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## ANTEPARTUM DEPRESSIVE SYMPTOMS AND TOKOPHOBIA (FEAR OF CHILD BIRTH)-A CROSS-SECTIONAL STUDY

<sup>1</sup>Babitha E K, <sup>2</sup>Dr.Geethakumary.V P, <sup>3</sup>Dr.Harish.M T

<sup>1</sup>Asst.Professor, Govt.College of Nursing, Kozhikode, <sup>2</sup>Principal, Govt.College of Nursing, Thrissur.

<sup>3</sup> Professor, Dept. of Psychiatry, Govt.Medical College, Kozhikode.

<sup>1</sup>Asst.Professor, Obstetrics and Gynecological Nursing, Govt.College of Nursing, Kozhikode-673008, Kerala, India.

**ABSTRACT:** The mental health of women is an important, but often neglected aspect of reproductive health. The present study is a pilot project to identify the association between antepartum depressive symptoms (APDS) and tokophobia among women attending Antenatal OPD at Institute of Maternal and child health, Kozhikode. Fifty antenatal women were screened for APDS using Edinburgh Depression Screening Scale (EPDS) and also assessed for tokophobia using Wijma Delivery Expectancy Questionnaire (W-DEQ). Fifty percentage of women were screened positive for APDS and 36% of women tend to have tokophobia. APDS was significantly associated with tokophobia ( $\chi^2 = 5.558, p=0.018$ ) along with social support and history of illness in present pregnancy ( $p<0.05$ ). There is high prevalence of depressive symptoms in pregnancy and need routine screening to identify APDS. Antepartum childbirth preparation sessions would be useful to reduce fear and increase the acceptance of pregnancy and delivery.

**Key words:** Antepartum depressive symptoms, Fear of child birth / Tokophobia, Antepartum depression

### INTRODUCTION

Pregnancy is an important period of vulnerability to depression, which has been linked to hormonal and/or biological changes. Prevalence of antepartum depression varies high-income nations and low- and middle-income countries. Okagbue et al. (2019) conducted a systematic review on antepartum depression (APD) and reports that prevalence of APD is around 16.4% and is most prevalent in the last trimester of pregnancy and least in the second trimester. Factors contributing to APD varies (Dadi et al., 2020) and falls into socio economic factors, obstetric factors, social support available, personal factors and fear of child birth (Humayun et al., 2013).

According to Kiruthiga (2017) fear of miscarriage, fetal deformities, and not being a good mother are all common fears during pregnancy. Fear in pregnant women increases as the pregnancy progresses, owing to concerns about childbirth and delivery pain. Fear of childbirth refers to afraid of labor pain and delivery. Even though the pregnancy is desired and planned there are possibilities of worries and fears to mothers regarding the changes happening to the body as well as fetal outcome. Fear of child birth will be more pronounced during third trimester especially approaching to due date. As per Naitreetgrandir.com (2021) report about 20% of women used to experience fear of childbirth during pregnancy. High levels of anxiety and fear affects health of women and her fetus badly. There is increased risk of developing pre-eclampsia, premature birth and low birth weight (MGH Center for Women's Mental Health, 2011).

Fear of child birth (FOB) have been reported as a risk factor for antepartum and postpartum depression. Moreover APD have been identified as an important predictor of postpartum depression (PPD) (Pfoet et al., 1990). Hence early identification of APDS and fear of child birth among women is necessary to prevent the occurrences of postpartum depression. Tokophobia can be managed effectively by proper support and psycho- education regarding child birth.

The current study is a pilot project and the objectives were to identify APDS among antenatal women, to find out the association between APDS and tokophobia and to find out association between APDS and selected variable

### Hypotheses

H<sub>1</sub>: There is significant association between antepartum depressive symptoms and selected variable

H<sub>2</sub>: There is significant association between antepartum depressive symptoms and fear of child birth

### Materials and methods:

The present study is a cross-sectional study conducted in Antenatal OPD of IMCH, Kozhikode. This institute is one of the biggest State government owned obstetric centres with modern diagnostic and treatment facilities. It is the largest referral and teaching hospital caters the health need of mothers as well as children from five northern districts of Kerala. The research variables in the study were antepartum depressive symptoms (APDS), socio personal variable, selected variables such as obstetric factors, spouse related factors, family related and personal factors, social support and fear of birth. Population of the study was antenatal women of 28-34 weeks of gestation and sample of the study was antenatal women of 28 to 34 weeks of gestation attending antenatal centres. The sample size of the study was calculated using the formula  $n = \frac{4pq}{d^2}$  in which p is the prevalence of antepartum depressive symptoms taken as 35.7% based on the literature reviewed (Sheeba et al., 2019), q was taken as 64.3, d was taken as seven and the calculated sample size was 200. In the pilot study required sample size was 20, means 1/10<sup>th</sup> of actual sample size, but fifty participants were taken in the study in order to do statistical analysis and to confirm fit for the test. Fifty antenatal women attended antepartum OPD from twenty sixth August 2018 to twenty eight August 2018 were recruited consecutively based on inclusion and exclusion criteria.

**Inclusion criteria:** Antenatal women of 28 -34 weeks of gestation

- Willing to participate and give consent for the study
- Able to read and write English or Malayalam

**Exclusion criteria** - Antenatal women with mental illness on treatment

**Tool 1-Semi structured interview schedule to collect socio personal data** of women attending antenatal OPD

**Tool 2- Social support measurement scale**

Self-reported 4-point rating scale consists of 26 items refers to help and support which a woman gets from her attending antenatal in law, relatives, friends and neighbors and health personnel during pregnancy. Maximum score -78, score range 0-78, graded as good >68, moderate 45-68 and poor < 45

**Tool 3 EPDS** (Edinburg postnatal depression screening scale) - standardized 10 item self-reporting screening tool for depression which is based on the severity of symptoms a woman experienced during the last week. <sup>8</sup>The tool has been used for screening symptoms of antepartum as well as postpartum depression (ACOG Statement on Depression Screening, 2021) and (Meijer et al., 2014). Routine screening of women in perinatal period is useful to identify mothers at risk for antepartum and postpartum depression. APDS was evaluated by Malayalam version of EPDS. It is a 4-point Likert scale ranging from 0 to 3, and the score ranges from 0-30, score of more than  $\geq 9$  would be categorized as presence of APDS.

**Tool 4-W-DEQ (Wijima Delivery Expectancy Questionnaire)** standardized tool to assess fear of childbirth before delivery. The 33-item self-reported questionnaire measures FOB on a six-point Likert scale that ranges 0 -5, with a total score of 0 -165. A higher score indicates a higher level of childbirth fear. A score of >85 suggest fear of child birth (Wijima et al., 1998).

The tools were validated by thirteen experts in the field of obstetric and gynaecologic nursing, obstetrics and gynaecology, psychiatric nursing, psychiatry, clinical psychology and psychiatric social work. Reliability of the tools were tested using Cronbach's alpha. The reliability coefficient was found to be 0.89 for social support measurement scale and 0.85 for Edinburgh postnatal depression screening scale and 0.84 for W-DEQ (Wijima Delivery Expectancy Questionnaire).

### Statistical analysis

Data were analyzed using 18<sup>th</sup> version of SPSS. Descriptive statistics was used to find out frequency, percentage, mean, standard deviation (SD) of socio personal data and prevalence of APDS. Chi-square test was used to find out association between APDS, tokophobia and selected variables

**Results:** The mean age of the women was 27 years [standard deviation (SD) 4.9] years, with a range of 18-39 years. Majority (92%) of them were in the age group of 20-35 years. The women included in the study had gestation between 28 to 34 weeks, 56% belongs to Hindu religion, 54% have secondary education, 94% were home makers and 70% belongs to three generation family.

Regarding prevalence of APDS, it was found that 50% of women have APDS, who scored  $\geq 9$  on EPDS

Among 50 mothers 36% have tokophobia, who scored >85 on W-DEQ and 64% had no tokophobia. Table 1 shows that the mean of APDS score was 9.3 with a SD of 5.28 and mean of FOB score of the participants was 37.3 with a SD of 24.16. Table 2 shows that there is no significant association between APDS and socio-personal variables

**Table 1: Minimum score, maximum score, mean and SD of APDS and FOB score of participants (n=50)**

Variable	Score range	Minimum	Maximum	Mean	SD
APDS	0-30	0	19	9.3	5.28
FOB	0-165	0	110	37.3	24.16

Table 2: Association between APDS and socio personal variable

(n=50)

Socio-personal variable	Categories	Total f	APDS		Chi-square	df	p value
			Present (n=25) f (%)	Absent (n=25) f (%)			
Age in years	<20	2	1(4.0)	1(4.0)	2.087	2	0.352
	20-35	46	22(88.0)	24(96)			
	>35	2	2(8.0)	0(0.0)			
Religion	Hindu	28	14(56.0)	14(56.0)	1.048	2	0.592
	Christian	1	1(4.0)	0(0.0)			
	Muslim	21	10(40.0)	11(44.0)			
Education	Primary	3	3(12.0)	0(0.0)	4.180	3	0.243
	Secondary	27	14(56.0)	13(52.0)			
	College	14	5(20.0)	9(36.0)			
	Professional	6	3(12.0)	3(12.0)			
Occupation	Homemaker	47	22(88.0)	25(100.0)	3.191	2	0.203
	Private sector	2	2(8.0)	0(0.0)			
	Public sector	1	1(4.0)	0(0.0)			
Type of family	Nuclear	15	7(26.0)	8(32.0)	0.095	1	0.758
	Three generation family	35	18(72.0)	17(68.0)			

Table 3 shows that majority (66%) of the participants had history of illness in present pregnancy and the prevalence of APDS was 96% among women with history of illness in present pregnancy as compared to women without history of illness in present pregnancy (1%). Majority of the participants (54%) had good social support and 34 % had poor social support. Prevalence of APDS was more in participants with poor social support (68%) as compared to participants with good social support (8%). Prevalence of APDS was 52 % among women with tokophobia as compared to women without tokophobia

Table 3 also depicts that there is significant association of APDS with history of illness in present pregnancy, social support and tokophobia (p value<0.05). It was also identified that there is no significant association of APDS with gravida, un wanted pregnancy, staying with husband, history of mental illness and family history of mental illness (p value>0.05)

Table 3: Association between APDS and selected variable (n=50)

Variable	Categories	Total f	APDS		Chi-square	df	p value
			Present (n=25) f (%)	Absent (n=25) f (%)			
Gravida	Primi	18	10(40.0)	8(32.0)	0.347	1	0.758
	Multi	32	15(60.0)	17(68.0)			
Present pregnancy	Wanted	38	17(68.0)	21(84.0)	1.754	1	0.185
	Un wanted	12	8(32.0)	4(16.0)			
History of illness in present pregnancy	Yes	33	24(96.0)	9(36.0)	20.053	1	0.000
	No	17	1(4.0)	16(64.0)			
Fear of birth	Present	18	13(52.0)	5(2.0)	5.558	1	0.018
	Absent	32	12(48.0)	20(80.0)			
Social support	Good	27	2(8.0)	25(100)	42.593	2	0.000
	Moderate	6	6(24.0)	0(0.0)			
	Poor	17	17(68.0)	0(0.0)			
Staying with husband	Yes	35	15(60.0)	20(80.0)	2.381	1	0.123
	No	15	10(40.0)	5(20.0)			
History of mental illness	Yes	1	1(4.0)	0(0.0)	1.020	1	0.312
	No	49	24(96.0)	25(100)			
Family history of mental illness	Yes	1	1(4.0)	0(0.0)	1.020	1	0.312
	No	49	24(96.0)	25(100)			

## Discussion

The present study shows that prevalence of APDS among antenatal women in third trimester is 50%. A high prevalence of APDS have been supported by the findings of a study conducted in Pakistan (Humayun, A., et al .2013) and in Bangalore, India (Sheeba et al ., 2019) where the prevalence of APD was 64.6% and 35.7% respectively. The findings were not matching with the findings of Okagbue et al. (2019) systematic review on prevalence of antepartum depression during the trimesters of pregnancy and a study conducted in South India (Jyothi Kantipudi ., 2020) on antenatal depression and generalized anxiety disorder, where the prevalence was 16.4% and 22% respectively. According to Zhang et al. (2020) prevalence of APDS was tend to be high in third trimester in the present study all participants where in third trimester as nearing the date of delivery, women were more worried about impending delivery and health of fetus

In the present study it was found that APDS is significantly associated with tokophobia ( $p < 0.05$ ) and the prevalence of APDS is more among women with tokophobia than women without tokophobia. This is in accordance with the findings of Humayun et al. (2013) and the vice versa was found in the study of Storksen et al. (2012), presence of anxiety and depression increased the prevalence of fear of childbirth among antenatal women. Moreover, the study of Räisänen et al. (2013) identified fear of child birth as a predictor of postpartum depression.

Findings of present study shows that the history of illness in present pregnancy have significant association with APDS ( $p < 0.05$ ). This finding was supported by Biaggi et al. (2016) and Joshi et al. (2019). They found that antenatal depression was associated with complications in present pregnancy.

In the present study it was found that social support is a significant factor for APDS and prevalence of symptoms of APD is more among women with poor social support as compared to women with good social support. This was supported by Friedman et al. (2020) and Fisher et al. (2012) in their study it was found that poor social support is a risk factor for prenatal depression

It was identified in the present study that there is no significant association between APDS and socio personal variables. It is a pilot study and small sample size may be the reason for this finding. Despite the high occurrence of depression in the current study, none of the women were evaluated for depression or other psychiatric diseases during standard prenatal examinations. As a result, none of them were receiving any treatment, putting these women at danger of developing postpartum depression



## Strengths and limitations

This study focuses on antenatal depressive symptoms which has received less attention than postnatal depression. The instruments/tools used to measure the study variables were standardized and have good psychometric properties. The findings emerged from the study were found to be relevant with respected to related literature

Limitations -this is a pilot project and sample size were small. In the present study researcher used the EPDS scale which is a self – reporting screening measure for identifying women at risk for depression. Even though EPDS has a high sensitivity and specificity and can be easily administered by a trained health worker, it is important to clinically confirm the presence of depression .

**Conclusion:** The present study showed a high prevalence of antenatal depressive symptoms which is suggestive of its public health importance. History of illness in pregnancy, social support and fear of child birth were found to be associated with APDS. Maternal health service should include screening and diagnosis of prenatal depression and should be a part of routine antenatal check- ups. Integration of mental health service to maternal health program would be beneficial to early identify mothers at risk for prenatal depression and also the mothers with fear of child birth. As tokophobia and APDS are reciprocal, interventional management of tokophobia would be a good approach to deal with antenatal depression. Both APD and FOB were predictors of postpartum depression, prevention and management of APDS as well as FOB is useful in prevention of PPD.

**Conflicts of interest:**The authors declare that they have no conflict of interest

**Ethical consideration** – The study was conducted after getting approval from, Scientific Review Committee and Institutional Ethics Committee of Govt.College of Nursing, Kozhikode and permission from Medical supdt of IMCH, Kozhikode. Investigator met the antenatal women attending antenatal OPD at IMCH, Kozhikode introduced herself and established rapport with them. Participants were selected based on inclusion and exclusion criteria. The purpose of the study was explained and assured the confidentiality of information. After obtaining willingness, consent was taken and data were collected using concerned tools of the study.

**Authors' contribution:**First author was the principal investigator, second author was the guide and third author was the co-guide of the research work.

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