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A descriptive study to assess the prevalence of antenatal depression among pregnant women at selected hospitals, Bangalore, with a view to develop an informational booklet on prevention of depression during pregnancy

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Abstract

Background: Pregnancy is the time during which one or more offspring develops inside women. Pregnancy entails physiological, hormonal and psychological changes which could increase the probability of mental and emotional changes resulting in depression, anxiety or psychological distress in pregnant mother. Pregnant women may undergo emotional changes, thinking changes, physical changes, behaviour and social changes. Antenatal depression can be a precursor to postpartum depression if not properly treated. The aim of the study is to assess the prevalence of depression among the pregnant women.

Materials and methods: A descriptive study design was adopted to assess the Prevalence of Antenatal depression among pregnant women. Convenient sampling technique was used to select 150 pregnant women who had come for their regular antenatal care at OBG outpatient department in Ramaiah Memorial hospital, Bangalore. Edinburgh postnatal depression scale (EPDS) was used to screen the depressive symptoms among the pregnant women.

Result: The finding of the study revealed that 39.3% of the pregnant women were having probable depression, 30% were at risk for depression and 30.7 % of women were not likely to have depression during pregnancy. It was observed that there was significant association between selected socio demographic variables such as age (p=0.001), education of the mother (p=0.043), duration of marriage (p=0.000), children living with chronic illness (p=0.042), number of previous pregnancies (p=0.000), mode of pregnancies in past pregnancies (p= 0.000), number of times delivered (p=0.000), number of living children (p=0.000), history of abortion (p=0.010), complications during present pregnancy (p=0.043), planned or unplanned pregnancy(p=0.004), past medical history of hypothyroidism(p=0.000) and hormonal imbalance (p=0.042), past obstetrical history of miscarriage (p=0.042).

Conclusion: The study revealed that majority of the pregnant women had depressive symptoms. There is the need for clinical efforts to focus on early recognition and effectively managing antenatal depression by screening, thus preventing progression to postpartum depression and its ill effects.

Keywords: Prevalence, Antenatal depression, pregnant women

Introduction

Pregnancy is the time during which one or more offspring develops inside a woman. Pregnancy is typically divided into three trimesters. The first trimester is from week one through twelve, the second trimester is from week thirteen through twenty-eight; the third trimester is from twenty-nine weeks through forty weeks.**[1]** Pregnancy entails physiological, hormonal and psychological changes which could increase the probability of mental and emotional changes resulting in depression, anxiety or psychological distress in pregnant mother.

Pregnancy is a time of significant psychological adjustment as a mother adapts to physical changes and emotionally prepares to nurture a new life. For new mothers carrying their first baby, the adjustment may be more challenging, especially if the pregnancy was unwanted or unplanned, if they have had difficult relationships with their own mother — any unresolved emotional conflicts may be awakened, if they are working as it may be challenging to balance career with motherhood, particularly if colleagues are not understanding or supportive. Other factor that may contribute to antenatal depression includes having a complicated pregnancy, foetal abnormalities, past history of depression. The experience of antenatal depression can vary from person to person. The pregnant women may undergo emotional changes, thinking changes, physical changes, behavioural and social changes.

The World Health Organization (WHO) defines depression as ―a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness and poor concentration‖. It can be long lasting or recurrent and thus hinders normal functioning of life, in the most severe cases potentially leading to suicide**. [2]**

According to American college of obstetricians and gynaecologist (ACOG) between 14-23% of women struggles with symptoms of depression during pregnancy. Depression has become a significant public health issue, with a continuous rise in its prevalence. Depressive symptoms during pregnancy often go unnoticed and are disregarded, and this may negativity affect a woman's health**.[3]** Since 2006, ACOG has worked towards increasing awareness of perinatal depression, which effects as many as 20% of pregnant women and mother.

Antenatal depression can be a precursor to postpartum depression if not properly treated. Any form of prenatal stress felt by the mother can have negative effects on various aspects of fetal development, which can cause harm to the mother and child.Untreated depression can lead to poor nutrition, drinking, smoking, and suicidal behaviour, which can then cause premature birth, low birth weight, and developmental problems.

Materials & Method

Study Design: The study used descriptive research design.

Variables: Study variables for the study includes age, religion, education, occupation, income, place of residence, type of family, marital status, age at marriage, duration of marriage, children with chronic

illness, history of personal and family depression, number of previous pregnancies, mode of delivery in past pregnancies, number of times delivered, number of living children, history of abortion, complication in present pregnancy, planned pregnancy, past medical history, past obstetrical history, TSH value.

Setting of the study: The study was carried out in OBG outpatient department (OPD) of Ramaiah Memorial Hospital, Bangalore. The criteria for selecting the setting were geographical proximity, feasibility of conducting the study, availability of the samples and familiarity of the investigators with the setting.

Sample size: 150 pregnant women

Sampling technique: convenient sampling technique was used to select the samples.

Inclusion criteria

Pregnant women

- Able to read and understand either Kannada or English.
- Available at the time of data collection.
- Willing to co-operate for the data collection.

Exclusion criteria

Pregnant women

- With known case of phobias, anxiety and personality disorders.

Development of tool: After an extensive review of literature and discussion with the experts the structured questionnaires were prepared to assess the antenatal depression. The tool consisted of two parts:- Socio-demographic variables and Edinburgh Postnatal Depression Scale (EPDS). Socio-demographic variables of the subject included age, religion, education of the pregnant women, education of the husband, occupation of the pregnant women, occupation of the husband, family income, place of residence, type of family, marital status, age at marriage, duration of marriage, relationship with spouse, married life, children living with chronic illness, personal history of depression and family history of depression, number of previous pregnancies, mode of delivery in past pregnancies, number of times delivered, number of living children, history of abortion, complication in present pregnancy, planned pregnancy, past medical history, past obstetrical history and TSH value.

Edinburgh postnatal depression scale (EPDS) is a scale used to screen perinatal depression. Edinburgh Postnatal depression scale (EPDS) was developed in 1987 at health centres in Scotland by John L. Cox, Jenifer M. Holden, and Ruth Sagovsky. The scale consist of 10 item scale with each item scored from 0-3 (minimum score is 0 and maximum is 30). Question 10 on the EPDS tool addresses suicidal ideation.

Validity: Content validity of the tool was established by inviting suggestions from experts that included one Senior Obstetrician and nine nurse experts. There was 100% agreement between the experts on relevance of items included on the tool.

Reliability: The tool was tested for reliability using Cronbach's Alpha test was ά= 0.74 respectively

Ethical clearance: The ethical clearance for this study was obtained from the ethics committee of Ramaiah Institute of Nursing Education and Research.

Pilot study: Pilot study was conducted at Ramaiah memorial hospital. A total of 15 pregnant women were selected for the study. On completion of pilot study it was found that it was feasible to undertake the main study.

Data collection procedure: The data was collected in Ramaiah Memorial Hospital, Bangalore, after obtaining formal permission from the concerned authorities.

Pregnant women who met the inclusion criteria were recruited from the obstetrical and gynaecological outpatient department. A total of 150 pregnant women were selected for the study. The purpose of the study was explained and informed consent was obtained from all the subjects. Socio-demographic data and Edinburgh postnatal depression scale (EPDS) tool was distributed to each subjects and informed to read and follow the instructions carefully and subjects were requested to respond to the given questions. Approximately 10-15 samples were assessed per day. Time taken for each sample was around 5-10 minutes. The collected data were coded and entered in the master sheet.

Statistical method: The data analysis was done by using descriptive and inferential statistics. SPSS (version 20) was used to analyse the data.

1. Frequency and percentage distribution were computed for socio-demographic characteristics.
2. Frequency and percentage distribution were computed for prevalence of Antenatal depression.
3. Association between study findings and selected socio-demographic variables using chi square.

Results

The collected data were analysed according to the objectives of study. The findings are presented below.

Socio demographic characteristics of the subjects: Frequency and percentage distribution were computed for socio- demographic variables of the subject.it is observed that 51.3% of the participants belongs to the age group 25-29 years, 12 % of the participants were under the age group 20-24 years and 9.3% of the participants were above 35 years and above. Majority 68.7% of the participants was Hindu. 39.3% of the participants had education level of degree and above. 47.3% subjects were homemaker and only 4% of the participants were government employed. Most of the participant's husband 65.3% had private job while 18.7% were self-employed. Majority of the participants 80.7% belong to urban residence. More than half of the participants 70% belonged to nuclear family. All the participants were married. 47.3% of the participants were married at the age between 21 to 25 years. Half of the participants 58.7% was married for the duration of 4 to 6 years and all the participants had a satisfactory relationship with their spouse. Majority of the participants 98.7% had a happy married life. 2.7% of the participants had children living with chronic illness. None of the pregnant women had any personal and family history of depression. Half of the participants 56% were primi mothers with no previous pregnancy. 28% of the participants had normal vaginal deliveries and 11.3% of participants had lower segment caesarean section in past pregnancies respectively. More than half of the participants 60.7% had no history of delivery. 62 % of the participants had no living children and only 0.7% of the participants had more than two living children. Majority of the participants 84% had no history of abortion. 46.7% of the participants had complications during their present pregnancy whereas 53.3% of the participants did not have any complications during present pregnancy and most of the participants 66% had a planned pregnancy while 34% of the pregnancy were unplanned. All the participants had no past history of pain and heart disease. 15.3% of the participant had past history of hypothyroidism and only 2.7% of the participant had past history of hormonal imbalance. 5.3% of the participants had past obstetrical history of preterm delivery, 2.7% of miscarriage, 3.3% of stillbirth and none of the participants had past obstetrical history of puerperal infection. Majority 70% of the participants had normal thyroid stimulating hormone (TSH) and

30% of the participant had hypothyroidism with TSH value > 2.5 (mU/L). Almost half of the participants 48.7% had screened for TSH in between 13-28 weeks range.

Frequency and percentage distribution for prevalence of antenatal depression: Frequency and percentage distribution was computed for prevalence of antenatal depression among pregnant women. It is observed that that 39.3% of the participants had probable depression, 30% of the participants were found to be at risk for depression while 30.7% of the participants were not likely to have depression.

Association between antenatal depression and socio demographic data: Chi square test was used to find the association between antenatal depression and socio-demographic variables. It was observed that there was a statistical significant association found between antenatal depression and selected socio demographic variables such as age (p=0.001), education of the mother (p=0.043), duration of marriage (p=0.000), children living with chronic illness (p=0.042), number of previous pregnancies (p=0.000), mode of pregnancies in past pregnancies (p= 0.000), number of times delivered (p=0.000), number of living children (p=0.000), history of abortion (p=0.010), complications during present pregnancy (p=0.043), planned or unplanned pregnancy(p=0.004), past medical history of hypothyroidism(p=0.000) and hormonal imbalance (p=0.042), past obstetrical history of miscarriage (p=0.042).

Discussion

The antenatal period is very significant for the mother. Although the impact of maternal mental health on child development starts from conception, research in the area of antenatal mental health has gained momentum only in recent years. The existing literature has largely focussed on common mental disorder such as depression. Growing evidence also suggests that antenatal mental health problems can be a precursor for subsequent mental health problems in a woman's life**.** [4] All women are at risk for depression during pregnancy and during the postpartum period.

Based on the result of the present study, among 150 pregnant women, 39.3% of the pregnant women had probable depression, 30% of the women were at risk for depression and 30.7% of the pregnant women were not likely to have depression during pregnancy. A Similar prevalence was identified by a study conducted on Prenatal Depression and its associated risk factors among 280 Pregnant Women in antenatal clinic at Sanjay Gandhi Hospital, Bangalore. The proportion of respondents who screened positive for prenatal depression was 35.7%. [5] It was also consistent with the result of the study conducted to assess the prevalence and correlates of depression in pregnant women in an urban primary health center of east Delhi among 200 pregnant women who attended antenatal clinic where 21% women were found to be suffering from possible depression. [6]

The present study findings revealed that there was a significant association between selected socio demographic variables such as age (p=0.001), education of the mother (p=0.043), duration of marriage (p=0.000), children living with chronic illness (p=0.042), number of previous pregnancies (p=0.000), mode of pregnancies in past pregnancies (p= 0.000), number of times delivered (p=0.000), number of living children (p=0.000), history of abortion (p=0.010), complications during present pregnancy (p=0.043), planned or unplanned pregnancy(p=0.004), past medical history of hypothyroidism(p=0.000) and hormonal imbalance (p=0.042), past obstetrical history

of miscarriage (p=0.042). The study finding was supported by descriptive cross sectional study conducted to assess the prevalence of antenatal depression and to identify associated risk factors among 201 pregnant Women Attending Tertiary Care Hospitals in Coastal Part of South India, Mangalore. The study result found that the risk of developing antenatal depression was statistically significant among the women 21.1% who were married before 20 years of age (p= 0.027), who were multi-gravida (p=0.002) and who were facing pressure from in laws (p<0.05). **[7]** It was also consistent with the result of the study conducted to estimate the prevalence and obstetric risk factors of Depression during pregnancy among pregnant women attending a tertiary care hospital in Navi Mumbai, India. The sample size was 185 by random selecting technique. The prevalence of depression was found to be 9.18%, and it was significantly associated with several obstetric risk factors like gravidity, unplanned pregnancy, history of abortions and a history of obstetric complications, both present and past. [8]

Limitations

- Authenticity of the information regarding socio-demographic variables is based on the response of the subjects.
- Generalisation of the findings is limited due to limited sample size.

Conclusion

The present study findings indicated that majority of the pregnant women had depressive symptoms. There was a statistical significant association found between antenatal depression and selected socio demographic characteristics. Considering the findings of the present study there is a need for early assessment and detection of the depressive symptoms among the pregnant women. Antenatal mothers need to have the knowledge about the factors contributing to depression and its prevention thus preventing progression to postpartum depression and its ill effects.

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