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Perceived Stress, Physical Activity, and Insomnia of Female Nursing University Students in Saudi Arabia: A Cross-Sectional Study

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Abstract **Background:** Students go through a period of significant personal and social growth during their enrollment at university. It is essential to investigate the factors that affect the health of university students. Relatively little research has been done on how they are affected by factors such as practicing physical exercise, insufficient sleep, and effective management of stress. **Aim:** To investigate female nursing students' levels of perceived stress, practicing physical activity, and insomnia and examine related relationships. **Methods:** The sample for this descriptive and correlational study included 290 consenting female nursing university students. The students completed the following questionnaires: a sociodemographic questionnaire, the perceived stress scale, the Bergen insomnia scale, and the international physical activity questionnaire. **Results:** There were 32.19% of inactive students, 44.13% of minimally active students, and 23.68% of sufficiently active students. Insomnia affected 42.70% of them. High levels of perceived stress were reported by the student (22.54±7.16). Students with bad family support experienced insomnia more frequently than students with very good family support (OR = 1.41; 95% CI: 1.06-2.16). Students who used their mobile phones before sleep experienced insomnia (OR = 1.67; 95% CI: 1.17–2.63). High-stress students were also more likely to have insomnia (OR = 1.74; 95% CI: 0.95–0.98). **Conclusion:** insomnia is more common among students who experience high levels of stress, have bad family support, or use their phones before sleep. Promoting physical activity, sleep, and reducing perceived stress among university students requires preventative and therapeutic measures supported by scientific evidence.

Keywords University Students, Insomnia, Physical Activity, Perceived Stress

1. Introduction

Undergraduate students at universities are going through a significant transformation in their daily routines. Peer group changes, greater independence, and more demanding academic assignments are all encountered by them. These issues are typically associated with a poor diet, sleep issues, and occasionally substance abuse [1, 2].

Over the past 20 years, the majority of research in the Kingdom of Saudi Arabia (KSA) have exclusively focused on students studying medicine. Based on these studies, it is clear that there is a significant problem related to sleep, including insomnia [3, 4]. Physically inactive students were more likely to have bad sleep habits, and stress was substantially correlated with poor sleep quality [4]. In addition, 43.9% of students who participated actively in physical activity over the past month reported having restful sleep [5].

Numerous research on student stress have been undertaken in the nursing field. Consequently, several studies make a distinction between stress factor and determinant investigations [6, 7]. Others have expressed concern about the effects of stress [8, 9]. The perception of events, not the actual occurrences, is what actually causes stress. Perceived stress here refers to the main environmental evaluation [10].

It is implied that extreme stress makes it challenging to uphold good living practices, such as following a balanced diet, obtaining enough sleep, and keeping strong interpersonal relationships. People experience unfavorable outcomes when they encounter challenging circumstances [11].

It was also discovered that gender significantly influences how stress is experienced. The criteria by which males and females react to stressful situations vary. Females were more likely to identify concerns linked to their families and health [12]. Usually, stressors have a greater impact on women than men [13]. Contrarily, some of the findings indicate that women were more optimistic than men and had lower levels of perceived stress [14].

A complaint of insomnia, including but not limited to trouble falling asleep or staying asleep, waking up too early in the morning, or experiencing sleep that is not restorative. In addition to daytime impairments, at least three nights per week for at least three months is necessary to meet the newly proposed criteria for chronic insomnia in the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association (APA) [15].

According to research, college students had chronic insomnia, with the general rate of insomnia among nursing students ranging from 9.5% to 37.1% [16, 17]. Third of nursing and midwifery students who participated in Shamsaei and Cheraghi [18] study on the prevalence of insomnia were found to be affected. When compared to male students (23.1%), the rate was much greater among female students (37.1%). Additionally, nursing students (39.3%) had a greater rate of insomnia than midwifery students (31.2%).

Physical activity is any movement of the body that skeletal muscles produce and cause an energy expenditure [19]. Adopting appropriate physical exercise can improve total physical fitness; also, increasing physical activity on a regular basis helps minimize the onset of a variety of chronic diseases, including type 2 diabetes, cardiovascular disease, and obesity [20]. The World Health Organization (WHO) recommends that people in their middle years engage in 150 minutes of moderate exercise each week or at least 75 minutes of intense exercise per week [21].

Physical inactivity was common in Saudi Arabia, affecting somewhere between 42% and 80% of the population. Females are more prone to this. According to recommendations made at the international level, the vast majority of Saudi citizens do not engage in the moderate to vigorous levels of weekly physical exercise that are advised for them [22, 23].

University students are more likely to develop sleep problems because they choose their own sleep schedules, are not watched over by their family, are under more stress due to their education, and spend too much time socializing, using the internet, and playing video games on their computers [24].

In their study on Saudi youth, Al-Hazzaa, Musaiger and Group [25] showed that 91.2% of the female and 84% of the male participants spent more than 2 hours each day using a computer or watching television. Nearly 75% of females and 50% of males did not engage in the recommended amount of physical activity each day. In Saudi Arabia, women are typically less active than men [26]

According to a body of studies, female university students are more stressed than their male counterparts. Women are more likely to express concerns about the amount and complexity of the material they had to learn, they are also more likely to express stress because of self-expectation and a sense of incompetence, and they have a tendency to overreport their physical and mental health symptoms [27].

Few research have looked at the physical activity habits, sleep patterns, and reported stress of university students; in particular, there are few studies that look at the connection between physical activity and stress [24, 28]. As a result, this research will address a knowledge gap and serve as a resource for further research. The current study aims to investigate female nursing students' levels of perceived stress, practicing physical activity, and insomnia and examine related relationships. It seeks to answer the following questions:

1. What are the students' levels of perceived stress, insomnia, and physical activity?
2. What are the factors that contribute to students' levels of perceived stress, insomnia, and physical activity?
3. Is there a relationship between perceived stress, insomnia, and the students' levels of physical activity?

2. Materials and Method

2.1. Design

We conducted a cross-sectional, descriptive, and correlative research study. One reason a cross-sectional study was chosen that its findings can be generalized to a broad population in a short amount of time. Saudi Arabian female nursing undergraduates participated in the study.

2.2. Sample and Study Population

In order to perform a study with a level of significance of 0.05 and a statistical power of 0.95, the sample size calculation that was carried out in G Power 3.1.9.2 indicated that there would need to be a minimum of 150 participants. Researcher should account for the potential

for non- response rate by recruiting a larger than necessary sample of participants—typically an additional 20% to 30%. If the researcher anticipates a high rate of non-response in a self-administered survey, then 30% to 50% should be added to the response rate to account for it [29].

Because of this, the researcher in the current study estimated a sample size of 300 Saudi female nursing university students, who were selected using a convenient sample technique, taking into account a non-response rate of 50%. Students enrolled in a nursing program who met the study's main inclusion criteria and were mentally capable of providing informed consent were eligible to take part. Participants who were enrolled in another medical discipline or who had obtained a diagnosis of any psychiatric or mental health issues were excluded that was determined using socio-demographic questionnaire.

2.3. Data Collection

The sociodemographic questionnaire, the perceived stress scale, the international physical activity questionnaire, and the Bergen insomnia scale were among the self-reporting questionnaires used to collect the data for the current study. Data were obtained from female nursing students at the female branch of the nursing college between December 26, 2019, and January 25, 2020.

Sociodemographic Questionnaire: This questionnaire was created by the researcher, and the closed-ended questions in this section were derived from previous empirical data indicating a significant link between certain characteristics and insomnia, practicing physical activity, and perceived stress. These variables or characteristics were categorized as personal, academic, sleep, physical activity, and stress-related information.

In addition, the level of support provided by the student's family was evaluated by asking the students, "How would you rate the support that you receive from your family?" that included four possible answers on a Likert scale, with choices ranging from "bad" and "very bad" to "good" and "very good." Since measuring family support was not the primary aim of the study, the researcher did not utilize a reliable instrument to do so. However, the inclusion of such a question was done so as to place additional emphasis on the significance of family support on the variables included in this study.

The secaR scale and meter rod were utilized to measure body weight and height, respectively. The body mass index (BMI), which is the ratio of weight in kilograms to height in meters squared (kg/m^2), was used to evaluate the state of body weight. Body mass index categories were used to diagnose weight status. Based on their BMI, the National Institutes of Health classified adults as obese (30), overweight (25–29.9), normal (18.5–24.9), or underweight (18.5) [30].

Perceived Stress Scale (PSS-10): The Perceived Stress Scale was used to determine the extent to which situations in an individual's life were perceived as stressful. PSS-10 is a five-point scale with ten items; four positive items, namely 4, 5, 7, and 8, have reverse scoring of 0 to 4 and the remaining items have scoring of 0 to 4. The scale's average score is 13, and a higher number implies greater stress. The scale's internal consistency reliability (= 0.78) and convergent validity are adequate [31].

The Bergen Insomnia Scale (BIS): Diagnostic criteria from the Diagnostic and Statistical Manual of Mental Disorders serve as the basis for the Bergen Insomnia Scale (BIS). The first three sections deal with morning insomnia and the onset of sleep, and the next three cover a wide range of related issues. The latter three items are dissatisfaction with one's current sleeping habits, an inability to fall asleep at night, and a subsequent lack of restful sleep that manifests as impairment throughout the day. On a range of 0 to 7 on a scale of 8, the number of days per week with sleep difficulties is recorded [32].

The International Physical Activity Questionnaires (IPAQ): A set of 4 questionnaires make up the instrument. For use with self-administered methods, there are long (5 activity domains asked independently) and short (4 generic items) versions. The tool's objective is to establish a common scale that can be used to acquire data on physical activity that is related to health that is comparable across borders. Young and middle-aged individuals can use the tool.

In order to evaluate overall physical activity in metabolic equivalence MET-min/week and time spent sitting, this measure takes into account the various intensities of physical activity and sitting time that individuals engage in as part of their everyday lives. One sample question from the scale asks, "How many days in the recent week have you engaged in strenuous physical activity, such as heavy lifting, digging, aerobics, or fast bicycling?". Multiplying the total number of minutes per week by the MET value yields the MET-minute/week score. Multiplying by 8 MET for vigorous activity, 4 MET for moderate activity, and 3.3 MET for walking gives the total METs expended for each of these activities. By adding together each day's MET score, we can determine the MET score for the week. Inactivity is defined as a MET score of 599 or less, minima activity as a number between 600 and 3,000, and sufficient activity as a score of 3,000 or higher.

In 1998, work began in Geneva, Switzerland on a global measure of physical activity, and by 2000, it had been put through extensive reliability and validity testing in 12 nations (14 locations). Final findings suggest this instrument is suitable for use in national prevalence assessments of physical activity participation in populations and can be translated into a number of languages [33, 34].

2.4. Ethical Considerations

The Institutional Review Board provided the required written consents prior to the current study's data collection

(IRB). The objectives and benefits of the research were communicated to female nursing students. In addition, they were informed that participation in the study was fully voluntary and that they might withdraw at any time or decline to answer questions. The researchers maintained the confidentiality and right to privacy of the participants. The information of participants was saved and used exclusively for study.

2.5. Data Analysis

The data analysis was performed using SPSS 21.0. Means, numbers, and percentages are employed to describe the data. Using the chi-squared test, the Mann-Whitney U test, and the Kruskal-Wallis variance analysis, the differences between the independent and dependent variables were evaluated. In addition, the Games-Howell post hoc test was employed. The multivariate associations between independent factors and insomnia were examined using logistic regression.

3. Results

The study tools were completed by 290 students, with a response rate of 96.6% (290 out of 300). Of those, 290 students, aged 18 to 22 (M = 21.50 ±SD = 8.52), participated in the study. The majority of the students (N = 270; 93.10%) were unmarried, and their BMI ranged from 16.87 to 36.15 (M = 22.75± SD = 4.83). Of them, 8.62% had physical illnesses, and 3.45% experienced chronic discomfort. Additionally, the majority of students used their phones before sleeping (86.20%) (Table 1).

Table 1. Nursing University students sociodemographic characteristics

Variable	N	(%)
Age (years old)		
18–22	249	85.86
≥ 22	41	14.14
Marital status		
Married	20	6.90
Unmarried	270	93.10
Body Max Index		
Obese (≥30)	4	1.37
Overweight (25–29.9)	80	27.59
Normal (18.5–24.9)	180	62.02
Underweight (<18.5)	26	9.02
Presence of physical diseases		
Yes	25	8.62
No	265	91.38
Level of education		
1st year	100	34.48
2nd year	60	20.69
3rd year	75	25.86
4th year	55	18.97
Using mobile before sleeping		
Yes	250	86.20
No	40	13.80
Practicing regular activity.		
Yes	90	31.03
No	100	68.97
Practicing activity in free times.		
Yes	93	32.06
No	197	67.94
Presence of chronic pain		
Yes	10	3.45
No	280	96.55
Family support		
Bad	30	10.34
Moderate	189	65.17
Good	51	17.59
Very Good	20	6.9
Stress level		
Mild	100	34.48
Moderate	155	53.45
Severe	35	12.07

Table 2 compares the descriptive traits of female nursing university students with their levels of physical activity participation. Of them, 50% of obese and overweight female students were inactive, compared to 34.18% of the normal-weight and underweight students. The statistical significance of this difference was 0.001. The 40% of students who used their phones before sleeping were inactive. Additionally, 26.88% of students who engage in activity during free time were sufficiently active. The results of the students' responses to the International Physical Activity Questionnaire showed that 32.19% of students were inactive, 44.13% were minimally active, and 23.68% were sufficiently active.

According to the results of the Bergen Insomnia Scale, 42.70% of the students had insomnia. Table 3 compares the factors that were thought to impact insomnia with the amount of sleep that students reported having. Insomnia was more common in the students who reported having poor family support (p=0.02), experiencing severe stress (p<0.001), and using a mobile phone before sleep (p=0.002). Both students who did not engage in free time and those who did not engage in regular physical activity experienced greater levels of insomnia than their peers (p=0.001).

Table 2. Comparison between nursing university students' descriptive characteristics and practicing of physical activity levels

The International Physical Activity Questionnaire Scores							
Variables	**Inactive**		**Minimally active**		**Sufficiently active**		**χ2; p***
	N	%	N	%	N	%	
Age (years)							
18–22	30	12.00	119	47.80	100	40.20	χ2=3.26
≥ 22	10	24.30	21	51.21	10	24.49	P=.49
Body Max Index							
Obese (≥30)	2	50	1	25	1	25	χ2=23.055
Overweight (25–29.9)	40	50	36	45	4	5	P=0.001
Normal (18.5–24.9)	20	11.11	82	45.60	68	43.29	
Underweight (<18.5)	6	23.07	11	42.31	9	34.62	
Practicing regular activity.							
Yes	9	10	56	62.22	25	27.78	χ2 =50.167
No	51	51	39	39	10	10	p <0.0001
Practicing activity in free times.							
Yes	13	13.98	55	59.14	25	26.88	χ2 =7.580
No	100	50.76	87	44.16	10	5.08	p=0.013
Using mobile before sleeping							
Yes	100	40	33	13.2	17	46.8	χ2 =5.650
No	10	25	22	55	8	20	p=0.002

*χ2: Chi-square test.

Table 3. Comparison between nursing university students' descriptive characteristics and insomnia

The Bergen Insomnia Scale Scores					
Variables	**With insomnia**		**Without insomnia**		**χ2*; p**
	N	%	N	%	
Family support					
Bad	22	73.33	8	26.67	χ2=16.315
Moderate	40	21.16	149	78.84	P=0.02
Good	6	14	61	86	
Very Good	4	20%	16	80	
Stress level					
Mild	20	20	80	80	χ2=27.589
Moderate	15	9.70	140	90.30	p <0.001
Severe	10	28.57	25	71.43	
Practicing regular activity.					
Yes	25	27.77	65	72.22	χ2 =10.354
No	59	59	61	61	p =0.001
Practicing activity in free times.					
Yes	41	44.08	52	55.91	χ2 =11.541
No	60	30.46	137	69.54	p=0.001
Using mobile before sleeping					
Yes	109	43.60	141	56.40	χ2 =9.650
No	14	35.00	26	65.00	p=0.002
Physical activity levels					
Inactive	40	44.44	50	55.56	χ2 =1.15
Minimally activity	50	41.66	70	58.34	p=0.45
Sufficiently active	20	25.00	60	75.00	

*χ2: Chi-square test.

Table 4 compares the mean perceived stress scores of students with other independent variables. The average perceived stress score for the students was 22.54±7.16. The mean perceived stress scale scores of the students in the 18–22 age group who engaged in regular physical activity were higher than those of the students in the other age groups (p=0.012). The mean scores on the perceived stress scale were greater for the inactive students than the active students (p <0.0001). The insomniac students also scored higher on the perceived stress scale than their counterparts (p<0.0001).

The mean perceived stress scale scores and using a mobile phone before sleep were not significantly different (p>0.05). When compared to students who rated their family support as moderate, good, or very good, students who rated their family support as bad had higher mean scores on the perceived stress scale (p<0.0001). A significant difference between each group was revealed by the advanced analysis (p< 0.05).

Students who were inactive showed higher mean scores on the perceived stress scale than students with other levels (p<0.0001). The more in-depth analysis found that there was a statistically significant difference between the levels of perceived stress experienced by students who were minimally active and those who were sufficiently active, as well as between the levels of perceived stress experienced by students who were inactive and those who were sufficiently active (p <0.05). However, there was not a statistically significant difference in the mean levels of perceived stress reported by the students who were inactive and those who were minimally active (p>0.05).

Table 4. A comparison of the students' mean Perceived stress Scale scores and certain variables

Variables	Total Mean Perceived Stress Scores		Statistics Z*/ Kwx2*
	Mean	SD*	
Age (years)			Z=1.135 p=0.012
18–22	26.62	8.20	
≥ 22	20.08	8.03	
Family support			Kwx2=76.73 p<0.0001
Bad	30.64	9.47	
Moderate	27.06	8.07	
Good	15.10	7.37	
Very good	8.41	5.02	
Practicing regular activity.			Z=6.37 p<0.0001
Yes	10.14	6.03	
No	29.10	8.87	
Practicing activity in free times.			Z=7.60 p<0.0001
Yes	12.72	7.65	
No	34.12	9.89	
Using mobile before sleeping			Z=.5.73 p=0.09
Yes	22.88	7.62	
No	28.73	8.96	
Insomnia			Z=1.66 p<0.0001
Yes	38.06	9.93	
No	16.22	7.56	
Physical activity levels			Kwχ2=15.58 p<0.0001
Inactive	33.34	9.12	
Minimally activity	20.01	7.45	
Sufficiently active	10.05	7.01	

* Kwχ2: Kruskal-Wallis, Z: Mann-Whitney U; SD: Standard deviation.

Table 5. The factors associated with insomnia in the logistic regression analysis.

Variables	B	Exp(B)/ OR**	p	95% Confidence interval
Family support				
Family support (1) *	0.76	1.85	0.41	0.39-9.77
Family support (2) *	-0.018	0.89	0.95	0.54-1.89
Family support (3) *	0.313	1.41	0.003	1.06-2.16
Using mobile before sleeping	0.65	1.67	0.006	1.17–2.63
Perceived stress scale score	0.03	1.74	0.02	0.95–0.98
Practicing regular activity.	0.15	1.16	0.92	0.07–20.75
Practicing activity in free times.	-0.05	0.95	0.85	0.55–1.64

*(1), (2), and (3) are codes used in logistic linear regression. (1): good to very good; (2): moderate to very good; and (3): bad to very good.

**OR: Odds Ratio

Regression analysis showed that in comparison to students with very good family support, those with bad family support were 1.41 times more likely to suffer from insomnia. Students who used their mobile phones before sleep experienced insomnia 1.67 times more frequently than those who did not. And the incidence of insomnia increases by a factor of 1.74 for every unit increase in the total perceived stress score.

4. Discussion

Based on the findings of the IPAQ, 32.19% of female nursing students were not active at all, 44.13% were just minimally active, and 23.68% were sufficiently active (Table 2). These results are lower than what previous studies in Saudi Arabia found [5, 22, 35, 36]. And likewise, Joy, Vincent and Vincent [37] found that 71.1% of students were physically active versus 28.9% who were physically inactive. The results of international research on self-reported physical activity among college students vary, with rates of inactivity ranging from 22% to 79%% [38-40].

However, other studies indicate that around 40% of university students had poor levels of physical activity [41]. In India, 14.5% of university students were found to be inactive, which is lower than the results of the current study [42]. Different measuring tools make it impossible to match the surveyed data to the present study. Overall, the present study's findings regarding inactivity rates among university students are consistent with those of earlier studies that employed comparable measurement instruments.

In this study, 12.63% of underweight and normal BMI students were inactive, while 50% of overweight and obese students were inactive (Table 2). Consistent with previous research showing that individuals who don't exercise are more likely to be overweight or obese than those who do, and it is found that those who regularly engage in vigorous exercise were less likely to be obese [43].

According to the findings of this study, the levels of physical activity of students who engaged in regular physical exercise and who were active in their leisure time were higher than those of students who did not participate in either of these activities ($p<0.05$) (Table 2). In parallel, Wang [44] recommended that university students should engage in frequent exercise to improve their physical health.

This study indicated that 42.70% of university students had scores on the Bergen Insomnia Scale indicative of insomnia (Table 3). Comparatively, a comprehensive review reveals that the prevalence rates of insomnia in seven research ranged from 35.4% to 70% [45]. Similar somehow to a study conducted in Poland, 36.8% of students also reported experiencing insomnia [46]. The results of this study exceed those of previous studies, such as one that found the prevalence of insomnia among Italian college students to be (26.7%) [47]. The reported results are less than Oman's nursing student insomnia rate (57.4%) [48].

The results of this study showed that students who used their mobile in the hour before bed had considerably higher incidence of insomnia compared to students who did not do this ($p <0.05$) (Table 3). This outcome is comparable to those described in the relevant literature such as in Japan, excessive mobile phone use has been found to be associated with poor sleep hygiene and insomnia [49]. Additionally, it was discovered that the prevalence of insomnia and smartphone addiction were significantly correlated ($r = 0.162$, $p = 0.002$) [50].

The current study indicated that students with bad family support were more susceptible to insomnia than other participants ($p<0.05$) (Table 3). Similar findings were made by another study, which found a link between family support and insomnia [51]. In addition, it is discovered that students with bad family relationships were more likely to suffer from insomnia [52].

Insomnia was substantially more common among students who reported severe levels of stress ($p<0.05$) (Table 3). In similar vein, it is found that depression, poor sleep hygiene, stress, and anxiety were all significant

factors related to insomnia [53]. Furthermore, another study including university students indicated that stress has a negative impact on sleep [54].

The current investigation, on the other hand, did not find any correlation between the students' levels of physical activity as measured by the IPAQ and instances of insomnia ($p>0.05$) (Table 3). This conclusion is comparable to those of other studies of relevance [46]. Moreover, links between student insomnia and physical activity have not been evaluated earlier [55]. Even though there wasn't a statistically significant link between physical activity and insomnia symptoms, our results showed that students who thought they were physically active were less likely to have insomnia symptoms.

The total mean perceived stress score of the students was 22.54 indicating a high level of stress (Table 4). Similar to this study, Jones, Hansen, Kaddoura, Schwab-McCoy and Tocchini [56] emphasized that nursing students experience considerably elevated levels of stress. In Saudi Arabia, nursing students had the highest levels of stress [57]. In addition, a significant prevalence of stress among university students has been found in numerous research [58, 59].

Students who did not exercise on their own time, who did not engage in regular physical activity, and who had low physical activity levels reported considerably greater mean perceived stress levels ($p<0.05$) (Table 4). It has been shown in numerous research that engaging in regular physical exercise has positive effects on both pleasure and stress levels [60, 61].

According to the findings of this study, students' insomnia can be predicted by their level of perceived stress as well as their use of mobile devices before bed (Table 5). In line with these findings, other research reached the conclusion that stress and addiction to smartphones were significant contributing variables of insomnia [62]. Insomnia was significantly predicted by family support (Table 5). In line with the findings of an earlier study, there was a strong link between insomnia and the support provided by family [63].

4.1. Implications

Findings from this study highlight the need for public education campaigns and the launch of all-encompassing preventative activities to address stress, physical inactivity, and sleep disorders. In addition, policymakers and administrators interested in developing preventative and rehabilitative strategies for students who are physically inactive, have sleep problems, and suffer high levels of stress may find the study's findings useful. It is necessary to conduct controlled experiments to confirm the causal links between these variables.

4.2. Study Limitations

When analyzing the findings, it's important to take into account the limitations of the current study. First off, no causal pathways linking the variables under investigation to the study's cross-sectional design can be established. Although it would be expensive and time-consuming, a longitudinal study could be able to overcome this limitation. Second, the sample was only comprised of females, which reduces the sample's generalizability. Finally, because the primary focus of this research was on undergraduate students, it is not possible to generalize the findings to cover the entirety of the student population at universities.

5. Conclusions

The current study indicated that there were 32.19% of students who were inactive, 44.13% of students who were minimally active, and 23.68% of students who were sufficiently active. 42.70% of them were affected with insomnia. The student indicated extremely high levels of perceived stress (22.54 ± 7.16). Students who reported lower levels of family support, higher levels of stress, and greater use of mobile phones in the hour before bed were more likely to suffer from insomnia. Insomnia was more common among students who did not participate in either free times activities or regular physical exercise.

Inactive students had higher perceived stress scores than active students. Students with insomnia also reported higher mean perceived stress. Bad family support was associated with higher mean perceived stress levels than moderate, good, or very good family support. Roughly half of the students who had high body mass indexes were also not physically active. Almost half of the students who used their phones in bed were inactive. Additionally, family support, stress levels, and mobile phone use before bed were all significant predictors of insomnia. Taken as a whole, the results of the current study and the previously mentioned studies provide substantial insight into the issue. The findings add to the existing body of knowledge. It has major implications for counselors, nursing professionals, healthcare providers, and the general population. As a result, nurses who interact with college students should screen for sleep problems, lack of physical exercise, and stress to prevent the detrimental effects of these issues. It is vital to distribute pamphlets and conduct seminars about the causes and symptoms of insomnia. The guidance and counselling service should support the university community with stress management and social skill development. It is advised that more interventional research be conducted on this topic.

Data Availability

If a reasonable request is made, the author responsible for the datasets that were used in this investigation will make them available.

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Conflict of Interest

The author claims that there are no competing interests.

Author Contributions

The author had a major role in all phases of the research process, including conceptualization, design, data collection, analysis, interpretation, drafting, critical revision for important intellectual content, and final approval of the manuscript.

Ethical Approval

Permission from the Institutional Review Board from King Khalid University was obtained prior to data collection by the Ethical Committee of Scientific Research.

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