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Assess the prevalence of selected sleep disorder among adolescent's girls

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Abstract

Sleep disturbance is defined as inadequate sleep with abnormal quality and quantity leading to daily activity dysfunction. Sleep disturbance is classified to early or late insomnia, extreme sleepiness, sleep and waking schedule problems and parasomnia. The present aim was to assess the prevalence of selected sleep disorders among adolescents girls. A quantitative approach with non-experimental descriptive research design was adopted for the present study. 50 students were recruited as study participants by convenient sampling technique. Data was gathered by exploiting a self structured questionnaire for both the demographic variables and for assessing the prevalence of sleep disorders. Outcome of the present study revealed that, the mean score was 5.00 prevalence of insomnia among adolescents girls, the mean score 4.26 of prevalence of sleep apnea among adolescents girls, the mean score was 4.04 of prevalence of narcolepsy among adolescents girls, the mean score was 4.2 in prevalence of restless legs syndrome among adolescents girls, the mean score was 3.92 in prevalence of REM sleep behaviour among adolescents girls.

Keywords: Adolescents girls, prevalence, sleep disorders

Introduction

Sleep disturbance is defined as inadequate sleep with abnormal quality and quantity leading to daily activity dysfunction. Sleep disturbance is classified to early or late insomnia, extreme sleepiness, sleep and waking schedule problems and parasomnia [1]. Insomnia is characterized by a difficulty falling asleep, staying asleep and/or waking too early. Obstructive sleep apnea is characterized as recurrence events of partial or complete obstruction of the upper airway during sleep [2]. Rapid eye movement (REM) is characterized by multiplex motor behaviors during sleep related to the loss of the normal atonicity of REM sleep. Affected adolescents appear to act out their dreams; for example, talking, yelling, thrashing, or punching while asleep [3]. Sleep disorders and sleep disturbances severely impair university students' academic success. In another study, restlessness reported reduced daytime functioning. Reduced sleep duration and an irregular sleep-wake schedule significantly correlated with a lower GPA [4]. The connection between sleep and academic performance is well-established. Inappropriate sleep leads to increased drowsiness and daytime sleepiness, which subsequently decreases mental attentiveness and concentration. This can influence the ability to deal with tasks involving problem-solving, memory, and attention to detail [5]. Sleep disorders square measure prevailing among adolescents when pubescence. Sleep throughout this biological process stage is characterized by reduced sleep length on weekdays, a delayed sleep section, and a high prevalence of insomnia [6]. Adolescence encompasses a large time vary which has early (11–13 years), middle (14–18 years) and late periods (19–21 years recent or through school age), at intervals this time frame most people can bear the time of life method, move from additional logical thought to abstract thinking with problem-solving skills [7]. We recently known, in youngsters and adolescents, a doubtless new sleep identification known as 'restless sleep disorder' (RSD), characterized clinically by sleep disruption, frequent nocturnal body movements involving giant muscle teams and daytime impairment [8]. According to the China Sleep Quality Survey Report in 2018, among the one hundred, 000 respondents, 83.81% suffered from some form of sleep disturbance. Sleep disturbances like insufficient sleep time, irregular sleep patterns, poor sleep quality, and daytime somnolence area unit common in Chinese adolescents, thanks to the aggressiveness of ranking instructional resources and intense social pressure [9].

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Healthy sleep is characterized by obtaining enough sleep, at acceptable times and within the absence of any sleep disturbance. Firstly, older adolescents (e.g. Fourteen years old) take longer to make sleep physiological condition pressure compared to younger adolescents (e.g. 11 years), leading to accumulated biological alertness within the late evening to early morning (e.g. 10:30 P.M. to 2:30 A.M.)^[10]. Actigraphs are ideal for adolescents as a result of devices are often unobtrusively and unceasingly worn, requiring no participant coverage^[11]. Mental health issues are rife among youth with associate degree estimate of up to twenty folks kids experiencing a psychological state disorder within the past year. Adolescents World Health Organization don't get adequate sleep suffer diminished mental well-being^[12]. Anxiety and sleep disorders have a good impact on the psychophysical health of nurses, touching skilled performance and patient safety. Conversely, higher self-effectuality could play a crucial role in reducing anxiety and stress^[13]. Idiopathic conjointly called isolated, fast eye movement (REM) sleep behavior disorder could be a risk issue for neurodegenerative illness in older adults^[14]. The consequences of sleep deprivation are severe, impacting adolescents' physical and psychological state likewise as daytime functioning^[15]. Therefore the objectives of present study was aiming in analysing the quality of sleep and thereby assessing the prevalence of sleep disorders among adolescents girls and to find out the association between the prevalence of sleep disorders among adolescents girls with their demographic variables.

Materials and Methods

A quantitative approach with descriptive research design was adopted for the present study. After obtaining a ethical clearance from the Institutional Ethical Committee (IEC) at Saveetha College Of Nursing and a formal permission from the administrative Head of Akila institute of Mathematics, the main study was conducted via online. A total of 50 adolescent girls who are met the inclusion criteria were recruited as the study participants by using convenient sampling technique. The inclusion criteria includes adolescent girls between the age group of 13-17 years, who are willing to participate the present study, who can read, write and understand English and Tamil. The excluded criteria includes adolescent girls who are above the age 18 years, with previous history of sleep disorder and on regular treatment, non-cooperative and not available during the study period. The investigator created a common google meet link and shared to all the adolescent girls who are in Akila Institute of Mathematics. About 220 adolescent girls attended the online google meet at a particular day on the scheduled time. Investigator explained the purpose of study in depth and clarified their doubts, followed by that, a written informed consent was sent to all through a google form and were asked to give the consent and willingness for their participation in the current study and instructed them to resend back to the investigator in a scanned format. After gathering all the informed consent by the investigator a counter check of all the informed consent was done and documented in a printed form, followed by that, a general survey was carried out via online google form submission for 220 adolescent girls aiming in assessing the quality of sleep which consisted of 20 self-structured questionnaire based on sleep quality and was categorized as good sleep quality and poor sleep quality based on the scoring and the

outcome of the survey results revealed that 170 (77.27%) had good sleep quality and 50 (22.72%) had poor sleep quality. Outcome results on the general survey on quality of sleep pointed out that, 170 (77.27%) had good sleep quality and 50 (22.72%) had poor sleep quality. 50 adolescent girls who had poor sleep quality were recruited based on the findings of general survey as the final study participants for the present study and a self-structured questionnaire related to the prevalence of stipulated sleep disorders were assessed through the same online google form submission and the responses of all study participant's were recorded, documented eventually, tabulated and analyzed by using descriptive and inferential statistics.

Results and Discussion

Section A: Demographic Variables

Among 50 study participants, with regards to age 20 (40%) were in the age group of years 13-15 .With regards to the type of family, 28 (56%) were belong to nuclear family. With regards to the religion, 31 (62%) were hindus.

Section B: Prevalence of Sleep Quality of Adolescent Girls

The prevalence of sleep quality among adolescents girls 170(77.28%) were good sleep quality and 50 (22.72%) were bad sleep quality (Table:1 & Figure 1).

Table 1: Frequency and Percentage Distribution of Sleep Disorders among Adolescents Girls. N = 220

Prevalence of Sleep Quality	Frequency (NOS)	Percentage (%)
Good sleep quality	170	77.28
Poor sleep quality	50	22.72



Fig 1: Percentage distribution on prevalence of sleep quality among adolescents girls

The present study findings is supported by a study conducted by Somayeh Safarzade *et al.* (2019) aiming in assessing the sleep quality and prevalence of sleep disorders among adolescents. The end results projected that, out of 1153 samples in the descriptive group, 75.3% of the adolescents had low and inappropriate sleep quality.^[16]

Section C: Prevalence of Sleep Disorder among Adolescents Girls.

The current prevalence of insomnia among adolescents girls is 22 (44%), had Sleep Apnea 10(20%), had Narcolepsy 8(16%), had Restless legs syndrome 5(10%) and had REM sleep behavior 5 (10%). (Table: 2 & Figure: 2)

Table 2: Frequency and Percentage Distribution on Prevalence of Selected Sleep Disorders N=50

Sleep Disorders	Frequency (Nos)	Percentage (%)
Insomnia	22	44
Sleep Apnea	10	20
Narcolepsy	8	16
Restless Legs Syndrome	5	10
Rem Sleep Behaviour	5	10



Fig 2: Assessment of Prevalence on Selected Sleep Disorders Scores among Adolescents Girls.

Section D: Existing Prevalence Level Scores on Selected Sleep Disorders Among Adolescents Girls.

Table 3: Assessment of Existing Prevalence Level Scores on Selected Sleep Disorders among Adolescents Girls. N=50

Existing Prevalence Level on Selected Sleep Disorders	Score		Mean	Standard Deviation
	Minimum	Maximum		
Insomnia	3.00	8.00	5.00	1.8654
Sleep Apnea	1.00	9.00	4.26	1.596
Narcolepsy	1.00	7.00	4.2	1.520
Restless Legs Syndrome	1.00	9.00	4.04	1.586
Rem Sleep Behaviour	1.00	7.00	3.92	1.226

For the present study, prevalence of insomnia among adolescent’s girls, the mean score was 5.00 with standard deviation 1.8654 with the minimum score of 3.00 and the maximum score of 8.00. Prevalence of sleep apnea among adolescents girls, the mean score 4.26 was with standard deviation 1.596 with the minimum score of 1.00 and the maximum score of 9.00. Prevalence of Narcolepsy among adolescents girls, the mean score was 4.2 with standard deviation 1.520 with the minimum score of 1.00 and the maximum score of 7.00. Prevalence of restless legs syndrome among adolescents girls, the mean score was 4.04 with standard deviation 1.586 with the minimum score of 1.00 and the maximum score of 9.00. Prevalence of REM sleep behaviour among adolescents girls, the mean score was 3.92 with standard deviation 1.226 with the minimum score of 1.00 and the maximum score of 7.00 (Table:3)

Section E: Association between the Prevalence of Sleep Disorders among Adolescents Girls with Their Demographic Variables

The demographic variables of age is not statistically significant, type of family and religion is statistically significant association with the prevalence of selected sleep disorders among adolescent’s girls.

Conclusion

Thus, the findings of the present study revealed that, there is an marked increased prevalence of insomnia and sleep apnea while comparing with other selected sleep disorders including narcolepsy, restless legs syndrome and REM sleep behaviour prevalent among the adolescents girls.

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Conflicts of Interest

Author’s declare no conflict of interest.

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