Assessment of Depression among antenatal women in a teritiary care Centre in bengaluru: a cross sectional study.

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ABSTRACT

BACKGROUND: Antenatal depression, also known as prenatal depression, is a form of clinical depression that can affect a woman during pregnancy. In many women, antenatal depression continues to progress into postnatal depression affecting both the mother and the child. Maternal distress during pregnancy is associated with increased infant cortisol levels and has an impact on the developing foetal brain leading to cognitive, emotional and behavioural difficulties in childhood. Hence, an accurate assessment of depression during pregnancy is essential to safeguard the well- being of the mother and child. This study aims to assess the prevalence of depression and factors influencing depression in pregnant women.

METHODS: A cross-sectional study was carried out between May 2016 to August 2016 in a large public tertiary care hospital in Bangalore. One hundred and fifty antenatal mothers were interviewed employing the Edinburgh Postnatal Depression Scale (EPDS).

RESULTS: We found that14.6% of antenatal women had high levels of depression, 21.3% had moderate levels of depression and 64% had low levels of depression. Coming to the contributing factors, 42.1% of antenatal women who had not had antenatal visits previously, 18.75% of antenatal women who had delivered through C-section earlier, 38% of antenatal women whose mothers were no more and 18.75% of antenatal women who had 'difficult' relationships with their husbands, all had statistically significant'high levels' of depression.

CONCLUSION: The study emphasises that factors for depression among pregnant women include being irregular in attending ANC visits, relationship issues with the husband and other family members and having lost their mothers.

KEY WORDS: Pregnancy, Depression, Antenatal mothers, Prenatal

Introduction

Pregnancy is a period of normal physiological phenomenon associated with hormonal changes in women and attempts to adapt these changes may increase the likelihood of psychological and emotional disturbances that may initiate antenatal depression (1). According to WHO, the depressive disorders will be the second leading cause of global disease burden, and rates of depression in women of reproductive age are reported to be twice than in men[2]. Antenatal depression is associated with adverse foetal outcomes including intrauterine growth retardation, low birth weight, preterm delivery and infant behavioural problems[3]. Apart from physiological effects on foetus, depression in pregnancy can affect a mother's functional status and cause cognitive distortions (4).

Identification of and assessment of depression during pregnancy is very important for early intervention in order to prevent the adverse outcomes on both mother and baby. Hence this study is conducted to estimate the prevalence of depression & to determine the factors influencing depression among antenatal mothers.

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Methods

Study Design: Cross – Sectional Study.

Study Area: Tertiary care centre, Bangalore Medical College and Research Institute (BMCRI).

Study Duration: May To August 2016.

Study Population: Antenatal mothers who visited

Tertiary care centre .

Sample Size: Based on previous study by Pajulo M (4) et al sample size was estimated to be 150.

Sampling Method: 150 Antenatal mothers were included in the study by non probability sampling technique.

Inclusion Criteria: Antenatal mothers who visited the tertiary care centre during the study period.

Exclusion Criteria: Participants who did not give consent for the study.

Data Collection: Data was collected by interview method by using semi-structured questionnaire, after obtaining verbal consent from the study participants by thoroughly explaining the details of the study.

Part A: Socio-demographic Profile. Socio economic status was assessed by using Kuppu swamyscale (5).

Part B: EDINBURGH POSTNATAL Depression Scale (EPDS) (6). Depression is assessed by scoring of 0 to 9 is considered as low, 10-12 is considered as moderate and> 13 is considered as high.

Data Analysis: Data was entered in excel and analysed using SPSS software. Data was analysed using descriptive statistics and chi-square test.

Results

In our study, regarding socio-demographic details about 70.66% of antenatal mothers belongs to 15-25 years of age group. Majority of them are Hindus constituting about 70.66%. About 89.33% of antenatal mothers are literates and about 64% of antenatal mothers are unemployed which are illustrated in Table.1

Regarding obstetric details, about 54.66% of antenatal mothers are multigravida and 13.33% of antenatal mothers had bad obstetric history. About 12.66% of antenatal mothers does not had any antenatal visits previously. About 21.33% of antenatal mothers had caesarean as mode of delivery of previous child and about 12.66% of antenatal mothers had abnormal thyroid profile(Hypothyroid) which are illustrated in Table.2

Regarding maternal factors and family support, about 12% of mother of antenatal mothers were dead, about 42.66% of antenatal mothers had unhealthy relationship with their husbands and about 47% of antenatal mothers had unhealthy relationship with other members of their family. About 28.66% of antenatal mothers had unplanned pregnancy which are illustrated in Fig.1, Fig.2, Fig.3, Fig.4 respectively.

EPDS scaling is commonly used for both antenatal and postnatal depression. By using this scaling about 14.6% of antenatal mothers had high levels of depression, 21.3% of antenatal mothers had moderate levels of depression and 64% of antenatal mothers had low levels of depression which are illustrated in Fig.5. Significance of association is found between each factor and depression which are illustrated in Table.3, Table.4, Table.5 and factors like antenatal visits, mode of delivery of previous child, mother's status of antenatal mother and relationship with husband are found to be statistically significant.

Table 1. Socio-demographic Details

Socio-Demographic Characteristics		N(150)	%
AGE	15-25	106	**70.66%**
	26-35	44	29.33%
RELIGION	Hindu	106	**70.66%**
	Muslim	32	21.33%
	Christian	12	8%
TYPE OF FAMILY	Joint	44	29.33%
	Nuclear	106	**70.66%**
EDUCATION	Literate	134	**89.33%**
	Illiterate	16	10.66%
OCCUPATION	Employed	54	36%
	Unemployed	96	**64%**

Table 2. Obstetric Details

Maternal factors		Number	%
Obstetric score	Primi	48	32%
	Multi	82	54.66%
	Bad obstetric	20	**13.33%**
Visited ANC previously	Yes	131	87.33%
	No	19	**12.66%**
Mode of delivery of previous child	Vaginal	50	33.33%
	Caesarean	32	**21.33%**
Thyroid profile	Normal	131	87.33%
	Abnormal	19	**12.66%**

Figure 1. Mother of Antenatal Mother- Dead or Alive

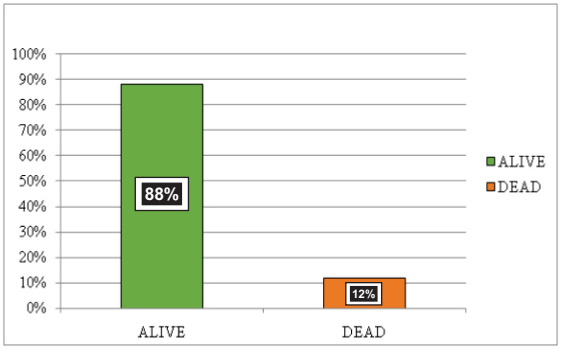

Figure 2. Relationship with Husband

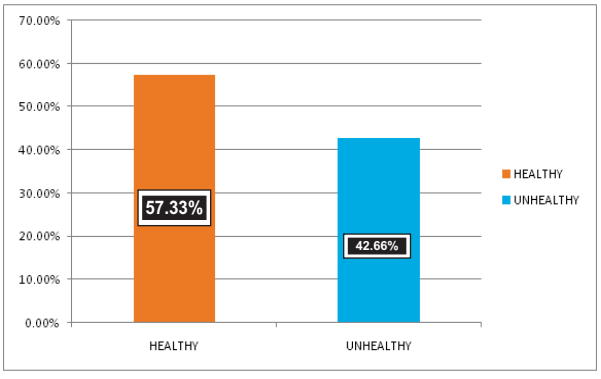

Figure 3. Relationship with other Members of Family

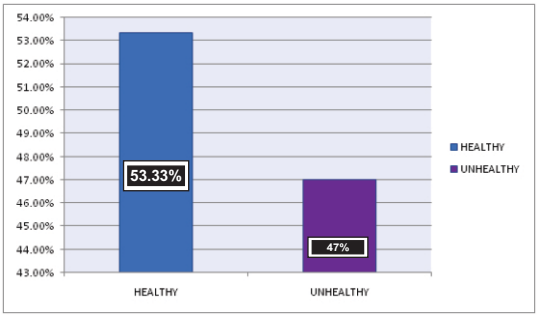

Figure 4. Planned Pregnancy or Not

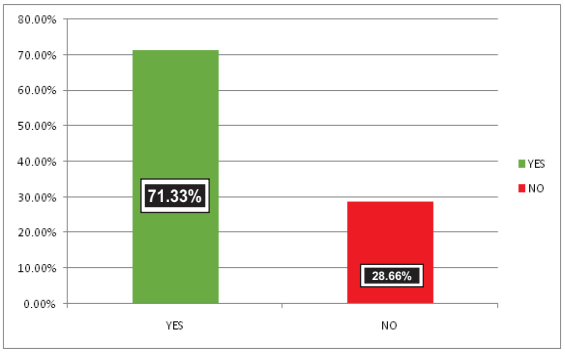

Figure 5. Prevalance of Depression

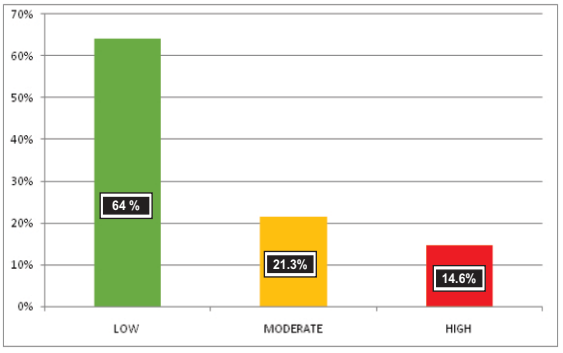

Table 3. Socio-demographic Factors

Socio-demographic characteristics		High	Moderate	Low	P value
Age	15-25	13.20%(14)	19.81%(21)	66.98%(71)	>0.05(ns)
	26-35	**18.18%(8)**	25%(11)	56.81%(25)	
Religion	Hindu	16.03%(17)	22.64%(24)	61.32%(65)	>0.05(ns)
	Muslim	12.5%(4)	18.75%(6)	68.75%(22)	
	Christian	8.33%(1)	16.66%(2)	75%(9)	
Type of family	Joined	11.36%(5)	20.45%(9)	68.18%(30)	>0.05(ns)
	Nuclear	**16.03%(17)**	21.69%(23)	62.26%(66)	
Education	Literate	15.67%(21)	21.64%(29)	62.68%(84)	>0.05(ns)
	Illiterate	6.25%(1)	18.75%(3)	75%(12)	
Occupation	Employed	9.25%(5)	22.22%(12)	68.51%(37)	>0.05(ns)
	Unemployed	**17.70%(17)**	20.83%(20)	61.45%(59)	

Table 4. Maternal Factors

Factors		High	Moderate	Low	P value
Obstetric score	Primi	8.33%(4)	25%(12)	66.66%(32)	
	Multi	8.53%(7)	17.07%(14)	74.39%(61)	
	Bad obstetric history	**55%(11)**	30%(6)	15%(3)	>0.05(ns)
ANC visits previously	Yes	10.68%(14)	20.61%(27)	68.70%(90)	**<0.05(s)**
	No	**42.10%(8)**	26.31%(5)	31.57%(6)	**P=0.0002**
Delivery of previous child	Vaginal	2%(1)	6%(3)	92%(46)	**<0.05(s)**
	Caesarean	**18.75%(6)**	34.37%(11)	46.87%(15)	**P=0.0080**
Thyroid profile	Normal	11.45%(15)	22.90%(30)	65.64%(86)	
	Abnormal	**15.78%(3)**	31.57%(6)	52.63%(10)	>0.05(ns)

Table 5. Maternal Factors

Factors		High	Moderate	Low	P value
Subjects Mother's status	Alive	11.36%(15)	19.69%(26)	68.93%(91)	**<0.05(s)**
	Dead	**38.88%(7)**	33.33%(6)	27.77%(5)	**P=0.001**
Relationship with husband	Healthy	11.62%(10)	19.76%(17)	68.60%(59)	**<0.05(s)**
	Unhealthy	**18.75%(12)**	23.43%(15)	57.81%(37)	**P=0.0009**
Relationship with other members of family	Healthy	10%(8)	18.75%(15)	71.25%(57)	
	Unhealthy	**20%(14)**	24.28%(17)	55.71%(39)	>0.05(ns)
Planned pregnancy	yes	12.14%(13)	14.95%(16)	72.39%(78)	
	no	**20.93%(9)**	37.20%(16)	41.86%(18)	>0.05(ns)

Discussion

In our sample,70.66% of antenatal mothers belonged to the 15-25 years age group. Majority of them were Hindus, constituting about 70.66%. Around 89% of antenatal mothers were literates and 64% of the antenatal mothers are unemployed. Around 13% of antenatal mothers had had a bad obstetric history, 12.66% of antenatal mothers did not attend any antenatal visits previously, 21.33% of antenatal mothers had caesarean mode of delivery for the previous child and about 12.66% of antenatal mothers had an abnormal thyroid profile (were hypothyroid). Among these antenatal women, twelve percent of their mothers were no more, around 42.66% of antenatal women had 'unhealthy' relationship with their husbands and about 47% of antenatal mothers had 'unhealthy' relationships with other members of their family. About 28.66% of antenatal mothers had unplanned pregnancy. As per EPDS scaling, about 14.6% of antenatal mothers had high levels of depression, 21.3% of antenatal mothers had moderate levels of depression and 64% of antenatal mothers had low levels of depression.

In a similar study conducted by Jacob V and Imran S et al among 100 antenatal mothers, about 38% of antenatal mothers belonged to 24-29 years age group. Majority belonged to Hindu religion and about 41% lived in a nuclear family. 20% of antenatal mothers who hhad a bad obstetric history had high levels of depression. According to EPDS scaling, 10% of antenatal mothers had high depression, 21% had moderate and 69% had low levels of depression. In another study conducted by EmreYanikkren, Semra AY et al among 651 antenatal mothers, around 87% of antenatal mothers were unemployed. 7.7% of antenatal mothers did not perceive social support from husband and other relatives of family. 9.2% of antenatal mothers belonging to nuclear family had high levels of depression. According to EPDS scaling about 10.9% had high depression, 22% had moderate and 68% had low levels of depression.

Conclusion

In our study, about 64% of antenatal mothers had low levels of depression, 21.3% had moderate and 14.6% had high levels of depression. It also noted that significant association is found between the factors like mother's status of antenatal mother, relationship with husband, ANC visits and mode of delivery of previous child and depression. Other important factors like bad obstetric history and unplanned pregnancy also contribute to high levels of depression.These findings suggests the need of training the doctors and nurses regarding the assessment and screening of antenatal mother about depression during each antenatal visits and to take, measures immediately and appropriately as required. This can help prevent andmanage antenatal depression as well as its future consequences on mother, child and entire family.

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