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A study to assess quality of sleep among antenatal mothers

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Abstract---During nine month of Pregnancy period lot of changes occurred, the changes are psychological, physiological & hormonal due to which pregnant women are at risk of disrupting their sleep patterns. Sleep issues affect the majority of women, with over 98 percent experiencing nocturnal awakenings. The purpose of this study was to assess the quality of sleep during pregnancy. A descriptive cross-sectional design was used, with 100 samples recruited using a convenient sampling technique. The Pittsburgh Sleep Quality Index (PSQI) & a demographical questionnaire was used to collect data. The analysis is done by using SPSS 15.0 software. Results revealed that 87% of participants had poor quality of sleep and only 13% had good quality of sleep and SD=5.108. The chi-square values showed that age, education, occupation, type of family, area of living, number of children, weight, monthly income and any disease condition were statistically non-significant at $p < 0.05$. The study concluded that majority of women had a poor quality of sleep.

Keywords--- assess, quality of sleep, antenatal mothers.

Introduction

Sleep is regarded one of the most fundamental basic physiological needs for all humans. Sleep has been identified as a significant health factor that influences an individual's well-being and quality of life. Pregnancy is a lovely, exciting, and joyful time in a woman's life because it displays the woman's amazing creative and nurturing abilities while also serving as a link between the present and the future. The Psychological, physiological, and hormonal changes that occur during pregnancy put the pregnant woman at danger of disrupting her sleep pattern. After turning out the light, healthy adults should fall asleep in 5–10 minutes and sleep for at least 7 hours. Physical activity, age, gender, food, health-related conditions, and stressful situations are all factors that influence sleep patterns. Insomnia and sleep disturbances are very common during pregnancy, especially with advanced gestation, as a natural result of the increased levels of pregnancy hormones and the dramatic physiological and psychological discomforts such as Shortness of Breath, Heartburn, Cramping's of leg, Restless legs Syndrome, Nocturia, Increase in urine voiding frequency, and other problems which are direct & indirectly impacting sleeping pattern and quality. so, it is important to manage insomnia during pregnancy.

Objectives of the study

- To assess the quality of sleep during pregnancy of Vadodara, Gujarat.
- To find out association between quality of sleep during pregnancy with their socio-demographic variables.

Hypothesis

- **H1:** There will be significant relationship between sleep quality among antenatal mothers and socio-demographic variables at 0.05 level of significance.

Material and Methods

A Cross-sectional, Descriptive research design was adopted for present study. Ethical clearance and formal permissions were obtained to conduct the study. 100 samples were conveniently recruited from vadodara. Tool A: Socio Demographical questionnaire was used to collect demographic variable data such as Age, Education, Occupation, Types of family, Area of living, Number of children, Weight, Monthly income, History of any diseases and tool B: PSQI (Pittsburgh Sleep Quality Index) was used to assess quality of sleep during pregnancy.

Sampling Criteria

Inclusion criteria

- Who may be Primigravida or Multigravida.
- Who willing to participate in the study.

Exclusion Criteria

- Who have been diagnosed with high risk complication.
- Who have been advised for complete bed rest.

Result

Finding related to socio demographical variables show that 52% of Participants are from age group of 26-35 years where as 56% completed Primary education, 55% of women was house wife and 55% women's belongs to nuclear types of family. Majority of women was living in rural area where as 52% had 1 child. 49% women's belong to below 60 Kg of body weight, 53% had a monthly income between rupees 11000-20000 and 78% of pregnant women have no any disease condition.

Finding related to frequency and percentage distribution quality of sleep during pregnancy results revealed that majority 87% of participants had poor quality of sleep and only 13% had good quality of sleep. Minimum score obtained was 1 and maximum score was 21 with score range of 20 with an average mean knowledge score was 13.51 and SD=5.108.

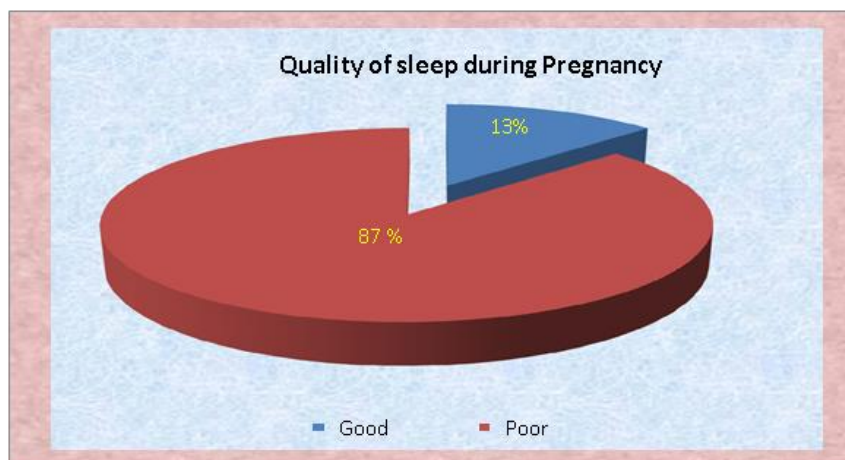


Fig 1. Percentage distribution of sleep quality among antenatal mothers

Finding related to association between Qualities of sleep during pregnancy with their selected demographical data.

Table 1
Association between qualities of sleep during pregnancy with their selected demographical data

N=100

Demographic characteristics	Categories	Sleep Quality		x2 value	df	p value
		Good	Poor			
Age in Year	18 - 25 Years	7	34			0.183 ^{NS}
	26 - 35 years	4	48			

	36 years & above	2	5	3.397	2	
Education	No formal Education	4	23	0.114	2	0.945 ^{NS}
	Primary Education	7	49			
	Secondary Education or above	2	15			
Occupation	Houswife	6	49	0.529	2	0.768 ^{NS}
	Labourer	3	18			
	Sedantary	4	20			
Type of family	Joint	9	36	3.545	1	0.060 ^{NS}
	Nuclear	4	51			
Area of living	Rural	6	51	0.717	1	0.397 ^{NS}
	Urban	7	36			
Number of children	0	3	30	1.106	2	0.575 ^{NS}
	1	7	45			
	2 or more	3	12			
Weight	Below 60 kg	5	44	0.869	2	0.648 ^{NS}
	61-70 kg	6	35			
	71 kg and above	2	8			
Monthly income	Below Rs 10000	3	22	0.032	2	0.984 ^{NS}
	Rs 11000-20000	7	46			
	Above Rs 210000	3	19			
Any disease condition	Yes	2	20	0.381	1	0.537 ^{NS}
	No	11	67			

*Significant at $p < 0.05$ level.

NS-Non significant

Table 1 depicts the association between qualities of sleep during pregnancy with their demographic characteristics that were examined using the chi-square test. Age, education, occupation, type of family, are of living, number of children, weight, monthly income, and any disease condition were statistically non-significant at $p < 0.05$ with sleep quality during pregnancy.

Discussion

Finding of present study showed that majority of women has a poor quality of sleep during pregnancy which was 87%. One similar study was done in Kerala, in that study they only included antenatal mother of 3rd trimester of pregnancy. They examined sleep quality and found that 93.3 % of the women in their third trimester of pregnancy had poor sleep quality. The study's findings were greater than those of studies conducted in Finland (15%), Peru (17%), and China (15.2%). The difference could be attributable to the sample size and eligibility criteria. The Peruvian study included pregnant women between the ages of 24 and 28 weeks of pregnancy, with a total of 1298 participants, whereas the current study included pregnant women in their third trimesters of pregnancy, with a total sample size of 100. Another reason for the difference could be related to differences in social

support patterns, sampling techniques, and the women's socio-cultural and demographic contexts.

Summary

A descriptive, cross-sectional study was conducted to evaluate the quality of sleep during pregnancy of Vadodara. A socio-demographic and Pittsburgh Sleep Quality Index tools were used for the assessment of quality of sleep. By using this tools quality of sleep has been assessed and analyzed by the association between quality of sleep during pregnancy with their selected demographic variables which was tested by using chi-square test.

Conclusion

The Present study concluded that that pregnant women experienced poor sleep quality, according to the study's findings. There was no association between sleep Quality & Selected Socio-demographical factors. During pregnancy, insufficient sleep duration and poor sleep quality might raise the risk of adverse pregnancy outcomes. It can be concluded that there is need to deliver health education to women on importance of sleep and to overcome from minor ailment which is disturbing sleeping pattern.

Conflict of interest: None

Source of funding: Self

Ethical clearance: Ethical clearance was obtained from Institutional Ethics committee.

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