VOL. 16|NO. 1|ISSUE 61|JAN.-MARCH. 2018

Anxiety on Primigravid Women Attending Antenatal Care: A Hospital Based Cross-sectional Study

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Citation

Shrestha S, Pun KD. Anxiety on Primigravid Women Attending Antenatal Care: A Hospital Based Cross-sectional Study. *Kathmandu Univ Med J.* 2018;61(1):23-7.

ABSTRACT

Background

High levels of anxiety during pregnancy have adverse effects on mother and baby.

Objective

To assess anxiety on primigravid women attending Antenatal Care.

Method

Analytical cross-sectional study was carried out on the primigravid women attending Antenatal Care out-patient department of Dhulikhel Hospital. Perinatal Anxiety Screening Scale (PASS) was used to assess anxiety on 502 women. Data were collected through face-to-face interview using Systematic Random Sampling Technique from May 2017 to December 2017. Chi-square test was applied to test the association between selected variables. All p- values less than 0.05 were considered statistically significant.

Result

The mean (± Standard deviation [SD]) age of the participants was 23.17±3.9 years. More than half (57.6%) of the women were from the age group 20-25 years. Just above two-fifth (41.4%) of the participants were in the third trimester of pregnancy. Out of 502 pregnant women, nearly half (46.4%) of them were at high risk of anxiety. High risk of anxiety was significantly associated with age and type of family. However significant associations were not seen between high risk of anxiety during pregnancy and residence, educational status, occupation, husband's occupation and gestational period of women.

Conclusion

The high risk of anxiety on primigravid women was quite up. Anxiety during pregnancy was more likely to fall on younger women (age <20 years) and joint families in comparison to those women from age twenty and above and nuclear families respectively.

KEY WORDS

Antenatal care, Anxiety, Primigravid women

INTRODUCTION

The transition to motherhood is a period of developmental challenge involving substantial changes and adjustments, both physiologically and psychologically.[1] Though being a mother is a pleasant feeling, it is one of the most stressful events in a woman's life as psychologists have cited pregnancy as an emotional crisis.[2-4]

Maternal anxiety during pregnancy has shown to have possible negative effects on somatic and psychological outcomes in children.[5] Studies have shown that a condition like anxiety during pregnancy is associated with increased cortisol in utero and has connections with impaired cognitive development of the child.[6] It is also seen to have caused long-term behavioral and emotional problems in children.[7]

Specific types of anxiety have even been linked to various complications to maternal health.[8] The women with anxiety disorders during pregnancy have shown to have three times the risk of developing postnatal depression.[9]

A lot of emphasis has been given on antenatal depression but studies addressing the anxiety issues are inadequate. Current research works on them have clearly revealed the need for such studies. Therefore this study aims to assess the anxiety on pregnant women attending the Antenatal care out-patient department of Dhulikhel Hospital.

METHODS

A cross sectional hospital-based study was conducted in Antenatal care out-patient department (OPD) of Dhulikhel Hospital from May 2017 to December 2017. Ethical approval was obtained from the Institutional Review Committee of Kathmandu University School of Medical Sciences/Hospital (IRC-KUSMS). All the 502 women were selected using Systematic Random Sampling Technique. The sample size was calculated using the formula Z^2pq / d^2. Where, p was taken 33% and d 15%. The primigravid women with psychiatric problems and those who denied participating in the study were excluded.

The questionnaire for the study consist of two parts. The part one consist questions related to socio- demographic and obstetric history. The part two consist of Perinatal Anxiety Screening Scale (PASS). The socio demographic questionnaire was administered to collect information regarding age, residence, educational status, religion, occupation, their husband's occupation, and type of family, and the obstetric history including last menstrual period to calculate gestational age of the pregnant women in order to categorize trimesters. If the women are pregnant for up to 12 weeks, they fall on first trimester. If the pregnancy developed from 13 to 27 weeks, they were categorized as being on second trimester and from 28 weeks and above, as third trimester.

The second part of the questionnaire was the PASS questionnaire.[10] This is a 31 item validated scale, scored on a likert scale ranging from 0("not at all") to 3 ("almost always"). An overall score greater than 26 was considered as a cut-off for high risk on presenting with anxiety disorder.[11] The questionnaire originally designed in English, was translated carefully to Nepali Language and re-translated to English. Pre-test was done on 10% of the sample. Some modifications were done after pre-testing the questionnaire in Nepali version. The terms used in the questionnaire were made more simple.

The quality assurance of the data was maintained through daily assessment by questionnaire filled-in by the first author; in case of error or incompleteness, immediate correction was done on the same day of the data collection. The data were entered into the Statistical Package for Social Science Software (SPSS) version 20 for analysis using the simple descriptive statistics. Associations with high risk of anxiety were explored using chi-square test and p value <0.05 considered as statistically significant.

RESULTS

The mean age of participants was 23.17 ± 3.9 years with range of 18 to 40 years. Out of the 502 participants, 18.3% were ≤ 19 years. Slightly less than one-fourth (23.7%) of women were from rural residence, 33.1% had gained higher secondary level of education, majority (84.5%) were Hindus and less than half (43.2%) were employed, whereas the majority (91.6%) of their husbands were employed and 75.9% were from joint families.

Taking a score of ≥ 26 as high risk, slightly less than half (46.4%) of the women fell in the high risk category of anxiety and 8.2% of women came under severe symptoms of anxiety.

High risks of anxiety were more likely to fall on younger mothers (≤ 19 years) compared to women aged 20 or above (57.6%).This difference was found to be statistically significant (p=0.01). The women who were from joint families were more likely to fall in the high risk of anxiety group in comparison to those from single family (49.3% Vs 37.2%, p=0.02). High risk of anxiety was not significantly associated with residence, educational status, occupation, husband's occupation and period of gestation.

DISCUSSION

This is a cross-sectional analytical study to assess anxiety and its associated factors. Only very few studies were conducted to assess the anxiety on pregnant women in Nepal. We found that 46.4% of the women were in high risk of anxiety. Anxiety was found to be associated with age of the women and type of families.

In the current study on 502 women, 46.4% were at high risk of anxiety which is higher than the finding of the study

Table 1. Socio-demographic description of the respondents (n=502)

Variables	Frequency	Percentage
Age in years		
≤ 19 years	92	18.3
20-25 years	289	57.6
26-30 years	101	20.1
>30 years	20	4.0
Residence		
Rural	119	23.7
Urban	383	76.3
Educational status		
Illiterate	18	3.5
Primary (1-5 class)	39	7.8
Lower secondary (6-8 class)	40	8.0
Secondary (9-10 class)	111	22.1
Higher secondary (+2)	166	33.1
Bachelor and above	128	25.5
Religion		
Hindu	424	84.5
Christian	15	3.0
Buddhist	60	12.0
Others	3	0.5
Occupation		
Housewife	82	16.3
Employed	135	26.9
Unemployed	285	56.8
Husband's Occupation		
Employed	460	91.6
Unemployed	42	8.4
Type of family		
Nuclear	121	24.1
Joint	381	75.9

Table 2. Obstetric history of the respondents (n=502)

Variables	Frequency	Percentage
Period of gestation		
1st Trimester	75	14.9
2nd Trimester	219	43.6
3rd Trimester	208	41.4

conducted by Johnson et al. in rural India where 30.6% of pregnant women were at a high risk of anxiety.[12] Another study on 209 pregnant women, conducted by Andersson et al. revealed that depression and/or anxiety were prevalent in 29.2% of pregnant women.[13] The difference might be due to the study sample, only primigravida women were included in the present study where as in the previous two studies, multigravida women were included.

In the present study, we found that 8.2% of the women had severe symptoms of anxiety which is higher than the finding of the study conducted by Thomas et al. in Taluk

Table 3. Anxiety score detail (n=502)

Overall prevalence of anxiety of risk	Frequency	Percentage
Low risk for anxiety (0-25)	269	53.6
High risk for anxiety (≥26)	233	46.4
Severity of anxiety		
Asymptomatic (0-20)	176	35.1
Mild-moderate symptoms (21-41)	285	56.8
Severe symptoms (42-93)	41	8.2

Table 4. Association between high risk for anxiety and Socio-demographic variables (n=502)

Variables	Low risk (%)	High risk (%)	p value
Age in years			
≤ 19 years	39(42.4)	53(57.6)	0.01
≥ 20 years	230(56.1)	180(43.9)	
Residence			
Rural	57(47.9)	62(52.1)	0.15
Urban	212(55.4)	171(44.6)	
Educational status			
Literate	260(53.7)	224(46.3)	0.75
Illiterate	9(50.0)	9(50.0)	
Occupation			
Employed	125 (57.6%)	92 (42.4%)	0.11
Unemployed	144 (50.5%)	141 (49.5%)	
Husband Occupation			
Employed	247 (53.7%)	213 (46.3%)	0.87
Unemployed	22 (52.4%)	20 (47.6%)	
Type of family			
Single	76(62.8)	45(37.2)	0.02
Joint	193(50.7)	188(49.3)	
Period of gestation			
1st Trimester	39 (52.0%)	36 (48.0%)	
2nd Trimester	199 (54.3%)	100 (45.7%)	0.93
3rd Trimester	111(53.4%)	97(46.6%)	

Hospital, rural India whereas only 4.8% of the women were in severe symptoms.[14] Our findings on presence of severe anxiety during pregnancy were lower than the findings of the study by George et al. on 400 French pregnant women whereas 18.8% of pregnant women had severe anxiety symptoms.[2]

This study showed that there was significant association between high risk of anxiety and age of the women. High risk of anxiety was more in the younger women. It is because a woman who is by herself and is still dependent on relatives to meet her needs will undoubtedly face the problems in handling the needs of her baby. Similar findings were observed in the study conducted by Chan et al. where younger pregnant women are more likely to manifest anxiety symptoms in early pregnancy.[1] In contrast to these findings, the study on 2900 pregnant women conducted by Tearne et al. in Perth, Western Australia has shown that

the older maternal age is related to an increased risk of depression, anxiety and stress symptoms.[15] Another study done in New Zealand revealed that increasing age was reported as an associated factor for anxiety and depression on pregnant women.[16]

In our study, significant association was seen between high risk of anxiety and the types of families. Moreover women from joint families were at high risk of anxiety compared to the pregnant women from nuclear families. In contrast to the study conducted by Madhavan Prabhakaran et al. in Muscat, Oman on 500 pregnant women, nuclear family status was identified as a risk factor of pregnancy-specific anxiety.[17] This might be because, in joint families there is lack of privacy to share scientific and comprehensive information on childbirth preparation leading to increased worries related to pregnancy.

In the present study 46.6% of women were in high risk of anxiety, who were in 3rd Trimester but could not find the association between high risk of anxiety and gestational period. Similar data have been reported by Silva et al. in Brazil on 209 pregnant women whereas 42.9% felt more stress in third trimester; however significant effects were not seen between anxiety during pregnancy and period of gestation.[18] Another study conducted by Jusoh ASB on 320 out-patient antenatal mothers from the teaching Hospitals in Malaysia explored the fact that there are significant associations between anxiety and a mother's period of gestation.[19]

This study also showed that there is no association between high risk of anxiety and the occupation of the women and their husband. In contrast to the study conducted by Silva et al. where anxiety during pregnancy was found statistically associated with women's occupation.[18] Another study done in Hyderabad, Pakistan showed psychological distress was associated with the unemployment of husbands.[20]

In this study, significant relationship between high risk of anxiety and educational status of women was not seen. These findings were supported by the study of Gandomi et al. where there was no significant relationship between the level of the mother's education and pregnancy anxiety.[21] But, these findings were not consistent with the results of the study done in rural Bangladesh where women's literacy showed strong association with Antepartum depressive and anxiety symptoms.[22]

The strength of this study is that the data were collected through face to face interview using standardized tool Perinatal Anxiety Screening Scale (PASS) and no research of this kind has yet been done in Nepal using this tool.

The study design we used is cross-sectional that does not allow for assessing cause-and-effect relationships of potential risks of anxiety during pregnancy. It is a hospital-based study that limits the generalization of the findings to other settings such as in the rural areas. There may be some degree of the over-reporting and under-reporting of information since it was collected based on the recall of the women. Additionally, we did not take into account all etiological factors for anxiety during pregnancy such as women's previous history of mental disorder, abuse by their intimate partner, smoking or alcohol consumption. These confounders may affect the women's anxiety during pregnancy.[1,18,22]

CONCLUSION

Among the antenatal women, slightly less than half were at high risk of anxiety. Younger women were more anxious about the pregnancy as compared to the older and women from joint families were at high risk of anxiety compared to the pregnant women from nuclear families. This study emphasizes routine screening of pregnant women for anxiety. Women with severe symptoms could be referred to the psychiatric department and provides early preventive measures that would reduce the adverse pregnancy outcomes.

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