioner Kesesuaian Hubungan Suami Istri were reliable to detect antenatal depression and the associated risk factors in various setting.

Keywords: Antenatal Depression, Urban Primary Care, Screening Instruments.

1. INTRODUCTION

Symptoms of antenatal depression are found in 7–20% pregnant mothers worldwide. It consists of somatic and psychological symptoms, such as appetite and sleep disturbance, sad feelings, and loss of interest. These symptoms are often perceived as normal changes occur in pregnant mothers. However, if antenatal depression is not recognized and goes untreated, it could lead to poor pregnancy outcome. Antenatal depression would affect fetal neural development and behavior, childhood and adolescent development, also mother’s health quality.

The occurrence of antenatal depression is associated with various risk factors. The identified risk factors are demographical characteristic, psychosocial situation including stress during pregnancy, and medical history both for general medical and psychiatric problems. In the previous study, support from the surroundings (husband, family, neighbor, and health care providers) were thought to have important role in the appearance of any antenatal depression symptom.

Considering the damaging effect of antenatal depression to pregnancy outcome, it is important to identify antenatal depression and its risk factors. However, there are few challenges to conduct routine screening in pregnant mothers. For instance, current obstetric practice (both in specialist and primary care) mostly focus on physical aspect of pregnancy. In a study among obstetrician in the United States, 15% never screen their patient for depression. The other challenge is about the screening instrument. There are various instruments available to detect antenatal depression. Among 44% obstetrician who screen their patient for depression, 32% used validated instrument that has been used by health practitioners, and the other 16% utilize self-reporting questionnaire.

Several instruments are available to detect depression in pregnant women. Edinburgh Postnatal Depression Scale (EPDS) is one of the most commonly used instrument. It has been translated into Indonesian language and validated. Another instrument available to detect depression in pregnant women is Lembar Pengenalan Gejala Depresi (LPGD).

To identify risk factors associated with antenatal depression, there are Kuesioner Dukungan Sosial (KDS) to identify social
support for pregnant mothers, and Kuesioner Kesesuaian Hubungan Suami Istri (KHSI) to identify marital adjustment among couples.\textsuperscript{11} LPGD, KDS, and KHSI have been used in a large-scale study regarding perinatal depression in Indonesia which took place in a tertiary hospital. These instruments were valid and reliable.\textsuperscript{11}

Health care in Indonesia is delivered through referral pathway. Pregnancy service is available starting from primary care level provided by public health center (Puskesmas). To deliver a holistic service for pregnant women, it is important to ensure utilization of a reliable instrument. Utilization of LPGD, KDS, and KHSI have been studied in primary care in rural area but not yet in urban setting. Therefore, this study will provide scientific proof to utilize LPGD, KDS, and KHSI in an urban primary health care to enhance its utilization as part of integrative antenatal services.

2. METHOD

This study used a cross-sectional study design with consecutive sampling method. This study looked for 107 pregnant mothers who had antenatal care in Matraman Primary Health Care during March–May 2016. The targeted subjects were pregnant mothers aged between 15–54 years old, able to speak Indonesian language, literate, in conscious state, and agree to participate in our study. This study received ethical clearance by Health Research Ethical Committee-Faculty of Medicine, University of Indonesia.

All instruments used were self-report questionnaires. To gather participants’ demographic characteristic, it was used patient’s identity form. This includes age of mother, level of education, income generating activity, marital status, and obstetric history.

There were 3 questionnaires to be tested for its reliability. The first was Lembar Pengenalan Gejala Depresi (LPGD) to detect antenatal depression. It was a self-reporting questionnaire aimed for pregnant mothers. Aside than its function as a screening instrument, LP GD also served as an educational tool. The cut off score to screen antenatal depression is \( \geq 5 \).\textsuperscript{11}

Kuesioner Dukungan Sosial (KDS) was the second instrument to test. This was a questionnaire to assess social support provided for pregnant mothers. There were 24 statements with Likert scale to assess social support provided for pregnant mothers. The cut off score for KDS is \( \geq 13 \), with higher score describes less social support available.\textsuperscript{11}

The last questionnaire to test for reliability was Kuesioner Kesesuaian Hubungan Suami Istri (KHSI). The questionnaire had 15 statements with Likert scale, to reflect marital relationship situation in the past two weeks. The cut off score was \( \geq 16 \) to determine relationship situation with husband.\textsuperscript{11}

Each participant took 20 minutes to complete all questionnaires. Data collected was analyzed statistically to obtain reliability of internal consistency using Cronbach’s Alpha for each questionnaire.

3. RESULTS

This study showed reliability for instruments related to antenatal depression and associated risk factors screening to be used in urban primary health care setting. Table I presents the reliability for LP GD, KDS, and KHSI. Internal reliability coefficients (Cronbach’s Alpha) were ranging from 0.733 to 0.890.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Cronbach’s Alpha</th>
<th>Cronbach’s alpha based on standardized items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lembar Pengenalan Gejala Depresi (LPGD)</td>
<td>0.733</td>
<td>0.822</td>
</tr>
<tr>
<td>Kuesioner Dukungan Sosial (KDS)</td>
<td>0.877</td>
<td>0.902</td>
</tr>
<tr>
<td>Kuesioner Kesesuaian Hubungan Suami Istri (KHSI)</td>
<td>0.890</td>
<td>0.887</td>
</tr>
</tbody>
</table>

It was not found any multicollinearity for each item in all questionnaires.

4. DISCUSSION

Lembar Pengenalan Gejala Depresi is a self-reporting questionnaire aimed for pregnant mothers with double functions. The first function is a screening instrument for depressive symptoms and the second function is as an educational tool for pregnant mothers. LP GD comprised four aspects of depressive symptoms; affect, psychological, physical, and manifestation of complaints. The cut-off score for depressive symptoms screened with LP GD is 5; higher number is interpreted as tendency of having antenatal depression.\textsuperscript{11} This study showed Cronbach’s Alpha 0.733 for LP GD used in community setting, which reflects acceptable internal consistency. Compared to earlier study that defined reliability of LP GD in hospital setting (Cronbach’s Alpha 0.8668), this study showed lower reliability.\textsuperscript{11}

The Cronbach’s Alpha for Kuesioner Dukungan Sosial in this study was 0.877. This number showed a good internal consistency and found to be higher than previous reliability study (Cronbach’s Alpha 0.7887).\textsuperscript{11} KDS has six components; those support from husband, extended families (from both sides), environmental support, mother’s preparedness, and traditional ritual. The cut-off score for KDS is 13, with higher score interpreted as less support for pregnant mothers.\textsuperscript{11}

Kuesioner Kesesuaian Hubungan Suami Istri has six components with 29 items to assess marital adjustment between pregnant mothers and their spouses. This instrument includes six aspects that consist of closeness, adjustment, understanding, expression of affection, satisfaction, and togetherness for each couple. A score higher than 16 is interpreted as less adjustment among the spousal relationship.\textsuperscript{11} Our study revealed Cronbach’s Alpha 0.890 for KHSI which showed good internal consistency, while the previous study showed slightly lower number (Cronbach’s Alpha 0.8555).\textsuperscript{11}

All instruments showed an acceptable to good internal consistency, which was similar to the previous study. Lembar Pengenalan Gejala Depresi is a simple and practical instrument, also can detect depression disorder directly. In the earlier study, pregnant mothers with poor result from Kuesioner Dukungan Sosial and Kuesioner Kesesuaian Hubungan Suami Istri showed two times higher risk to experience antenatal depression.\textsuperscript{11}

The different result obtained from our study and the earlier, might be due to different population that participated in the study. At first, LP GD, KDS, and KHSI were developed and tested in tertiary hospital setting. While our study was conducted in urban primary care with more diverse obstetric characteristic, since primary care serves the community directly. It needs further study to explore the possible factors that might affect instruments’ reliability.
5. CONCLUSION

Lembar Pengenalan Gejala Depresi, Kuesioner Dukungan Sosial, and Kuesioner Kesesuaiman Hubungan Suami Istri have acceptable consistency and reliable to detect antenatal depression and associated risk factors in urban primary care setting. These instruments can be utilized as part of delivering integrative antenatal services in urban primary care.

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References and Notes

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