International Journal of Teaching, Learning and Education (IJTLE)
ISSN: 2583-4371
Vol-3, Issue-1, Jan-Feb 2024
Journal Home Page: https://ijtle.com/
Journal DOI: 10.22161/ijtle

Sleeping Disorders Symptoms (SDS) of College Students in relation with Attention Deficit Hyperactivity Disorder Symptoms (ADHD)

Kislay Kishor Mirgank, Dibya Jyoti Boruah, Jyoti Tasing, Shishupal Gorain

Research Scholar, Department of Education, Rajiv Gandhi University, India

Received: 15 Dec 2023, Received in revised form: 30 Jan 2024, Accepted: 10 Feb 2024, Available online: 18 Feb 2024

Abstract

Attention deficit hyperactivity disorder (ADHD) symptoms are exacerbated by sleep disorder. The purpose of this study was to determine whether or not sleep problems among college students are related to attention deficit and hyperactivity-impulsivity symptoms. The Pittsburgh Sleep Quality Index (PSQI) and the Adult Attention-Deficit Hyperactivity Disorder Scale was used to evaluate the 100 college students between the ages of 18 and 23 that were selected as a part of the study. In the results was show that moderate level of sleeping disorder among college students and other sub set factors are not influence to sleep disorder. Only few factors like; Coffee consumption, Tea consumption and Room too hot and cold are affected to sleeping disorder. Therefore investigators conducted correlation analysis for checking the relationship between hyperactivity disorder (ADHD) and sleep disorder and found positive and significance relationship between these two variables; hyperactivity disorder (ADHD) and sleep disorder. The study's participants had a mean age of 22.39 (1.93) years and comprised 38.5% male and 61.5% female. In order to determine the best treatment options and interventions, it is crucial to assess the sleep quality of young individuals who are experiencing attention problems.

***Keywords*— Sleep Disorders, Attention Deficit Hyperactivity Disorder, College students & Symptom**

I. INTRODUCTION

Attention-deficit hyperactivity disorder (ADHD) is the most frequently diagnosed neuropsychiatric disorder in children (Feldman and Reiff, 2014). The incidences of childhood ADHD symptoms persisting to adulthood have been reported to vary in the 4%–60% range (Biederman et al. 2000; Rasmussen and Gillberg 2000; & Kessler et al. 2006). Sleep problems are comorbid with ADHD from infantility to adulthood (Rasmussen and Gillberg 2000; Kessler et al. 2006, Lin et al.2016; & Snitselaar et al. 2017). A meta-analysis reported that problems of sleep onset difficulties, daytime sleepiness and breathing related sleep disorders are common in children and adolescents diagnosed with ADHD (Cortese et al.2009). Prolonged latency of sleep onset and difficulties associated with maintaining sleep, waking up late in the morning and circadian rhythm disturbances are reported to be common in patients diagnosed with adult ADHD (Snitselaar et al. 2017).

1.1. Background of the Study:

Concurrently, Attention Deficit Hyperactivity Disorder (ADHD) is another prevalent concern among college students, with significant implications for their academic and personal lives. ADHD is characterized by symptoms of inattention, hyperactivity, and impulsivity (American Psychiatric Association, 2013). Studies have indicated that the prevalence of ADHD symptoms among college students ranges from 2% to 8% (DuPaul et al., 2012). The prevalence of sleeping disorders among college students has been extensively documented in empirical research. According to a study conducted by Lund et al. (2010), approximately

27.6% of college students reported symptoms indicative of a sleeping disorder. For instance, individuals with ADHD may experience difficulties in initiating or maintaining sleep due to hyperactivity, racing thoughts, or restlessness (Corkum & Tannock, 2008). Conversely, chronic sleep deprivation resulting from sleeping disorders can exacerbate ADHD symptoms, amplifying inattention, impulsivity, and academic difficulties (Becker et al., 2010). Additionally, the National Sleep Foundation reports that 50% of college students report daytime sleepiness and 70% obtain insufficient sleep on weeknights (NSF, 2020). Studies have found that individuals with ADHD are more likely to experience sleep disturbances, such as delayed sleep onset, fragmented sleep, and shorter sleep duration (Yoon et al., 2012). Conversely, insufficient or poor-quality sleep may exacerbate ADHD symptoms, leading to increased difficulties in attention, impulse control, and executive functioning (Weiss et al., 2017).

In summary, studying the relationship between SDS and ADHD symptoms among college students is significant for its implications on diagnosis, treatment, academic success, quality of life, public health, and long-term outcomes.

1.2. Objective of the study

2. To find out the level of Sleep Disorders among college students.
3. To find out the other factors which Affecting Sleep disorder among college students.
4. To assess the relationship between Sleep Disorders and Attention Deficit Hyperactivity Disorder Syndrome of the college students.

1.3. Hypothesis of the study

i. There will have moderate level of sleeping disorders among college students.
ii. Their will have positive and significant relationship between Sleep Disorders and Attention Deficit Hyperactivity Disorder Syndrome of the college students.

II. METHOD

Descriptive survey method has been used for the nature of the study. Total 100 students, who are enrolled at a college that is affiliated with Rajiv Gandhi University, were chosen for the study. Purposive sampling technique has been used for collect the data. All participants completed the Pittsburgh Sleep Quality Index (PSQI) and Adult Attention-Deficit Hyperactivity Disorder-DSM-IV questionnaires based-Diagnostic Screening and Rating Scale.

2.1. Data Acquisition Tools

The Pittsburgh Sleep Quality Index (PSQI): develop by Ağargün and collageaus (1996). The PSQI offers data on the type and severity of current sleep disruptions that occurred within the last one month, as well as information on sleep quality. There are 24 items on the scale. Five of the items, which are answered by the bed partner (if any) 19 of which are self-rated Not included into the score. The 19 items used for assessing the seven separate sub-dimensions of subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disruptions, usage of sleeping medications, and daytime dysfunction are each given a score between 0 (no distress) and 3 (severe distress).

The Adult Attention-Deficit Hyperactivity Disorder Scale: this scale was developed by Günay and collageaus (2005).

2.2. Statistical Analysis

For statistical analysis of the data, the SPSS 22 package of software was applied. The Kolmogorov-Smirnov test was used to determine whether the continuous variables were normal. Descriptive analyses were carried out such as; percentage, mean, SD. The correlations between the categorical variables were examined and the Pearson correlation analysis was used to evaluate the relationship of PSQI and Adult ADHD subscale scores with total scores.

III. ANALYSIS AND RESULTS

Table 1: level of cybercrime awareness of the Sleep affecting students among college students.

Scores	Frequency	Percentage	Levels of sleep affecting
Above 130.253	13	13	High
Between (130.253-110.263)	71	71	Average awareness
Below 110.263	16	16	Low
Total	100	100	

Table no – 1: the college students (71% in number), apply between moderate range of area i.e; 130.253 and 110.263. Therefore, investigator can say that college students in Arunachal Pradesh are having moderate and average sleeping disorder. Only 19% students

Cross Ref DOI: https://dx.doi.org/10.22161/ijtle.3.1.2

affected into sleeping disorder, it can seen into table – 1.

Table 2: Habits and Other Factors Affecting Sleep disorder

Factor	Percentage	
	Yes	No
Coffee consumption	72	38
Tea consumption	79	21
Regular exercise	34	66
Physical illness	19	71
Uncomfortable bed and pillow	42	58
Unventilated room	41	59
Too much light in room	38	62
Dark room	11	89
Room too hot and cold	61	39
Crowded room	35	75
Being alone in the room	8	92
Someone entering and exiting the room	37	63
Environmental Noise	52	48

Regarding use of tea, coffee, cigarettes, alcohol, regular exercise/sports, and other sleep-affecting activities, there were no statistically significant variations between the participant subgroups with and without sleep disturbances. There were no statistically significant differences between subjects with moderate-high levels of attention deficit symptoms and those who consumed tea, coffee, cigarettes, alcohol, participated in regular exercise or sports, or other factors affecting sleep. 87 participants with sleep disorders and the 13 participants with low levels of attention deficit symptoms were compared. Only two dimension i.e; Coffee consumption and Tea consumption are significantly impact on sleep (Table - 2).

The correlation between the PSQI's mean total scores and the ADHD scale were significant and positive correlated. Table 3 shows the relationships between the PSQI and ADHD scale total and subscale scores. Only Use of sleeping medication with ADHD dimensions found no significant relation.

Table 3: Correlation analysis between Sleep Quality Scores and Attention-Deficit Hyperactivity Scores

ADHD	ADHD-1 (Attention deficit)	ADHD (Hyperactivity Impulsivity)	ADHD (ADHD related characteristics)	ADHD total
Subjective Sleep quality	0.213	0.110	0.325	0.290
Sleep Latency	0.157	0.108	0.255	0.239
Sleep duration	0.051	0.026	0.059	0.059
Sleep efficiency	0.097	0.036	0.35	0.104
Sleep disturbance	0.201	0.111	0.282	0.252
Use of sleeping medication	0.029	-0.030	0.042	0.002
Daytime dysfunction	0.320	0.169	0.415	0.400
PSQI total	0.295	9.178	0.425	0.40

PSQI: Pittsburg Sleep Quality Index, ADHD: Attention Deficit-Hyperactivity Disorder

**p<0.01

IV. MAJOR FINDING OF THE STUDY

a) 13 students feel slightly lower Sleep affecting problem and 16 students feel higher Sleep affecting disorder out of total sample. Investigator also found that 71 percents students have moderate level of sleep affecting disorder; therefore, in Rajiv Gandhi University's college students have not sleeping disorder problem. Only 13 percentage students are having sleeping disorder problem.

b) Coffee consumption, Tea consumption and Room too hot and cold factors have been slowly influence to the sleeping disorder problem and another factors did not significant impact on sleeping disorder problem.

c) Sleep Disorders and Attention Deficit Hyperactivity Disorder Symptoms are significant and positive relationship with each other. Therefore, "use of sleeping medication" of the dimension of Pittsburg Sleep Quality are not significantly relate with

Cross Ref DOI: https://dx.doi.org/10.22161/ijtle.3.1.2

Attention Deficit Hyperactivity Disorder Symptoms.

V. IMPLICATION OF THE STUDY

a) Coffee and tea consumption, as well as room temperature (too hot or too cold), are noted to slowly influence sleeping disorder problems. This implies that lifestyle factors such as caffeine intake and environmental factors like temperature regulation could play a role in the prevalence of sleep disorders among college students.

b) The findings suggest a significant and positive relationship between sleep disorders and symptoms of Attention Deficit Hyperactivity Disorder (ADHD). This implies that students experiencing sleep disorders may also exhibit symptoms associated with ADHD.

c) Educational institutions should raise awareness among students, faculty, and staff about the importance of good sleep hygiene and its impact on academic performance, mental health, and overall well-being. Providing information about factors that can influence sleep quality, such as caffeine consumption and room temperature, can empower individuals to make informed choices.

d) Educational institutions should consider providing accommodations for students with sleep disorders or related conditions, similar to accommodations for other disabilities. This could include flexibility with class schedules, access to quiet spaces for rest, and alternative exam arrangements.

VI. CONCLUSION

Overall, the study highlights the complex nature of sleep disorders among college students, influenced by various factors including lifestyle habits, environmental conditions, and their relationship with other mental health conditions such as ADHD. Understanding these factors is crucial for developing effective interventions and support systems to promote better sleep and overall well-being among college students.

REFERENCES

[1] Ağargün MY, Kara H, Anlar O (1996). The validity and reliability of the Pittsburgh Sleep Quality Index. *Türk Psikiyatri Derg,* 7(1), 107-15.

[2] Biederman J, Mick E, Faraone SV (2000) Age-dependent decline of symptoms of attention deficit hyperactivity disorder: impact of remission definition and symptom type. *Am J Psychiatry*, 15(7), 816-18.

[3] Becker, S. P., Langberg, J. M., Byars, K. C., & Vaughn, A. J. (2010). Attention-deficit/hyperactivity disorder and sleep in children. Pediatric Clinics of North America, 57(3), 585–601

[4] Corkum, P., & Tannock, R. (2008). Sleep disturbances in children with attention-deficit/hyperactivity disorder. Journal of the American Academy of Child & Adolescent Psychiatry, 47(2), 157–166

[5] Cortese S,, Faraone S, V., Konofal, E. et al. (2009) Sleep in children with attentiondeficit/hyperactivity disorder (ADHD): meta-analysis of subjective and objective studies. *J Am Acad Child Adolesc Psychiatry* 48(1), 894-908

[6] DuPaul, G. J., Weyandt, L. L., O'Dell, S. M., & Varejao, M. (2012). College students with ADHD: Current status and future directions. Journal of Attention Disorders, 16(1), 5–20.

[7] Feldman H, M, & Reiff M, I. (2014) Clinical practice. Attention deficit-hyperactivity disorder in children and adolescents. *N Engl J Med*, 37(1), 838-846.

[8] Günay Ş, Savran C, & Aksoy U, M. (2005). Erişkin Dikkat Eksikliği Hiperaktivite Ölçeğinin (Adult ADD/ ADHD DSM IV-Based Diagnostic Screening and Rating Scale) Dilsel Eşdeğerlik, Geçerlik Güvenirlik ve Norm Çalışması. M.Ü. Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi 21:133-50.

[9] Kessler R, C, Adler L, Barkley R. et al. (2006) The prevalence and correlates of adult ADHD in the United States: results from the National Comorbidity Survey Replication. *Am J Psychiatr* 16(3), 716-23.

[10] Lin Y, J, Yang L, K, & Gau, S, S. (2016) Psychiatric comorbidities of adults with earlyand late-onset attention-deficit/hyperactivity disorder. *Australian N Z J Psychiatry*. 50(1), 548-56.

[11] Lund, H. G., Reider, B. D., Whiting, A. B., & Prichard, J. R. (2010). Sleep patterns and predictors of disturbed sleep in a large population of college students. Journal of Adolescent Health, 46(2), 124–132.

[12] Rasmussen P, & Gillberg, C. (2000) Natural outcome of ADHD with developmental coordination disorder at age 22 years: a controlled, longitudinal, communitybased study. *J Am Acad Child Adolesc Psychiatry* 39(1), 1424-31

[13] SnitselaarMA, Smits MG, van der Heijden KB et al (2017) Sleep and circadian rhythmicity in adult ADHD and the effect of stimulants. J Atten Disord 21:14-26.

[14] Weiss, M. D., Salpekar, J., & McBride, N. (2017). Sleep problems in children with ADHD: Unique effects of stimulants and atomoxetine. Journal of the American Academy of Child & Adolescent Psychiatry, 56(7), 594-601.

[15] Yoon, S. Y. R., Jain, U., & Shapiro, C. (2012). Sleep in attention-deficit/hyperactivity disorder in children and adults: Past, present, and future. Sleep Medicine Reviews, 16(4), 371-388.