FACTORS INFLUENCING MENTAL AND PSYCHOLOGICAL HEALTH DURING PREGNANCY

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ABSTRACT

The study aimed to evaluate maternal mental and psychological health throughout the pregnancy based on age, religion, and occupation. In this cross-sectional study, a total of 66 pregnant women from govt. and private hospitals in Coimbatore city who were admitted between December 2019 and January 2020 were selected as respondents. Purposive sampling method was applied to select the samples. A self-constructed tool on Pregnancy Psychological Status Scale (which assesses mental health) was developed and used to collect data from pregnant women. Results revealed that significant differences in mental and psychological health based on religion ($p=0.005$) and occupation ($p<0.001$). The overall level of psychological status (Mental health) among Hindu pregnant women was found better as compared to Muslims and Christians. Regarding occupation, housewives reported higher mental and psychological health followed by private and government employees. However, no significant differences could be seen among various age groups of pregnant women.

Keywords: Mental Health, Pregnancy, Psychological Health

INTRODUCTION

Pregnancy is an exceptional period for every woman, which is a particular and complex time with various physical and psychological changes that a pregnant woman experiences during the nine months (Bjelica et al., 2018; Isaacs and Andipatin, 2020). It is a remarkable and vital period in a woman’s life because the mother-to-be prepares herself for her new role as a mother (Lindsay, 2019). Thus, this period is generally filled with feelings of excitement and happiness; yet, stress, anxiety, and other undesirable emotions and sentiments could be seen during pregnancy (Lindsay, 2019). The psychological stress of pregnant mothers is generally believed to influence pregnancy, and it may increase the risk of fetal death in different ways (Relier, 2001). Stress during the prenatal period has also been shown to impair the regulation of the hypothalamic-pituitary-adrenal axis, and likely the effects of stress on birth.
outcomes are a consequence of the fetus being exposed to higher levels of cortisol (Weinstock, 2005).

Most of the prevailing studies showed that if the mother during pregnancy is anxious, worried, and distressful, the probability of the newborn weight loss and encountering displeased results after birth such as emotional problems and the symptoms of hyperactivity disorders as well as problems in cognitive development will increase (Parcells, 2010).

Nayak et al. (2015) reported that physical changes could be seen throughout the pregnancy along with mood swings and other psychological or emotional reactions. The study added that during the advanced stage or third trimester of pregnancy, women experience various psychological problems, namely depression, somatization, anger hostility, interpersonal sensitivity, phobic anxiety, sleep disturbance, appetite, psychoticism etc.; these symptoms may relate to their current age and duration of pregnancy.

Based on the existing evidence, stress, depression, or anxiety in pregnancy has been associated with increased obstetric complications, including stillbirth and low birth weight infants (Dole, 2003; Maina et al., 2008). Pregnancy is a crucial time to care for the mothers’ minds and mental attitudes (Donegan, 2015). Hence, the researcher decided to conduct a pilot study to evaluate maternal mental health and psychological status. Thus, the study aimed to assess mental and psychological health of the pregnant women; to analyze mental and psychological health of pregnant women based on age; to examine mental and psychological health of pregnant women based on religion and to know the mental and psychological health of pregnant women based and occupation.

MATERIAL AND METHODS

Area of the study and study sample

This pilot study was conducted between December 2019 and January 2020 in Coimbatore city of Tamil Nadu. The target groups of this study were pregnant women from various govt. and private hospitals. A total of 66 pregnant women were selected through the purposive sampling method. Prior permission/consent was obtained from pregnant women, their families, and the three hospitals of two Primary Health Centres (PHCs) and one private hospital. Inclusion and exclusion criteria were applied for sample selection; inclusion criteria involved pregnant women of the first trimester, between the age group of 18-40 years, and first/second/third pregnancies. In exclusion criteria, the points considered were unwillingness to participate, below 18 years and above 40 years.

The data were collected with the help of a self-constructed tool named ‘Pregnancy Psychological Status Scale’. This tool consisted of two parts: a sociodemographic profile and Pregnancy Psychological Status Scale (mental health). The socio-demographic profile was specially designed to gather information about sample characteristics and variables: name, age, education, income, religion, occupation, types of family, size of family, stages of pregnancy, etc.

Procedure of the study and research design

The Pregnancy Psychological Status Scale (PPSS) was constructed to measure the mental health and psychological status of pregnant women (Fig. 1). It was designed by referring to
various available tools based on mental health and psychological conditions during pregnancy. The tool consisted of 50 items in seven dimensions, namely anxiety (8 items), stress (10 items), depression (7 items), emotions (7 items), socialization (5 items), personal relationships (7 items), and in-law-family relationships (6 items). Item analysis and analyses of internal consistency, parallel form reliability, content validity, construct validity and criterion validity were performed to meet out standardization requirements. The alpha Cronbach value for reliability is 0.71 which got the accepted value to measure the same. Out of 50 items, 12 are true-keyed, and the rest 38 are false-keyed. A 5-point Likert scale was adopted to respond to each statement: Always, Often, Sometimes, Rarely, and Never and the scoring for true-keyed items were 5, 4, 3, 2, 1 and for false keyed, the items were scored as 1, 2, 3, 4, 5 respectively. Total scores obtained range between 50-250, thus indicating that the higher the score better the mental health and psychological status, the lower the score, the poorer mental health, and psychological status among pregnant women. The categories are as follows:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Scale Score</th>
<th>Level of mental &amp; psychological health</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>184-250</td>
<td>Good</td>
</tr>
<tr>
<td>2</td>
<td>117-183</td>
<td>Average</td>
</tr>
<tr>
<td>3</td>
<td>50-116</td>
<td>Poor</td>
</tr>
</tbody>
</table>

All the data were normally distributed, descriptive, and inferential statistics were applied. In inferential statistics, ANOVA, independent, t-tests were performed to assess the mental and psychological health among selected pregnant women.

RESULTS AND DISCUSSION

Demographic profile of the respondents

Demographic factors such as age, religion, and occupation were represented as follows: Table 1 illustrates the descriptive statistics for all variables. The researcher selected total respondents of 66 pregnant women from Coimbatore. These participants were categorized under age, religion, and occupation. Most respondents (69.7%) were between 20 and 30 years of age, and a few, i.e., 30.3 percent fell under the age group of 31-40.
Regarding religion, majority of the respondents, i.e., 72.7 percent were Hindu and an equal number of respondents, i.e., 13.6 percent, were distributed under Muslim and Christian, respectively. Regarding occupation, 56.1 percent were homemakers, 24.2 percent were govt. employees and 19.7 were engaged in private jobs. Table 2 represents the level of the psychological status of pregnant women. From the above table, it was
observed that majority of the respondents, i.e., 68.2 percent had good mental and psychological health, and the remaining 31.8 percent had moderate mental and psychological health. There was no one with poor mental and psychological health. Findings showed that most (71.73%) of respondents under the 20-30 age group had good mental and psychological health, while 28.26 percent had average mental and psychological health.

Regarding respondents belonging to 31-40 years, 60 percent had good mental and psychological health, 40 percent were under average and no respondents were found under poor mental and psychological health in the age groups.

Table 3 describes mental and psychological health of pregnant women based on age (n=66)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Age</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20-30 years (n=46)</td>
<td>198.10</td>
<td>30.30</td>
<td>1.705</td>
<td>0.093NS</td>
</tr>
<tr>
<td>2</td>
<td>31-40 years (n=20)</td>
<td>183.10</td>
<td>38.26</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NS-Not significant

The study conducted by Ulfah et al. (2021) which contradicts the results of the study revealed that the effect of stress on psychological well-being with age was found significant (p<0.01).
Thus, there was an effect of maternal characteristics such as age, gestational age, and parity on psychological well-being.

Regarding Hindu religion, majority of respondents, i.e., 75.00 percent had good mental and psychological health during pregnancy, while only 25 percent fell under average mental and psychological health. No one was found in poor mental and psychological health.

In case of Muslims, 66.66 percent of the total respondents were in good mental and psychological health, whereas only one-third of the respondents i.e., 33.33 percent were found to have average mental and psychological health. Likewise, for Hindus, none of the respondents fell under the poor category.

Regarding Christian religion, majority of respondents (66.66%) had average mental and psychological health during pregnancy and the rest 33.33 percent had good mental and psychological health. However, no respondent was found under poor mental and psychological health among Christian respondents.

Table 4 describes the Mean, SD, and F-values of the mental and psychological health of pregnant women based on religion.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Religion</th>
<th>Mean</th>
<th>SD</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hindu (n=48)</td>
<td>200.95</td>
<td>28.08</td>
<td>5.832</td>
<td>0.005**</td>
</tr>
<tr>
<td>2</td>
<td>Muslim (n=9)</td>
<td>183.44</td>
<td>36.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Christian (n=9)</td>
<td>164.22</td>
<td>41.02</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 1% level**

Kumari et al. (2013) also support the findings and explored the relationship between religiosity, anxiety, and pregnancy outcomes. The results indicated that higher levels of religiosity were associated with lower anxiety levels and improved pregnancy outcomes.

Regarding occupation, it was observed that many housewives, i.e., 83.7 percent had good mental and psychological health while only very few, i.e., 16.21 percent, were under the observed mean and SD values among Hindus were 200.95 and 28.08, respectively. In the case of Muslims, the mean value was 183.44, and SD was 36.16. Regarding Christian, it was 164.22, and SD was 41.02, respectively. The observed p-value was 0.005, which is significant at 1% level. From this, it could be stated that respondents from the Hindu religion had better mental and psychological health than Muslims and Christians. However, it is inappropriate and incorrect to generalize about the psychological status of pregnant women based on their religious affiliations. But in this study, the variations of psychological status among different religions were observed based on cultural factors, individual differences, support from in-laws, small family size, and financial security. Hence, Hindu pregnant women tended to have better mental and psychological health than others.
category of average mental and psychological health. On the other hand, no one was observed under poor mental and psychological health during pregnancy.

In the case of government employees, it was found that 68.75 percent of respondents showed average mental and psychological health, and the remaining 31.25 percent had good mental and psychological health, while no one was found with poor mental and psychological health.

Regarding women working in a private organization, 69.23 percent of total respondents had good mental and psychological health, and the rest, 30.76 percent of respondents, showed average mental and psychological health. In contrast, no respondents were observed with poor mental and psychological health.

Table 5 describes the Mean, SD, and F-values of the mental and psychological health of pregnant women based on occupation. Findings showed that occupation was significantly related to mental and psychological health of pregnant women. Regarding Housewives, the observed mean value was 204.94, and SD value was 25.41. In case of pregnant mothers belonging to government occupation, mean and SD were 164.00 and 32.66, respectively. In case of private employees, the observed mean value was 197.53.

Table 5. Mental and psychological health of pregnant women based on occupation (n=66)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Occupation</th>
<th>Mean</th>
<th>SD</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Housewives (n=37)</td>
<td>204.94</td>
<td>25.41</td>
<td>11.216</td>
<td>0.001**</td>
</tr>
<tr>
<td>2.</td>
<td>Government employee (n=16)</td>
<td>164.00</td>
<td>32.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Private employee (n=13)</td>
<td>197.53</td>
<td>34.22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Significant at 1% level
197.53, and SD was 34.22. The observed p-value was <0.001, which is highly significant at 1% level. From this result it was observed that housewives have better mental and psychological health compared to government and private employees. In addition, private employees are good in mental and psychological health than government employees. The reasons observed and sighted by the study were due to better family and social support for housewives and they had more time and flexibility to seek help from family members/friends, also reduced work-related stress than those of government and private sectors. As per the literature housewife pregnant women generally have greater autonomy in managing their daily routines and pregnancy-related decisions than working women.

The study contradicts the findings which examined the psychological status of pregnant women based on their employment status and found that working pregnant women exhibited more positive attitudes, a sense of purpose, and higher self-esteem than non-working women (Bulgakov et al., 2018).

CONCLUSIONS

The study aimed to assess pregnant women’s mental and psychological health from govt. and private hospitals in Coimbatore. The results revealed that pregnant women’s overall mental and psychological health was good to moderate. The study identified that Hindu housewives were found to have better mental and psychological health than other groups. However, we did not observe any significant difference among age groups. Additionally, these results also revealed that no respondents had poor mental and psychological health during pregnancy. The study suggested that more attention should be paid to identifying the psychological risk factors during pregnancy and providing suitable interventions to improve the lifestyle of pregnant women. Influential factors for psychological status determined in the present study are to provide additional facilities in the health care sector in relation to public mental health in developing preventive strategies to improve their overall psychological health.

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REFERENCES


