

## Psychiatric Caseness And Its Obstetric Correlates In Pregnant Population Attending Antenatal Clinic In TUTH

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### Abstract

**Background:** Prevalence rates for psychiatric disorders during pregnancy have been found to range from 6-13%. Psychiatric caseness during pregnancy not only affects the mother but also affects the health and development of the child. Various factors have been found to be associated with psychiatric caseness in different cultural and social settings including obstetric history. **Objective:** To evaluate the relation of obstetric history in pregnant population with psychiatric caseness. **Methods:** This is a cross sectional study with a total of 300 sample collected within 6 months in antenatal clinic of obstetric OPD, TUTH using semi-structured proforma and SRQ-24. **Results:** 15% of the pregnant women could be labeled as psychiatric cases. Trimester and, complication during current pregnancy showed statistically significant association with psychiatric caseness. **Conclusion:** As 15% of pregnant ANC attendees were found to be having psychiatric illness, it can be recommended that pregnant females be routinely screened for the possibility of psychiatric caseness especially if it is the first trimester or complication during this pregnancy is noted.

**Key words:** pregnancy, psychiatric caseness, obstetric history, ANC

### INTRODUCTION

Prevalence rates for psychiatric disorders during pregnancy have been found to range from 6-13%.<sup>1,2,3,4</sup> Women are consistently found to have higher rates of mental illness than men.<sup>5</sup> Even among females, differences between the rates of psychiatric illness between non-pregnant and pregnant population exists. Pregnancy, parturition (childbirth or delivery), and the postpartum period involve a series of tightly orchestrated hormonal events that create the potential for unique psychological states. Pregnancy is not only a biological event, but also an adaptive process as well. Hence, the psychopathology of pregnancy must be understood in terms of adjustment which all women must make when they conceive.<sup>6</sup> Obstetric factors have been studied in relation to psychiatric caseness. It has been seen that trimester of pregnancy affects the rates of psychiatric symptoms, with

some studies suggesting an exacerbation of psychiatric disorders in the first 2 trimesters of pregnancy.<sup>7</sup> History of induced abortion was also a risk factor for psychiatric disturbance in pregnancy. Pregnancy complications were also associated with significantly higher risk of psychiatric morbidity in pregnant women.<sup>8</sup> A higher risk was associated with adverse reproductive events including unwanted or unintended pregnancy, past pregnancy losses, coincidental illness and operative birth.<sup>9</sup> Some studies<sup>10,11</sup> found higher prevalence of psychiatric illness among pregnant women who had three or more children.

### MATERIAL AND METHOD

This was a cross sectional study. Samples were collected from obstetric Out Patient Department (OPD) in the antenatal clinic of Tribhuvan University Teaching Hospital (TUTH) within the duration of 6 months

between 1<sup>st</sup> Jestha, 2070 and 29<sup>th</sup> Kartik, 2070. 25% of the patient attending OPD in previous registers maintained in the OPD was calculated to be 300 which was taken as sample size. Semi-structured proforma was used to record the socio-demographic parameters. In obstetric history, number of pregnancies, last menstrual period, complications during present pregnancy, whether pregnancy was planned or not, complications during past delivery, loss of any previous pregnancies, death of a child, number of daughters was asked about. SRQ-24 was used to screen for psychiatric caseness with score of more than 10 taken as cut off as suggested in a previous study <sup>12</sup>. Epi-info 7 software was used for data tabulation and data was analysed using Statistical Package for Social Sciences (SPSS), Inc., Chicago, IL, USA version 17 for windows. Clearance was taken from Institutional Review Board, TUTH.

**RESULT**

**Table 1. Age Distribution**

Age group	Number	Percentage
< 20	18	6.0
20-24	139	46.3
25-29	103	34.3
>30	40	13.3
Total	300	100.0

Age of the study population was 46.3% were from 20-24 years, 34.3% were from 25-29 years and 13.3% were from 30 years and above and 6% from less than 20 years age.

**Table 2. Level of education**

Level of education	Number	Percentage
Illiterate	23	7.7
Primary	14	4.7
Middle	107	35.7
Highschool	73	24.3
Graduate	70	23.3
Post-Graduate	13	4.3
Total	300	100.0

Among the study population 35.7 percent had middle level education, 24.3 percent were studying in high-school, 23.3 percent had graduate level education 7.7 percent were illiterate, 4.7 percent had

primary level education, and 4.3 percent were post graduate.

**Table 3: Distribution according to Occupation**

Occupation	Number	Percentage
Student	33	11.0
Housewife	195	65.0
Business	28	9.3
Service	29	9.7
Other	15	5
Total	300	100

While evaluating occupation, it was seen that 65 percent were housewives, 11 percent student, 9.7 percent were in service, 9.3 percent were involved in some type of business and 5 percent were in other occupation.

**Table 4: Self reporting questionnaire**

	Number	Percent
Non-case	255	85.0
Cases	45	15.0
Total	300	100.0

Taking the cut off score of 11 or more to be cases, it was seen that 85 percent were non-cases and 15 percent could be labeled as psychiatric caseness.

**Table 5. Obstetric History by SRQ (Row %) Trimester**

Trimester *	Self - reporting questionnaire		Total	
	Non-case	Caseness	Number	Percent
	%	%		
1 <sup>st</sup>	69.2	30.8	13	100.0
2 <sup>nd</sup>	75.5	24.5	102	100.0
3 <sup>rd</sup>	91.4	8.6	185	100.0
Total	85.0	15.0	300	100.0

P=0.000,  $\chi^2= 15.6$  \*\* Significant at p<0.05

30.8% of those in first trimester were cases, 24.5% of those in trimester and 8.6% of those in the third trimester were cases.

**Table 6. Obstetric History by SRQ (Row %)  
Number of pregnancy**

Number of pregnancy	Self -reporting questionnaire		Total	
	Non-case	Caseness	Number	Percent
	%	%		
Primi	86.5	13.5	156	100.0
Gravida 2	82.5	17.5	97	100.0
Gravida 3	88.9	11.1	36	100.0
Gravida 4	72.7	27.3	11	100.0
Total	85.0	15.0	300	100.0

P=2.50,  $\chi^2= 0.47$

27.3% of those who were gravida 4, 17.5% of those who were gravida 2, 13.5% of those who were primi gravida and 11.1% of those who were gravida 3 were seen to be cases.

**Table 7. Obstetric History by SRQ (Row %)  
Loss of Pregnancy**

Loss of Pregnancy	Self -reporting questionnaire		Total	
	Non-case	Caseness	N	%
	%	%		
No	86.2	13.8	246	100.0
Yes	79.6	20.4	54	100.0
Total	85.0	15.0	300	100.0

P=0.222,  $\chi^2= 1.49$

20.4% of those with previous loss of pregnancy and 13.8% of those with no loss of pregnancies were found to be cases.

**Table 8: Obstetric History by SRQ (Row %)  
Complications during previous delivery**

Complications during previous delivery	Self -reporting questionnaire		Total	
	Non-case	Caseness	N	%
	%	%		
No	84.6	15.4	280	100.0
Yes	90.0	10.0	20	100.0
Total	85.0	15.0	300	100.0

P=0.517,  $\chi^2= 0.42$

15.4% of those with no complication during previous delivery and 10% of those with

complication during previous delivery were seen to be cases.

**Table 9: Obstetric History by SRQ (Row %)  
Complications during this pregnancy**

Complications during previous delivery	Self -reporting questionnaire		Total	
	Non-case	Caseness	N	%
	%	%		
No	86.4	13.6	280	100.0
Yes	65	35	20	100.0
Total	85.0	15.0	300	100.0

P=0.01,  $\chi^2= 6.723^{**}$  significant at <0.005

35% of those with complication during this pregnancy and 13.6% of those with no complication during this pregnancy were seen to be cases.

**Table 10: Obstetric History by SRQ (Row %)  
Planned Pregnancy**

Planned pregnancy	Self- reporting questionnaire		Total	
	Non-case	Caseness	N	%
	%	%		
No	86.1	13.9	237	100.0
Yes	81.0	19.0	63	100.0
Total	85.0	15.0	300	100.0

P=0.31,  $\chi^2= 1.02$

19% of those who had planned their pregnancy and 13.9% of those who had not planned their pregnancy were cases.

## DISCUSSION

In the total sample, 45 (15%) were cases and 255 (85%) were non- cases. This is comparable to findings from other studies <sup>1,2,3,4</sup>.

30.8% of first trimester sample were cases whereas only 24.5% of second trimester and 8.6% of third trimester were cases. This was found to be statistically significant with p value of 0.00. So, there is higher chance of a pregnant female being a case in the first trimester. Clinical studies <sup>7</sup> have suggested that trimester of pregnancy affects the rates of psychiatric symptoms, with some studies suggesting an exacerbation of psychiatric disorders in the first 2 trimesters of pregnancy. The finding of this study can be justified when

we consider that the first trimester is a time when the pregnant mother is still adjusting to the news of her pregnancy and the subsequent responsibilities it signifies. It can be hypothesized that news of pregnancy acted as a stressor which resulted in subsequent reaction to stress that has both psychological and physical symptoms which have been picked up by the questionnaire and represented as cases. Hence, this could have resulted in the significant association found between first trimester and psychiatric caseness.

Among cases, 46.7% were primi gravida, 37.8% were gravida 2, 8.9% were gravida 3 and 6.7% were gravida 4 which is comparable to sample percentages and shows no statistical significance. Some studies<sup>10, 11</sup> have however found higher prevalence of psychiatric illness among pregnant women who had three or more children which also reflects gravidity of a pregnant mother.

Among cases, 73.3% were planned and 26.7% were unplanned which is proportionate to the sample and was not found to be statistically significant. As all the cases were married in this study, even though the pregnancy was unplanned, there is greater support and shared burden which could explain less association with psychiatric illness than shown in some studies<sup>13,14</sup>.

6.7% of the sample had complications during this pregnancy. 35% of those with complication during this pregnancy were cases whereas only 13.6% of those without complication during this pregnancy were cases. This was found to be statistically significant with p value of 0.01 which was also seen in another study where reporting pregnancy complications were associated with higher rates of psychiatric disorders in past-year pregnant women<sup>15</sup>.

18% of sample had abortions or stillbirths in the past pregnancies. 20.4% of those with positive history of pregnancy loss were cases and 13.8% of those without history of loss of pregnancies were cases but this was not found to be statistically significant. 15.4% of those with negative history and 10% of those with positive history of complication during previous delivery were cases and this was not statistically significant. A reason for this finding in this study could be that receiving care in a tertiary care hospital might have reassured the females of better care and hence

less psychological upheaval. However, reason for this finding needs to be further researched. Limitation for this study is that as this is from a single centre without a control group, it is difficult to generalize the result in the general population.

## CONCLUSION

Perinatal psychiatric illness carries a great deal of importance because it affects not just the mother but also the health and development of the child. Results obtained from the study showed that 15% of the sample population could be labeled as psychiatric caseness which was comparable to the results obtained from other lower and middle income countries. This study also found that those who were in the first trimester and those who had complications during the present pregnancy had statistically significant association with psychiatric caseness. As the percentage of those with psychiatric caseness is significant, it can be recommended that pregnant females be routinely screened for the possibility of psychiatric caseness and even more so if the factors that have been listed above are present in the history so that those symptoms can be addressed and worsening of these symptoms in the postpartum period prevented.

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