

A Descriptive Explorative study on Sleep Disturbances during Pregnancy among Pregnant Women, in a Selected Hospital at Puducherry

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Abstract

Background: Pregnancy involves many maternal physiological and psychological changes both of which has implications on sleep. During the first trimester, sleep is disturbed by the hormonal changes and in the last trimester the grown up fetus and the anxiety regarding delivery disturbs the sleep. **Objectives:** This study was done to evaluate the Sleep Disturbances during Pregnancy among Pregnant Women, in a tertiary Hospital at Puducherry. **Methods:** 238 pregnant women were interviewed using modified Pittsburgh Sleep Quality Index (PSQI) to evaluate the Disturbances in sleep during Pregnancy. **Results:** The findings of the study showed that almost all the subjects (87.3%) had poor sleep in their pregnancy. Only 12.7% had good sleep quality. The mean Pittsburgh Sleep Quality Index Score was 7.60 (SD - 1.83), which shows poor sleep during pregnancy. No significant relationship was identified between sleep quality with selected socio demographic and clinical variables. **Conclusion:** Sufficient good sleep during pregnancy is important to improve the pregnancy outcomes. It can be concluded that there is a great need to sensitize antenatal women on this issues appropriately.

Key words: sleep quality; pregnant women

Introduction

Sleep is an essential for every human being. The National Sleep Foundation has suggested 7-8 hours of sleep per day for an adult. Pregnancy and child birth are the most precious and critical events in a woman's life [1]. Considerable changes occur in the level of hormones during pregnancy, which influences the functioning of various maternal systems. Alterations in hormone levels not only directly affect the sleep and sleep cycle, but also cause certain physical and psychological changes that can lead to sleep disturbances. Sleep deprivation causes anxiety, reduced pain tolerance, preterm delivery, low birth weight, hypertensive disorders, changes in blood sugar level and depression during and after pregnancy [2]. Nowadays women start a family life after establishing a career. Their sleep schedules are limited and constantly changing. Elderly women have probably have late working hours even during pregnancy, go to bed late, and obtain less sleep, although their sleep is more consolidated than that of a younger woman [3].

During I trimester the level of progesterone increases, which leads to a feeling of drowsiness in pregnant women. This feeling is relieved during second trimester for most women. But in third trimester, it is difficult for pregnant women to find a comfortable sleeping position. Sleep quality starts to decline during the first three months. Pregnant women typically report sleep maintenance insomnia. As pregnancy progresses, frequency and duration of awakening during night raises. In addition, antenatal mothers find difficult to get sleep (onset insomnia) and awake during early morning. The extent of sleep reduces during pregnancy. Moreover, antenatal mothers take naps than other women and the frequency of napping increases in late pregnancy [4].

In the meta analysis of 24 studies on prevalence of poor sleep quality as captured by the Pittsburgh sleep quality index (PSQI) with 11,002 participants, results revealed that the average PSQI score during pregnancy was 6.07, 95% confidence interval (CI) [5.30, 6.85], and 45.7%, 95% CI [36.5%, 55.2%], of pregnant women experienced poor sleep quality. Proper identification of sleep disorders as well as a good awareness on the cumulative risk associated with deprivation of sleep in pregnancy will help the care givers to manage and prevent the adverse maternal and fetal outcomes [5].

Objectives

1. To evaluate the quality of sleep and sleep disturbances during pregnancy among pregnant women.
2. To find out the association between sleep disturbances during pregnancy with selected Sociodemographic variables.

Methods

Descriptive research design was used in the study. 238 antenatal mothers who attended antenatal clinic in a selected Rural Hospital, Puducherry from February –April'19 were selected using convenience sampling method. Informed consent was obtained from the participants before collecting data. Reassurance and confidentiality was maintained. Participants were interviewed using modified Pittsburgh Sleep Quality Index (PSQI) to assess the Sleep Disturbances during Pregnancy among Pregnant Women.

Sl. No	Variables	Frequency(f)	Percentage (%)
1	Age		
	a) <20yrs	20	8.5
	b) 21-30yrs	163	68.5
	c) 31-40yrs	55	23
2	Educational qualification		
	a) Below 10 th standard	25	10.5
	b) Higher secondary	113	47.5
	c) Graduate & Above	100	42
3	Type of family		
	a) Nuclear	138	58
	b) Joint	100	42
4	Work status		
	a) Working mothers	80	34
	b) Homemaker	158	66
5	Family income		
	c) <Rs .15000	50	21
	d) ≥ Rs.15000	188	79
6	Area of Residence		
	a) Rural	100	42
	b) Urban	138	58

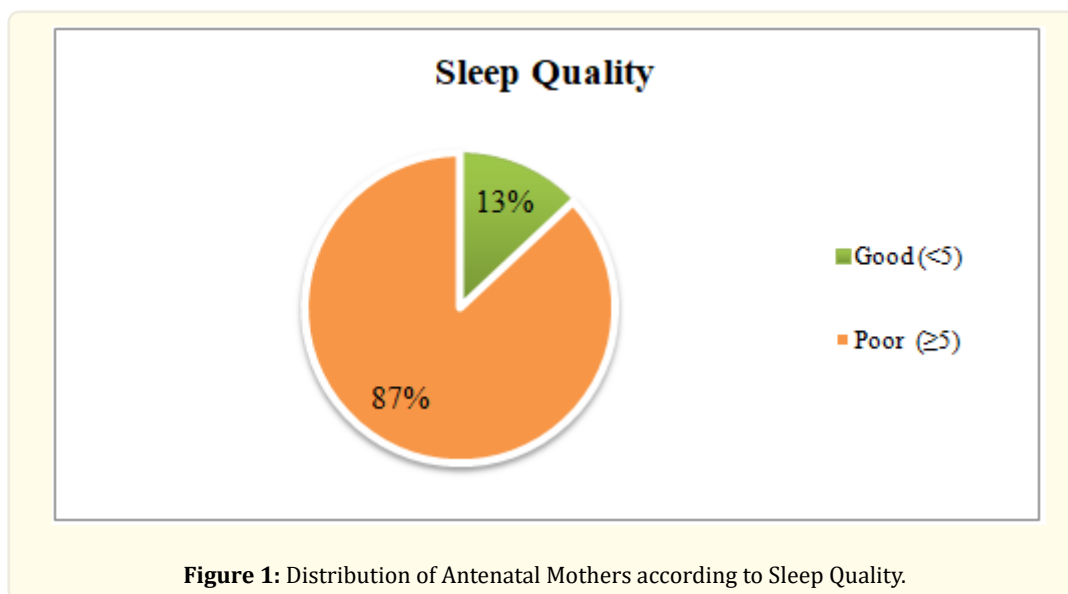
Table 1: Distribution of antenatal mothers according to socio demographic variables. n=238

Sl. No	Variables	Frequency (f)	Percentage (%)
1	Gravida		
	a) 1	120	51
	b) >2	118	49
2	Pregnancy complications		
	a) Yes	50	21
	b) No	188	79
3	Main support person		
	a) Mother & in-laws	68	29
	b) Husband	170	71
4	Enlarged abdomen cause any discomfort		
	a) Yes	100	42
	b) No	138	58

Table 2: Distribution of antenatal mothers according to obstetric variables. n=238

Sl. No	Sleep components	Mean \pm SD
1	Subjective sleep quality(0-3)	1.42 \pm 0.602
2	Sleep latency(0-3)	0.63 \pm 0.628
3	Sleep duration (0-3)	1 \pm 1
4	Habitual sleep efficiency (0-3)	1.369 \pm 1.034
5	Sleep disturbances (0-3)	1.607 \pm 0.489
6	Use of sleep medications (0-3)	0.000 \pm 0.00
7	Day time dysfunction (0-3)	1.705 \pm 0.709
	Total PSQI global score (0/21)	7.60 \pm 1.82699

Table 3: Mean Pittsburgh Sleep Quality Index Score with sleep component scores in pregnancy. n=238



Findings of the Study

- ***Distribution of participants based on Demographic Variables***

With regard to age, 163 (68.5%) were in the age group 21-30 yrs. With regard to education 113(47.5%) were having higher secondary education. Majority, 138 (58%) antenatal mothers belongs to nuclear family. 158 (66%) participants were home makers. 138 (58%) mothers were from urban area. 188 (79%) mothers have family income of >Rs.15000/- per month.

- ***Distribution of participants based on Clinical Variables***

118(48%) were multi gravid.188 (79%) participants had no pregnancy complications where as 50(21%) presented with pregnancy complications. Majority 170(71%) had their husband as support person. 138(58%) expressed that enlarged abdomen causes discomfort.

- ***To assess the sleep quality among antenatal women***

In the present study it was considered that the majority of participants (87%) had poor sleep quality during pregnancy. The mean Pittsburgh Sleep Quality Index Score was 7.60 with standard deviation of 1.82 which indicated poor sleep quality.

- Current research has shown that there is no significant relationship between sleep quality with socio demographic and obstetric variables.

Conclusion

The study concluded that most pregnant women had poor quality of sleep during pregnancy. No relationship was found between sleep quality and selected social variability and birth variability. Inadequate sleep and poor sleep quality during pregnancy can increase the risk of adverse pregnancy outcomes. Therefore the present study recommends that health care team should plan appropriate measures to improve the awareness of pregnant women on significance quality sleep during pregnancy.

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