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Insomnia, Related Problems and Coping Strategies Among Primigravida and Multigravida Mothers

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ABSTRACT

Background: Insomnia is a typical complaint during pregnancy. Hormonal alterations, physiological changes during early pregnancy, and the enlargement of the foetus during late pregnancy contribute to disrupted sleep. Nursing interventions to identify sleep deficits and promote sleep are required at all stages of the maternity cycle.

Methods: Insomnia, related problems and coping strategies were assessed using a structured Questionnaire of purposive sample of 50 Primigravida and 50 Multigravida Mothers attending OBG unit at HSK hospital and research centre, Bagalkot, Karnataka. Data were analyzed using descriptive and inferential statistics.

Results: The result depicts that the majority of primigravida mothers (92%) experienced moderate and 8% experienced severe insomnia, 94% moderate, 4% mild and 2% experienced severe insomnia-related problems, 84% followed average, 12% good and 4% followed poor coping strategies, whereas, majority of Multigravida mothers (90%) experienced mild and 10% experienced moderate insomnia, 82% moderate and 18% experienced mild degree insomnia related problems, 92% followed average, 6% good and 2% followed poor coping strategies. There is a significant difference between primigravida mothers' insomnia, related problems and coping strategies and that of multigravida mothers. There was an irrelevant association found between insomnia scores of Primigravida and Multigravida mothers with socio-demographic variables.

Conclusion: The overall study findings depicted that the mean percentage scores of insomnia of primigravida mothers (49.33%) was comparatively higher than the mean percentage scores of multigravida mothers (16.33%). Hence it was concluded that primigravida mothers has experienced more insomnia than compared to multigravida mothers.

Key-words: Coping strategies, Insomnia, Multigravida, Prevalence; Primigravida

INTRODUCTION

Pregnancy is a unique, thrilling and usually cheerful time in a woman's life, as its climax is the woman's amazing creative and foster powers while providing a bridge to the future.[1]

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Pregnant folks have trouble sleeping for various reasons; sometimes, it's a combination of little things. From a beer belly and pressure on the bladder to body pain, Wellis Ebomdiseses, and a racing mind, there might appear to always be something getting in the way of good sleep.[2] Sleep is a major part of day-to-day life as one spends about one-third of measure doing it. Sound sleep and grabbing enough of it at the right times is as vital to survival as nourishment.[3]

When sleep is so vital for all of us, it is assuredly more important for expecting mothers carrying another life in their bodies. Significantly, the sleep pattern of expecting

women also disturbs the development of their foetus. Establishing sound sleep patterns during pregnancy is extremely effective, both bodily and mentally. A good sleep pattern plays a key role in the readiness for birth and safeguards the baby from the emotional stresses and hassle of pregnancy.[4]

Sleep interruption are habitual to all new mothers. The sleep patterns of new mothers are expressed by less sleep period at night, arising in daytime tiredness.[5]

In pregnant women, countless things can origin her to insomnia, including back pain, breast tenderness, flatus, acidity, hot flushes, leg cramps and restless legs, frequent micturition, vivid dreams, nausea, dyspnoea, snoring and anxiety.[6]

Controlling insomnia during pregnancy is not distinct from coping with insomnia during any other time of life. As such, some approaches and formulas for pregnancy insomnia may help. Managing sound sleep hygiene is a vital component of dealing with this condition.[7]

MATERIALS AND METHODS

A comparative design was used to assess insomnia, related problems and coping strategies among Primigravida and Multigravida mothers attending OBG unit at HSK Hospital and research centre, Bagalkot. The data was collected using a structured closed-ended questionnaire, and descriptive and inferential statistics were used to arrange and evaluate the results.

Study design- Descriptive survey approach was used to assess and compare insomnia, related problems, and coping strategies among primigravida and multigravida mothers.

Setting of the study- The research was carried out in the antenatal wards and outpatient department of OBG unit at HSK Hospital and research centre, Bagalkot, Karnataka, India.

Participants- In the present study, the Primigravida and Multigravida mothers in the age group between 20-36 years and above. The sample consisted of 50 primigravida mothers and 50 multigravida mothers. They were selected using a non-probability purposive sampling technique.

Instruments- The study was conducted using a structured close-ended questionnaire. Information was gathered through an interview schedule using a structured knowledge questionnaire. It comprises 40 elements to assess insomnia, related problems and coping strategies. They were multiple-choice, close-ended questionnaires. Each item was given a score of 0,1,2, and 3.

Description of data collection instruments

Part 1: Socio-demographic variables- Comprised of 12 items to assess the socio-demographic variables of primigravida and multigravida mothers.

Part 2: Structured questionnaire to assess insomnia, related problems and coping strategies among primigravida and multigravida mothers- There were 4 items to assess insomnia, 19 questions on 4 aspects (physiological, psychosocial, medical and environmental problems) of insomnia-related problems and 17 questions to assess coping strategies.

Data collection procedures- The main study was conducted between 7 Aug to 20 Aug 2022, in OBG Unit at HSK Hospital and research centre, Bagalkot, Karnataka, India. Data were collected from Primi and multigravida mothers through an interview schedule. Before the enrolment of subjects and data collection, formal authorization was obtained from the principal of the nursing institution, and the study's aim was explained to the participants. They were asked questions in Kannada and other languages understandable to them.

Variable under study- Study variable- the study variable for the present study were, insomnia, related problems, and coping strategies of primigravida mothers and multigravida mothers.

Socio-demographic Variables- Age, religion, educational status, occupational status, number of pregnancies, usual bedtime, time taken to fall asleep, usual wakeup time, duration of sleep at night, source of information, planned pregnancy, support from husband.

Statistical Analysis- The obtained data were statistically examined in terms of the study's objectives using inductive statistics. A master sheet was prepared with responses given by the study participants.

Frequencies and percentages were used for the analysis of demographic data. The mean and standard deviation were used as inferential statistics. The Chi-Square test was used to determine the association between insomnia scores and selected Socio-demographic variables of Primigravida and Multigravida mothers.

Ethical Approval- A certificate of ethical permission was obtained from the institution's ethical committee, and written consent was taken from each participant.

RESULTS

Socio-demographic variables- In this study, most primigravida mothers (50%) were in the age group of 20-25 years, and multigravida mothers (42%) were in the age group of 26-30 years. The majority of the primigravida (68%) and multigravida mothers (66%) were Hindu religion. 38% and 56% had primary education. 42% and 44% were homemakers. A total 50% were Gravida I 62% were Gravida II mothers. 50% and 62% of bedtime were between 9-10 pm.

Table 1 shows an assessment of levels of insomnia, related problems, and coping strategies among primigravida and multigravida mothers, and findings reveal that the majority of primigravida mothers (92%) experienced moderate and 8% experienced severe insomnia, 94% moderate, 4% mild and 2% experienced severe insomnia related problems, 84% followed

A total 56% of primigravida mothers take 10-20 minutes to fall asleep and multigravida mothers 44% use to take <10 minutes to fall asleep. A total 40% and 64% woke up between 6-7 am. Total 40% and 66% slept for 7-8 hours. 34% and 56% of sources of information were from friends/relatives. 64% and 68% had planned pregnancies. A total 90% and 92% had support from their husband.

Assessment of insomnia-related problems and coping strategies among primigravida and multigravida mothers- Categorization of the Primigravida and multigravida mothers on the levels of insomnia, related problems, and coping strategies are done as follows:

Scores 0-3 are Mild, 4-7 considered Moderate, and 8-11 are severe insomnia.

Scores 0-12 are Mild, 13-25 are Moderate, and 26- 38 are severe insomnia-related problems.

Scores 0-11 are considered Poor, 12-23 are considered Average and 24-34 are considered good coping strategies.

average, 12% good and 4% followed poor coping strategies, whereas, majority of Multigravida mothers (90%) experienced mild and 10% experienced moderate insomnia, 82% moderate and 18% experienced mild degree insomnia related problems, 92% followed average, 6% good and 2% followed poor coping strategies.

Table 1: Level of insomnia, related problems and coping strategies among primigravida and multigravida mothers

Insomnia score	Range of Score	Primi-mothers	Multi mothers	Total
		Percentage (%)	Percentage (%)	Percentage (%)
Mild	0-3	0%	90%	90%
Moderate	4-7	92%	10%	51%
Severe	8-11	8%	0%	8%
Degree of related problems	Range of Score	Primi-mothers	Multi mothers	Total
		Percentage (%)	Percentage (%)	Percentage (%)
Mild	0-12	4%	18%	11%
Moderate	13-25	94%	82%	88%
Severe	26-38	2%	0%	1%
Level of cope	Range of Score	Primi-mothers	Multi mothers	Total
		Percentage (%)	Percentage (%)	Percentage (%)
Poor	0-11	4%	2%	3%
Average	12-23	84%	92%	88%
Good	24-34	12%	6%	9%

Table 2 shows that the maximum score of insomnia among primigravida and multigravida mothers is 11. The mean and SD of insomnia score is (5.92±1.103) and (1.96±1.194) and the mean percentage is (49.33%) and (16.33%).

Table 2: Mean and SD of insomnia, related problems and coping strategies among primigravida and multigravida mothers

Variables	Maximum score	Primigravida mothers			Multigravida mothers		
		Mean	S. D	Mean (%)	Mean	S. D	Mean (%)
Insomnia	11	5.92	1.103	49.33%	1.96	1.194	16.33%
Insomnia related problems	38	3	4.93	50.47%	16.9	4.02	44.47%
Coping strategies	34	9.24	4.12	56.5	17.1	3/56	50.35%

The data presented in Table 3 depicted that the calculated value in all the areas was greater than the table value. The calculated value of insomnia ($t_{(98)}$=17.21, table value $t_{(98)}$=1.96, p<0.05), related problems ($t_{(98)}$=2.93, table value $t_{(98)}$=1.96, p<0.05) and coping strategies ($t_{(98)}$=2.75, table value $t_{(98)}$=1.96, p<0.05) were comparatively greater than the table value. Thus, it indicates a significant difference between primigravida and multigravida mothers' insomnia, related problems and coping strategies scores. It reveals a significant difference between the coping strategies scores of primigravida and multigravida mothers.

Table 3: Mean, S. D and 't' value of insomnia, related problems and coping strategies of primigravida and multigravida mothers

Area	Category of subjects	Mean	SD	't' value
Insomnia	Primigravida mothers	5.92	1.103	17.21*
	Multigravida mothers	1.96	1.19	
Related problems	Primigravida mothers	19.18	3.72	2.939*
	Multigravida mothers	16.9	4.02	
Coping Strategies	Primigravida mothers	19.24	4.123	2.75*
	Multigravida mothers	17.1	3.56	

$t_{(98)}$=1.96, *significant, p<0.05

Table 4 shows that the chi-square computed between the insomnia scores and selected demographic variables of primigravida mothers was non-significant. Hence, it is concluded that there was no significant association between insomnia scores and selected socio-demographic variables of primigravida mothers.

Table 4: Association between insomnia scores and selected Socio-demographic variables of primigravida mothers

S. No	Socio-demographic Variables	Df	Chi-Square Value	P-value	Significance
1.	Age	1	0.347	0.55	NS
2.	Religion	1	0.023	0.879	NS
3.	Educational Status	1	0.18	0.67	NS
4.	Occupational Status	1	0.069	0.79	NS
5.	Your usual bed time	1	0.825	0.36	NS
6.	Time taken to fall asleep	1	0.547	0.459	NS

7.	usual wake up time	1	0.142	0.70	NS
8.	Duration of sleep at night	1	0.023	0.879	NS
9.	Source of information	1	1.033	0.309	NS
10.	Planned Pregnancy	1	0.101	0.74	NS
11.	support from husband	1	0.61	0.43	NS

Table value $\chi^2_{(1)}$=3.84, * significant, p<0.05; Df -Degree of freedom; NS-Not Significant

Table 5 shows that the chi-square computed between the insomnia scores and selected demographic variables of multigravida mothers was non-significant. Hence, it is concluded that there was no significant association between insomnia scores and selected socio-demographic variables of multigravida mothers.

Table 5: Association between insomnia scores and selected Socio-demographic variables of Multigravida mothers

S.No	Socio-demographic Variables	Df	Chi-Square Value	P Value	Significance
1.	Age	1	0.49	0.48	NS
2.	Religion	1	0.11	0.73	NS
3.	Educational Status	1	0.96	0.32	NS
4.	Occupational Status	1	0.92	0.33	NS
5.	Your usual bedtime	1	1.66	0.19	NS
6.	Time is taken to fall asleep	1	0.044	0.832	NS
7.	usual wake-up time	1	0.33	0.56	NS
8.	Duration of sleep at night	1	0.688	0.406	NS
9.	Source of information	1	0.49	0.48	NS
10.	Planned Pregnancy	1	0.455	0.499	NS
11.	support from husband	1	0.26	0.26	NS

Table value $\chi^2_{(1)}$=3.84, p<0.05; Df -Degree of freedom; NS-Not Significant

DISCUSSION

This study's findings discuss the major findings and review the findings from the results of other studies. The present study was conducted to discover insomnia, related problems and coping strategies among primigravida and multigravida mothers attending OBG unit at HSK hospital and research centre, Bagalkot, Karnataka. A descriptive cross-sectional comparative research design was adopted to achieve the study's objectives. A sample of 50 primigravida and 50 multigravida mothers were selected using a non-probability purposive sampling technique.

Percentage-wise distribution of Primi and Multigravida mothers according to their age in years reveals that, out of 50 Primigravida mothers, a higher percentage (50%) were in the age group between 20-25 years, 32% were within the age group of 26-30 years and remaining 18% of Primi mothers were within the age group of 31-35 years. It reveals that the majority (50%) of Primigravida mothers were 20-25 years old. The present study's findings are consistent and supported with the study conducted by Kızılırmak *et al.* [8]. The result showed that 78.4% of antenatal mothers are over 20.

The study conducted by Moradi *et al.* [9] showed that the mean age of women was 26.65 years which was consistent and supported the present study. The Insomnia scores of multigravida mothers showed that 90% of multigravida mothers experienced mild insomnia, 10% of multigravida mothers experienced moderate insomnia. The study was conducted by Waters *et al.* [10] found that poor sleep quality during pregnancy was associated with multigravidas. Nevertheless, our findings

were inconsistent with those from which we found an association between sleep quality and primigravida.

The mean percentage score of insomnia of primigravida mothers was 49.33% and that of multigravida mothers was 16.33%. The results of the present study are inconsistent and not supported by the study conducted by Usman *et al.* [11]**.** The results show that the prevalence of insomnia among antenatal mothers was 32.5%. The results of the present study are inconsistent and not supported by the study conducted by Salari *et al.* [12]. The results show that the overall prevalence of insomnia during pregnancy based on meta-analysis was 42.4% (95% CI: 32.9-52.5%). The present study results contradict the study conducted by Sedov *et al.* [13] Where the overall prevalence of insomnia symptoms during pregnancy was 38.2%.

The results of the present study are consistent and supported by the study conducted by signal *et al.* [14] women, who have experienced pregnancy for the first time have worse sleep quality than multipara mothers. The area-wise mean percentage of scores of related problems of multigravida mothers were physiological problems (34.33%), psychosocial problems (45.4%), medical problems (43.6%) and environmental problems (64.66%).

The findings of the present study are contradictory with the study conducted by Mindell *et al.* [15] showed that across all months of pregnancy, women experienced poor sleep quality (76%), insufficient nighttime sleep (38%), and significant daytime sleepiness (49%). All women reported frequent nighttime awakenings (100%), and most took daytime naps (78%). Symptoms of insomnia (57%), sleep-disordered breathing (19%), and restless legs syndrome (24%)

The present study's findings contradict the study conducted by Smyka *et al.* [16]. The result showed that sleep problems more commonly suffered are back pains (43.1% vs. 22.4%; p<0.001, frequent nocturnal urination (77.7% vs. 5.4%; p<0.001), leg cramps (33.45 vs. 18.8%; p<0.001) and fetal movements causing sleep problems (24.2% vs 7.8%; p<0.001). 77.09% of antenatal mothers reported sleep-related problems. Pregnancy ailments increase the risk of sleep disturbances (AOR 1.53-2.59) among pregnant women in Poland.

The study's findings depicted that 84% of the primigravida mothers had an average level of coping strategies and 12% mothers had good coping strategies. The coping strategies scores of multigravida mothers revealed that 92% had average coping strategies, 6% had good coping strategies and 2% had poor coping strategies. The mean percentage coping strategies scores of primigravida mothers was 56.5% and that of multigravida mothers was 50.35%.

The present study results contradict the study conducted by Palagini *et al.* [17]. A cross-sectional design results reported that Individuals with insomnia symptoms (n=57, 66%) presented higher PSS (p<0.001), PSQI (p<0.0001), BDI, (p<0.0001) scores and showed less-effective coping strategies such as the use of behavioural disengagement (p=0.04), self-blame (p=0.02) and emotional-focused coping (p=0.001).

There was no significant association between insomnia scores of multigravida mothers and selected socio-demographic variables such as age, religion, educational status, occupational status, bedtime, time taken to fall asleep, wake-up time, duration of sleep at night, source of information, planned pregnancy and support from husband. Our study results are inconsistent with the study by Roman-Galvez *et al.* [18]**.** The study results reported that Age, Employment and Education were statistically relevant (p<.05 in bivariate analysis). The study's findings are consistent and supported with the study conducted by Gunduz *et al.* [19]. The results showed that there was no significance between participants with poor sleep and good sleep quality about age and occupational status.

Limitations

The study was confined to antenatal mothers in specific selected healthcare centres, which imposes limits on generalization. The sample for the study was limited to 50 primigravida and 50 multigravida mothers, thus restricting the statistical inferences of results. The structured questionnaire was used to collect the data, restricting the respondents from providing adequate information on insomnia. Patient education was not included about measures to relieve problems causing insomnia.

CONCLUSIONS

The study is helpful in assessing insomnia, related problems and coping strategies among primigravida and multigravida mothers attending OBG unit at HSK Hospital and research centre, Bagalkot, Karnataka. The overall

study findings revealed that the mean percentage scores of Insomniaof primigravida mothers (49.33%) was comparatively higher than the mean percentage scores of multigravida mothers (16.33%). Hence it was concluded that primigravida mothers had experienced more insomnia than compared to multigravida mothers.

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