BODY MASS INDEX AND ANXIETY IN POSTPARTUM PERIOD

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ABSTRACT

Background: The period of pregnancy and postpartum is the period when hormonal imbalance and adjustment become a mother (social factor) that makes a woman transition both physically and psychologically. Physically, the phases of pregnancy and postpartum greatly contribute to the increasing rate of obesity in women.

Purpose: This study aims to analyze the relationship between body mass index and postpartum women’s anxiety level in Sukabumi City in 2014.

Methods: This research type is survey research using Cross Sectional method. The target population of the study was women who underwent labor in Sukabumi city of West Java with a sample of 97 people using random sampling technique.

Results: From the analysis of the relationship between body mass index and postpartum anxiety level there was a significant relationship. From the results of analysis of body mass index relationship with mild anxiety level and moderate-severe anxiety there is no significant relationship.

Discussion: The need to provide counseling about preparing before pregnancy or before birth in women. So that women are ready physically and mentally in pregnancy and labor so that it can reduce the number of anxiety disorders in postpartum women.

Keywords: Body Mass Index, Anxiety, Postpartum Period

INTRODUCTION

The period of pregnancy and postpartum is a period in which hormone imbalance and adjustment become a mother (social factors) that make women experience a transition both physically and psychologically (Vittayanont, Liabsuetrakul, & Pitanupong, 2006; Maulana, 2009). Physically, the pregnancy and postpartum phases greatly contribute to increasing obesity rates in women (Gunderson, 2009; Keller, Records, Ainsworth, Permana, & Coonrod, 2008). This increase occurs because of the increased supply of food consumed, increased fetal weight, increased blood supply to the fetus, increased fluid volume, accumulation of fat, and enlargement of organs. The standard body mass index according to the World Health Organization (WHO) for Asian populations is <18.5 for underweight, 18.5 to <23 for normal, 23 to <25 for overweight and> 25 for obesity (Choi, Park, & Shin, 2011). The Institute of Medicine (IOM) United States issued recommendations for weight gain during pregnancy. For a normal body mass index (BMI) then weight gain It is recommended that 11-16 kg during pregnancy, overweight 7-11 kg, 5-9 kg obesity, while for women with IMT underweight, you should increase 13-18 kg during pregnancy (Skouteris, McCabe, Milgrom, Kent, Bruce, Mihalopoulos & Gale, 2012; O’Dwyer & Turner, 2012; Maturi, Afshary, & Abedi, 2011). The Measurements commonly used to measure body weight are the Body Mass Index (BMI) body mass index is calculated from the weight (kg) divided with height squared (meters) (Garner, Feeny, Thompson, Bernier, McFarland, Huguet, & Blanchard, 2012). Obesity has a negative effect on physical and mental health. Some studies have shown a correlation between body mass index and anxiety level. Women are twice as noisy or experience anxiety disorders compared to men (Claesson, Josefsson, & Sydsjö, 2010; Onyango, & Mott, 2011). In 2010 the prevalence of women with body mass index overweight and obesity in Indonesia was 21.7%, while the prevalence in West Java was 22.8%. And the prevalence of overweight and obesity for women in West Java it is 29.7% (Ministry of
health of the Republic of Indonesia, 2013). Based on data from the Sukabumi Health Agency, the number of babies born was 7,270 in 2011. From these data, the number of mothers giving birth was quite high in the city, Sukabumi, and increasing the risk of obesity in women (West Java Provincial Health Agencies, 2011). Based on the above review, women who are obese especially postpartum women allow higher anxiety disorders compared to women with a normal body mass index. Therefore researchers feel the need to further explore and analyze the relationship of body mass index with the anxiety level of postpartum women in Sukabumi.

RESEARCH METHODS
Type of research is survey research and Cross Sectional. The target population of the study were women who underwent labor in Sukabumi City, West Java, with 100 samples using random sampling techniques. This study aimed to analyze the relationship of body mass index with anxiety levels of postpartum women in Sukabumi City in 2013.

RESEARCH RESULTS

Table 1. Characteristics of Body Mass Index and Levels of Anxiety N=100

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index of Body Mass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>37</td>
<td>37.0</td>
</tr>
<tr>
<td>Overweight</td>
<td>24</td>
<td>24.0</td>
</tr>
<tr>
<td>Obesity</td>
<td>39</td>
<td>39.0</td>
</tr>
<tr>
<td>Levels of Anxiety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>without anxiety</td>
<td>32</td>
<td>32.0</td>
</tr>
<tr>
<td>mild anxiety</td>
<td>50</td>
<td>50.0</td>
</tr>
<tr>
<td>Moderate anxiety</td>
<td>18</td>
<td>18.0</td>
</tr>
</tbody>
</table>

The women in labor as 100 samples, a total of 37.0% had a normal body mass index, and to index overweight and obesity body mass as much as 63%. Whereas when viewed from the level of anxiety, as many as 68% experienced postpartum anxiety disorders. While those who did not experience postpartum anxiety disorders were only 32%.

Table 2. Relationship Between Body Mass Index and Anxiety N=100

<table>
<thead>
<tr>
<th>Variable</th>
<th>without anxiety</th>
<th>Anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>BMI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>5</td>
<td>13.5</td>
</tr>
<tr>
<td>Overweight</td>
<td>12</td>
<td>50.0</td>
</tr>
<tr>
<td>Obesity</td>
<td>15</td>
<td>38.5</td>
</tr>
</tbody>
</table>

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\[ X^2 = p = 0.00 \]

It can be seen that women who undergo labor in the city of Sukabumi with normal body mass index are more likely to experience postpartum anxiety disorder which is 86.5%. Whereas the overweight category has the same percentage of those who are not worried about 50% who experience anxiety. The obesity category, women who had given birth in Sukabumi City were more likely to experience postpartum anxiety with a percentage of 61.5%. Which was statistically significantly different from \( p = 0.00 \).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mild Anxiety</th>
<th>Moderate to Severe Anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Normal</td>
<td>22</td>
<td>68.8</td>
</tr>
<tr>
<td>Overweight</td>
<td>10</td>
<td>83.4</td>
</tr>
<tr>
<td>Obesity</td>
<td>18</td>
<td>75.0</td>
</tr>
</tbody>
</table>

\[ X^2 = p = 0.61 \]

The mild anxiety with moderate anxiety to severe, the relationship between the Body Mass Index is that women who have a normal body mass index are more likely to experience mild anxiety, with a percentage of 68.8%. The overweight category was also more likely to experience mild anxiety with a percentage of 83.4%, while the obesity category was also more often experienced mild anxiety disorder with a percentage of 75%. And it can be concluded that post partum women in Sukabumi City are more likely to experience mild anxiety than moderate to severe anxiety. Statistically not significant with \( p = 0.61 \) p value>0.05, where there was no significant relationship between body index mass and the level of mild anxiety and moderate-severe anxiety in postpartum women in the city of Sukabumi, West Java.

DISCUSSION

The level of anxiety, 68% experienced postpartum anxiety disorder. While those who did not experience postpartum anxiety disorders were only 32%. This shows that women who give birth tend to experience postpartum anxiety disorders. This is consistent with the theory which states that anxiety levels tend to be higher in postpartum women (Zender, & Olshansky, 2009; Teixeira, Figueiredo, Conde, Pacheco, & Costa, 2009; Edhborg, Nasreen, & Kabir, 2011). Anxiety can be defined as a great concern about the baby’s condition and sometimes there is a great feeling of guilt over a mistake made by Manikkam, & Burns. (2012). Many negative things due to the persistence of anxiety disorders in postpartum women: less sensitive, less responsive and reduce competence in babysitting. Women who experience anxiety disorders during pregnancy and postpartum become more overprotective of their babies. In addition, children's psychology can also experience disorders due to postpartum anxiety (Edhborg, Nasreen, & Kabir, 2011).

Body Mass Index with postpartum anxiety level in Sukabumi City in 2013, it can be concluded that the anxiety level in postpartum women with body mass index is 86.5% and the highest category for non-depression is overweight body mass index. And from the results of the analysis of the relationship between body mass index and postpartum anxiety level, there

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was a significant relationship with p value 0.00 (p < 0.05).

The results of this analysis indicate that between body mass index has a significant relationship with postpartum anxiety level. The results of this study are in line with several previous studies, that body mass index in postpartum women has a significant relationship with increased postpartum female anxiety disorders (Zender, & Olshansky, 2009; Teixeira, Figueiredo, Conde, Pacheco, & Costa, 2009; Edhborg, Nasreen, & Kabir, 2011). The body mass index increases the prevalence of anxiety disorders by 25% and the higher the level of a person's body mass index, the level of anxiety will increase (McElroy, Allison, & Bray, 2006; Barden, Conley, & Young, 2015).

And when viewed from the relationship of the Body Mass Index with the level of mild anxiety and moderate to severe anxiety, postpartum women who experience mild anxiety disorders tend to be experienced by women who have an index overweight body mass with a percentage of 83.4%. And moderate-severe anxiety levels tend to be experienced by women who have a normal body mass index. And it can be concluded that postpartum women in Sukabumi city are more likely to experience mild anxiety compared to moderate anxiety. Statistically the relationship between body mass index with mild anxiety and moderate-severe anxiety was not significant with a p value of 0.61 (p => 0.05). The obese and overweight groups experience mild anxiety even though there is no statistical relationship. However, from a normal BMI there was an anxiety of 86.5%, so also those who were overweight and obese also felt mild anxiety. Thus from these data, anxiety that is quite high is likely to affect milk production and affect the development of the baby. In accordance with what was revealed by Ystrom (2012) that anxiety disorders and ASI have reciprocal relationships. Anxiety has an impact on breast milk production, and giving / stopping breast milk will have an impact on postpartum anxiety. Even early dismissal in breastfeeding has a significant relationship to postpartum anxiety levels.

The results of this study has similar with previous studies which showed that body mass index in postpartum women did not become at the postpartum anxiety level (Claesson, Josefssson, & Sydsjö, 2010). The relationship between obesity and mental disorders (anxiety, depression, and stress) is very complex (Barden, Conley, & Young, 2015). The body mass index is not the only postpartum anxiety factor. In addition to body mass index, hormone levels after childbirth also contribute to increased anxiety in postpartum women. Other factors that influence anxiety levels are the sex of the baby, level of income, infant weight, social support (Onyango, & Mott, 2011; Teixeira, Figueiredo, Conde, Pacheco, & Costa, 2009; Maturi, Afshary , & Abedi, 2011; Whisman, Davila, & Goodman, 2011).

CONCLUSION
The analysis of the relationship between body mass index and postpartum anxiety level there is a significant relationship. From the results of the analysis of the relationship between body mass index and the level of mild anxiety and moderate-to-severe anxiety there was no significant relationship.

SUGGESTIONS
The need to provide counseling about preparations before pregnancy or before birth in women. So that women are prepared physically and mentally during pregnancy and childbirth so that they can reduce the number of anxiety disorders in postpartum women in Indonesia, especially in Sukabumi City, West Java.

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