Original Article

Correlation Between Insomnia And Primary Headache In Final-Year Students Of Nursing

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ABSTRACT

Background: Adolescents' irregular sleep patterns, use of technology, gadgets, and gaming are among the causes of insomnia. Primary headaches are regarded to be another symptom of insomnia. In this study, ordinary nursing students in their last semester will be examined to see if there is any correlation between headache frequency and insomnia.
Methods: This study uses a cross-sectional approach with a quantitative descriptive correlation research design. Total sampling is the sampling method employed by 71 students who, according to responses, reported having sleeplessness. The Independent variable is insomnia. The dependent variable is Primary Headache. Instrumen use kuesionare.
Results: According to the results of the univariate analysis, 60 people (84.5%) and 64 people (90.1%) had primary headaches, respectively. The bivariate analysis with the Gamma test revealed that 64 students (93.8%) at Aisyah University of Pringsewu had both primary headaches and insomnia with a P-Value =0,002 ≤ 0,05.
Conclusion: it can be concluded that there is a significant correlation between insomnia and primary headaches. Students are expected to improve their sleep patterns to prevent primary headaches.

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Introduction

Pain or discomfort in the head, including the face and nape, was referred to as a headache (Andrijauskis et al., 2020; Vecchierini et al., 2021). One of the most prevalent medical concerns is a headache. They were caused by psychological pressure and were more prevalent in students in their final semester than in the general population (Fauziah et al., 2022). Headaches frequently limit daily activities, compromise quality of life, and influence academic performance (Brown et al., 2010; Kenneth Tanner & Edward Combs, 1993). Additionally, this issue may have an impact on pupils' performance in the future, burdening both people and society (Brown et al., 2010)

The most critical factor influencing the development of tension headaches in final-semester students is their psychological condition when completing assignments and taking tests. This was due to a drop in

serotonin turnover that occurs when exam anxiety sets off attacks of primary (Andrijauskis et al., 2020; Azoulay et al., 2018; Moss et al., 2021; Rose et al., 2022), particularly tension headaches. This finding is in line with Baumel's (2011) research, which identified academic stress—including the teaching and learning process, careers, time management, multiple assignments, and exam anxiety—as a risk factor for primary headaches. The psychological status of students in their last semester is a phenomenon that occurs in numerous contexts (Nandi et al., 2012). According to a study conducted in Iran, the first year's level of stress and anxiety was 33%, the second was 26%, and the third was 41%. (Akbar, 2017) According to data from the WHO from 2016, people over 18 account for more than 30% of all migraine and headache cases worldwide. At the same time, headaches were twice as common in women as in men. (NurCita & Susantiningsih, 2020; Vitaliati, 2018).

Tension-type headaches (TTH), which were compared in the 2010 Global Burden of Disease Study (GBD) study, were found to be the second most prevalent ailment (22%) and migraines to be the third (15%). According to the 2015 Global Burden of Disease Study (GBD), headache disorders are the sixth most common reason for Years Lived with Disabilities (YLDs), with migraine alone ranking seventh and third in both men and women aged 15 to 25. (Putri, Susanti, and Refilla, 2020)

According to the findings of a hospital-based multicenter study conducted in five major hospitals in Indonesia, cluster headache prevalence was 0.5%, migraine with aura was 1.8%, migraine without aura was 10%, the mixed headache was 14%, and chronic tension was 14%. Type of headache (24%) and headache with episodic tension (31%). The findings of this study indicate that tension-type headaches are the most prevalent headache symptoms among the general public (Rayan, 2019; Siagian et al., 2021).

Sleep disorders were one of the risk factors for headaches (insomnia). Sleeping too much or too little might be harmful to your health. There was a strong correlation between headache frequency, intensity, and headache, starting with the prevalence of specific sleep problems, such as nightmares, trouble falling asleep, waking up too early, and poor sleep quality. Adverse effects include loss of motivation, daytime tiredness, and neglect of one's own needs (Hussain et al., 2019; Ryder et al., 2019; Sun et al., 2021)

Methods

This study combined a cross-sectional methodology with a descriptive correlation design. Every variable is tracked and measured at the time of the investigation. Cross-sectional data collects information from causes, risk factors, outcomes, or cases seen simultaneously (Notoatmodjo, 2010, 2012). The sampling technique is total sampling. The number of samples in this study was 71 people. The instruments used were the Pittsburgh Sleep Quality Index (PSQI) questionnaire and the Headache Screening Questionnaire (HSQ). This research was conducted in April 2022 at Aisyah University of Pringsewu with 71 students. Hypothesis testing in this study was assisted by the application of Statistical Product and Service Solutions (SPSS) 25. This research has ethical clearance.

Results

Table 1. Frequency Distribution of Correlation between Insomnia and Primary Headache in Final-year Students of Nursing at Aisyah University of Pringsewu

Insomnia	HEADACHE						Total		P- Value	Coefficient Correlation (r)
	No TTH		Probable TTH		TTH					
	N	%	N	%	N	%	N	%		
Good < 5	3	42,9	4	57,1	0	0,0	7	100,0	0,002	0,963
Bad > 5	2	3,1	2	3,1	60	93,8	64	100,0		
Total	5	7,0	6	8,5	60	84,5	71	100,0		

The correlation between Insomnia and the Incidence of Primary Headache/TTH in Final-Year Students of Nursing at Aisyah University of Pringsewu can be seen that 60 respondents (93.8%) experienced insomnia and also experienced headaches/TTH. 4 respondents (57.1%) who did not experience insomnia but experienced Probable TTH, three respondents (42.9%) did not experience insomnia and also did not experience primary headache/TTH. In comparison, two respondents (3.1%) had insomnia but did not experience headaches, and two respondents (3.1%) experienced insomnia and also experienced Probable TTH obtained a p-value = 0.002, with a correlation of 0.963, which indicates a positive correlation with an extreme correlation strength.

Table 2. Frequency Distribution of Insomnia Disorders

Insomnia	Total	Percentage (%)
Good < 5	7	9,9
Bad > 5	64	90,1
Total	71	100,0

Based on table 2, the frequency distribution of insomnia disorders obtained was 64 people (90.1%) had insomnia disorders, and seven people (9.9%) did not experience insomnia disorders.

Table 3. Frequency Distribution of Primary Headache Disorders / TTH

Headache	Total	Percentage(%)
No TTH	5	7,0
Probable TTH ≥ 6	6	8,5
TTH 8	60	84,5
Total	71	100.0

According to Table 3, the incidence of primary headache disorders/TTH was distributed as follows: 60 individuals (84.5%) had primary headache disorders/TTH, six people (8.5%) had probable TTH, and five people (7.0%) did not have primary headache/TTH.

Discussion

From the results of the cross-tabulation between insomnia and primary headaches/TTH, it was found that the correlation between Insomnia and the Incidence of Primary Headaches/TTH in Final-Year students of Nursing at Aisyah University of Pringsewu could be seen that 60 respondents (93.8%) experienced insomnia, have a headache/TTH disorder. , four respondents (57.1%) did not experience insomnia. However, they experienced Probable TTH, three respondents (42.9%) did not experience insomnia and also did not experience primary headache/TTH, while two respondents (3.1%) had insomnia but did not experience headaches and two respondents (3.1%) experienced

insomnia and also experienced Probable TTH. P value = 0.002 was used to determine the significance of the correlation between the duration of the insomnia disorder and the incidence of primary headache/TTH. Because the value of the sig was 0.002 (0.05), the hypothesis that there is a significant correlation between the duration of the insomnia disorder and its incidence was accepted. Primary headache frequency and TTH correlated 0.963, indicating a positive correlation with a very strong correlation.

The findings of this study are consistent with (Ardita, 2021) that sleep is a significant issue for those who suffer from headaches and that sleep problems are typically thought to be a trigger for headaches. Lack of sleep, disturbed sleep, oversleeping, staying up late, rising earlier than normal, irregular sleep cycles brought on by shift work, and jet lag are some of the signs and causes that can cause it. Sleep is the second most frequent trigger of primary headache disorders, behind stress, according to meta-analyses (Berragan et al., 2022; Kumar, 2021; Mendes & Martino, 2020; Thompson et al., 2019).

According to the published articles, this study supports research (Mayer et al., 2021; Smitherman et al., 2018) that found a correlation between poor sleep and primary headaches, particularly migraine without aura and TTH. According to this study, 48.9% of the study sample who had TTH also had primary headaches, making up 67.8% of those with poor sleep quality.

A similar study by Nur Aladita on medical students at Hassanudin University in 2017 found several samples with poor sleep quality, 78 of whom experienced primary headaches, and seven others did not. Besides, It was found a significant correlation between sleep quality with the principal in students (Bjorvatn et al., 2018; Chung et al., 2010; Hagen et al., 2018; Oh et al., 2018)

Conclusion

The distribution of the frequency of primary headaches (migraine/tension headaches) in final-year students of Aisyah University of Pringsewu was relatively high, with as many as 64 people. The frequency distribution of insomnia in final-semester students at Aisyah Pringsewu University is relatively high,. There was a significant correlation between the incidence of primary headaches (migraine/tension-type headaches) and insomnia, which shows a positive and robust correlation.

Authors Contributions

The author carries out tasks from data collection, data analysis, making discussions to making manuscripts.

Conflicts of Interest

There is no conflict of interest.

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