



Original Article

Insomnia related to Stress and Anxiety in Adolescence

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ABSTRACT

Insomnia, anxiety, and sadness are all linked in adolescence, according to the research. Anxiety and depression disorders are common and are linked with undesirable consequences.

Objective: To better understand the interconnection between sleeplessness, anxiety disorders, and major depression in a community-based sample of adolescents. **Methods:** A cross sectional study was conducted at The University of Lahore, Lahore, during 4 months. A pre-tested questionnaire was used to collect data from 100 students through convenient sapling technique. SPSS version 21.0 was used to store and analyze the data. **Results:** The results revealed that insomnia is not common in mostly students but they have sleep issue due to exam disturbance and their diet. Late night phone usage is also a major cause in this study. Many students are worried about their current life situation and mostly have snore and choking issues due to worries. In general, the link between sleeplessness and depression was stronger and more constant in patients with serious depression than in those with depression symptoms. **Conclusion:** Adolescent insomnia has a significant impact on future health and functioning, and it is thought to cause and perpetuate a variety of emotional and behavioral issues, notably anxiety and sadness.

INTRODUCTION

Insomnia is the most common sleep disorder in the elderly clinical population and adolescents. The main complaint is difficulty falling maintaining sleep or asleep or being unable to return to sleep, resulting in obvious daytime symptoms, containing difficulty focusing and temper disorders [1]. Anxiety and depression disorders are common and are linked with undesirable consequences, such as increased hospitalization, decreased adherence to treatment, poor function, and increased mortality. However, despite the harmful effects of these disorders, depression, and anxiety in patients with heart failure have not been fully diagnosed and treated [2]. Some mental illnesses, such as anxiety and depression, have been shown to be closely related to insomnia. More severe symptoms of anxiety, depression, and stress before treatment have also reported increased

daytime fatigue, the severity of insomnia, and sleepiness [3]. Although the prevalence of insomnia in adolescents is increasing. 30% of adults from different countries have symptoms of insomnia. However, in Pakistan, Nepal, India, and Bangladesh, the prevalence rates are 59.04%, 35.4%, 70%, and 69.5%, respectively [4]. Sleeping pills are widely used to treat sleep disorders and insomnia. Users with short sleep time are three times more likely to have metabolic equivalent than non-users with short sleep time [5]. Insomnia is a composite interaction of mental and cognitive awakening and changes circadian tempo and self-balance apparatus. The decrease in sleep-wake switch function may also cause insomnia. During sleep, there is a slow transition from non-rapid eye movement (non-REM) to rapid eye movement (REM) sleep. AASM

divides sleep into 5 progressive stages, such as W (awake), N1 (relaxed awake), N2 (light sleep), N3 (deep slow-waves wave sleep), and R (rapid eye movement sleep or dreaming). Stages N1-N3 are non-rapid eye movement sleep stages. In this stage, cerebral cortex activity is low, while in the REM sleep stage, brain activity is very active [6]. Sleeping and eating behavior are important lifestyle factors to safeguard the health of adolescents [7]. The eating and sleeping habits of adolescents are important factors affecting the health of adolescents. Nutritional intake levels are an important part of adolescents' daily lifestyle, and studying its comprehensive role in specific adolescent groups can provide information for the improvement of prospective widespread interventions to prevent mental illness [8]. Proper family meals can serve as a role model for healthy ingestion behaviors [9]. Diet quality may also be a predictor of children's growth and development [10]. There is increasing evidence that modifiable lifestyle factors, such as proper nutritional status, are particularly helpful in preventing mental illness [11]. In terms of nutrition, studies have found that adolescents' eating behavior is related to sleep time and sleep quality [12]. In addition, a large-scale survey (n = 5,003 Chinese adolescents) confirmed that healthy eating patterns are negatively correlated with the prevalence of depression and anxiety symptoms [13]. Therefore, adolescents with unhealthy eating behaviors may have an increased risk of metabolic syndrome, obesity, and poor mental health [14]. Therefore, in developed countries, the eating behavior of adolescents is considered an important social issue [15]. It is worth noting that most previous studies on this topic behavior on the impact of lifestyle behavior (e.g., nutritional intake) on sleep quality, depression, and/or anxiety [8]. Therefore, to better understand this topic, the first purpose of this research is to separately investigate the relationship between lifestyle behavior (nutrition) and insomnia, depression, or anxiety. Disorders of eating behavior during adolescence lead to nutritional deficiencies and developmental delays and are even related to poor academic performance [16]. National Health and Nutrition Survey reported, from 1999 to 2000, 20.5% of 36.1% of young people aged 14-18 and children aged 9-13 did not eat breakfast [17]. Adolescents' eating behaviors tend to persist throughout their lives [18].

METHODS

A cross sectional study was conducted at The University of Lahore, Lahore, during 4 months, from September to December 2022. Ethical approval was taken from IRB of The University of Lahore, Lahore, Pakistan. A pre-tested questionnaire was used to collect data from 100 students through convenient sampling technique. Prior written informed consent were taken from all the participants. SPSS version

21.0 was used to store and analyze the data.

RESULTS

Data of 100 students were gathered for the current investigation. The findings showed that 65% of the population were male students, and 35% were female students. 35 students were graduated and 65 were undergraduate. Most students were between the weights of 40 and 50 as shown in Table 1.

Variables		Frequency (%) / Mean \pm SD
Gender	Male	65 (65%)
	Female	35 (35%)
Education	Graduated	35 (35%)
	Undergraduates	65 (65%)
Age	18-28	22.95 \pm 1.919
Weight	39-95 Kg	59.67 \pm 13.80

Table 1: Demographics of the respondents

The Table 2 displays the percentage of students who report having trouble falling asleep, getting enough sleep, sleeping like a baby, having snoring problems, have taking sleeping pills, lost interest in their daily work, mind races thoughts, insomnia issues and breathing or choking issues during sleep.

Variables	Never	Sometimes	Yes
Do you think you have enough sleep?	42%	51%	7%
Do you have trouble falling asleep?	48%	51%	1%
Do you face difficulty with while staying awake during day?	36%	58%	6%
Do you have trouble in sleeping during night after awakening?	35%	59%	6%
Do you have sleep problems as a child?	58%	7%	35%
Do you snore?	36%	58%	6%
Do your mind races thoughts while going to sleep?	29%	60%	11%
Does your insomnia occur three times a week?	58%	32%	10%
Do you sleep better in unfamiliar bedrooms like hotel?	7%	58%	35%
Have anybody said that you stop breathing or choke while sleeping?	37%	67%	6%
Have you lost interest in your daily activities or work?	26%	51%	23%
Do you have medical condition that disturbs your sleep?	45%	49%	6%
Do you take any sleeping pill?	47%	52%	1%
Are you satisfied with your current sleep patterns?	9%	63%	28%
How noticeable are your sleeping problems in terms of impairing quality of life?	12%	60%	28%
To what extent sleep problems interfere with your daily issues?	40%	-	60%
How worried are you about current problems?	31%	57%	12%
Do you feel sleep disturbance during exam?	56%	-	44%
Do you eat healthy?	30%	50%	20%
Do you feel lack of sleep because of your diet?	19%	55%	26%

Table 2: Response of the participants to questions asked

Table 3 shows the response of participants to the questions about cravings and diet. Most of the students liked homemade foods. The major percentage of girls liked desserts.

Questions	Desserts	Homemade	Fast food
What your cravings mostly consists?	12%	49%	39%
What you prefer in your diet?	22%	54%	24%

Table 3: Response of participants to the questions related to diet

DISCUSSION

Insomnia is the most usual sleep disorder in the older clinical population and adolescents. The main complaint is difficulty falling sleep, maintaining sleep or being unable to return to sleep, resulting in obvious daytime symptoms, containing difficulty focusing and temper disorders. We also noticed that the prevalence of insomnia in adolescents is increasing. 30% of adults from different countries have symptoms of insomnia [19]. However, in Pakistan, Nepal, India, and Bangladesh, the prevalence rates are 59.04%, 35.4%, 70%, and 69.5%, respectively. According to the report of National Health and Nutrition Survey, from 1999 to 2000, 20.5% of 36.1% of young people aged 14-18 and children aged 9-13 did not eat breakfast. Adolescents' eating etiquettes tend to continue all over their lives. Alvaro *et al.*, conducted research in 2017 that found a link between sleeplessness and depressed symptoms [20]. The research was carried out in eight different schools. It was completed by 318 and 255 students, respectively. According to the findings, sleeplessness symptoms are linked to depression symptoms. In another study conducted by Blake *et al.*, there is a high prevalence of negative impacts among adolescents. Insomnia was predicted by an increase in emotional reactivity and a decrease in emotion management capacity, according to the findings [21]. In our study data was collected from 100 students. The results revealed that the majority of students were male i.e. 65 and 35 were females of the total population. 35 students were from graduated and 65 were undergraduate. Mostly students were from weight range of 40-50. As per many studies, mostly students like fast foods that disturb their sleep cycle. Our results showed a link between sleeplessness and serious depression in adolescents, showing that the two are linked. We also concluded that the more research into the paths of sleeplessness and major depression in childhood and adolescence is needed [22].

CONCLUSIONS

Our results are the first to show a link between sleeplessness and serious depression in adolescents, showing that the two are linked. More research into the paths of sleeplessness and major depression in childhood and adolescence is needed.

Authors Contribution

Conceptualization: MK, MS

Methodology: AN, SB

Formal Analysis: HB, AR

Writing-review and editing: MK, AN, HB, MS

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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