

# A Comparative Study of Sleep Quality and Nomophobia Among Physical Education Students

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**Abstract**—The purpose of this study was to compare the sleep quality and nomophobia among Physical Education students. A total of sixty students were randomly selected from the Department of Physical Education and Sports Technology, Sri Guru Granth Sahib World University, Fatehgarh Sahib, Punjab. The age of the participants ranged from 21 to 25 years. The subjects were divided into male and female groups. Sleep quality and nomophobia were assessed using the Pittsburgh Sleep Quality Index (PSQI) developed by Daniel J. Buysse et al. (1989) and the Nomophobia Questionnaire (NMP-Q) developed by Caglar Yildirim and Ana-Paula Correia (2015), respectively. Descriptive statistics and the independent samples t-test were employed to examine differences between male and female students on the selected variables. The results revealed no significant difference in sleep quality between male and female Physical Education students. This may be attributed to their similar academic responsibilities, training schedules, and daily lifestyles. Likewise, no significant difference was found in nomophobia between male and female students. This could be due to the extensive use of smartphones by both genders for communication, educational purposes, entertainment, and social networking. The findings suggest that gender does not play a significant role in influencing sleep quality and nomophobia among Physical Education students.

**Index Terms**—Sleep Quality, Nomophobia, Physical Education Students, PSQI, NMP-Q.

## I. INTRODUCTION

Sleep is an essential physiological process that plays a vital role in maintaining physical health, cognitive functioning, emotional well-being, and overall quality

of life. Adequate sleep is particularly important for university students, as it contributes to academic performance, concentration, memory, and recovery from daily physical and mental demands. However, modern technological advancements and increased dependence on smartphones have led to changes in sleep patterns and behaviors among young adults (Buysse et al., 1989).

The rapid growth of smartphone usage has introduced a new psychological phenomenon known as nomophobia, which refers to the fear or anxiety experienced when individuals are unable to access or use their mobile phones (Yildirim & Correia, 2015). Smartphones have become an integral part of students' lives for communication, educational activities, social networking, and entertainment. While these devices offer numerous benefits, excessive smartphone use has been associated with various adverse outcomes, including anxiety, stress, reduced academic productivity, and disturbances in sleep quality (King et al., 2013).

Physical Education students represent a unique population because they are actively involved in academic studies as well as regular sports training and physical activities. Although physical activity is generally associated with improved sleep quality, excessive smartphone dependence may negatively influence sleep habits and overall well-being. Understanding sleep quality and nomophobia among Physical Education students is therefore important for promoting healthy lifestyle behaviors and enhancing academic and athletic performance.

Previous studies have reported varying findings regarding gender differences in sleep quality and

nomophobia among university students. Some researchers have observed significant differences, whereas others have reported similar patterns among male and female students (León-Mejía et al., 2021). Therefore, further investigation is needed to understand these variables among Physical Education students. In this context, the present study was undertaken to analyze sleep quality and nomophobia among male and female Physical Education students.

## II. PURPOSE OF STUDY

The purpose of this study was to examine the differences in sleep quality and nomophobia between male and female Physical Education students. It was hypothesized that there would be no significant differences between male and female Physical Education students with respect to sleep quality and nomophobia.

## III. MATERIAL AND METHODS

For the purpose of this study, sixty Physical Education students were randomly selected from the Department of Physical Education and Sports Technology, Sri Guru Granth Sahib World University, Fatehgarh Sahib, Punjab. The age of the participants ranged from 21 to 25 years. The subjects were categorized into male and female groups. Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI) developed by Buysse et al. (1989), while nomophobia was measured using the Nomophobia Questionnaire (NMP-Q) developed by Yildirim and Correia (2015). The data collected were analyzed using appropriate statistical techniques to determine the differences in sleep quality and nomophobia between male and female Physical Education students.

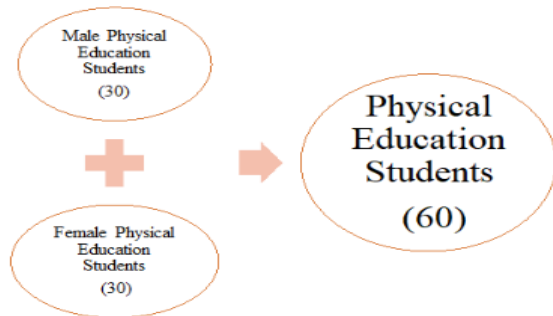


Figure: I Gender-Wise Distribution of Physical Education Students

## IV. PROCEDURE

All participants were informed about the purpose and significance of the study before the collection of data. Their voluntary consent was obtained, and they were assured that the information provided would be kept confidential and used solely for research purposes. The researcher explained the instructions. The questionnaires were administered under similar conditions to all participants, and sufficient time was provided for their completion. The researcher supervised the data collection process to ensure that the responses were recorded accurately and all participants uniformly followed the prescribed procedures.

## V. STATISTICAL TECHNIQUE

The data collected from the participants were systematically tabulated and analyzed using SPSS software (Version 23.0). Descriptive statistics, including mean and standard deviation, were computed to describe the characteristics of the selected variables. To determine whether significant differences existed between male and female Physical Education students in sleep quality and nomophobia, the independent samples t-test was employed. The level of significance was set at 0.05 for all statistical analyses.

## VI. RESULTS

Table-1 Descriptive Statistics And T-Value for Sleep Quality Variable Among Female and Male Physical Education Students

Group Name	Mean	SD	t-value	Sig.
Female	3.73	2.03	-1.86	0.31
Male	4.67	1.84		

SD = Standard Deviation

Table-1 presents the descriptive statistics and independent samples t-test results for sleep quality among male and female Physical Education students. The findings revealed that male students obtained a slightly higher mean score (Mean = 4.67, SD = 1.84) than female students (Mean = 3.73, SD = 2.03). The calculated t-value was -1.86, with a p-value of 0.31. Since the obtained p-value was greater than the

prescribed level of significance (0.05), the difference between the two groups was not statistically significant. Therefore, it was concluded that no significant difference existed in sleep quality between male and female Physical Education students.

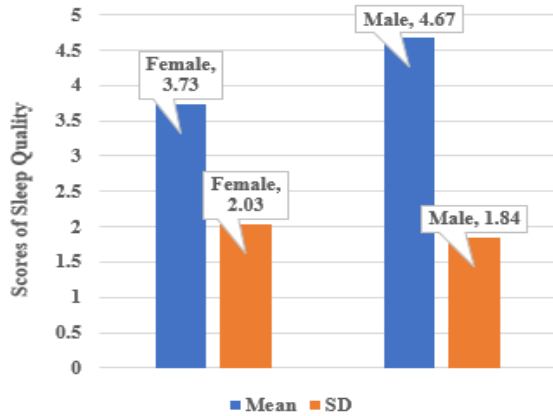


Figure II: Graphical Representation of Mean and Standard Deviation of Sleep Quality Variable Among Female and Male Physical Education Students

Table-2 Descriptive Statistics And T-Value for Nomophobia Variable Among Female and Male Physical Education Students

Group Name	Mean	SD	t-value	Sig.
Female	63.17	19.13	-0.86	0.84
Male	67.37	18.62		

SD = Standard Deviation

Table-2 presents the descriptive statistics and independent samples t-test results for nomophobia among male and female Physical Education students. The findings indicated that male students had a slightly higher mean nomophobia score (Mean = 67.37, SD = 18.62) than female students (Mean = 63.17, SD = 19.13). The calculated t-value was -0.86, with a p-value of 0.84. Since the obtained p-value was greater than the prescribed level of significance (0.05), the difference between the two groups was not statistically significant. Therefore, it was concluded that no significant difference existed in nomophobia levels between male and female Physical Education students.

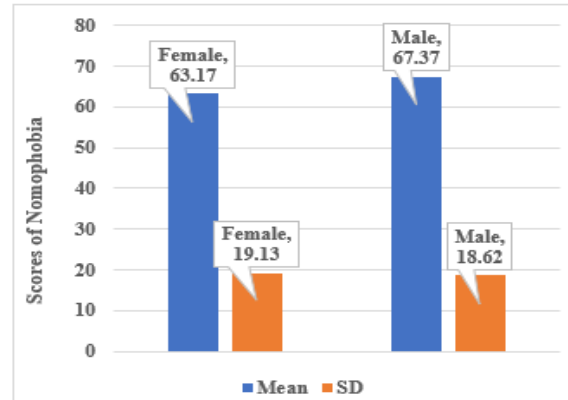


Figure III: Graphical Representation of Mean and Standard Deviation of Nomophobia Variable Among Female and Male Physical Education Students

## VII. DISCUSSION

The findings of the present study revealed that there was no significant difference in sleep quality between male and female Physical Education students. Although male students obtained a slightly higher mean score than female students, the difference was not statistically significant. This finding may be attributed to the fact that both male and female students were exposed to similar academic workloads, sports training schedules, and daily routines, which may have influenced their sleep patterns in a comparable manner. The result is consistent with the study of Chaudhry et al. (2024), who reported no significant relationship between smartphone use and sleep quality among male and female young adults. Similarly, several studies on university students have suggested that lifestyle and academic factors often exert a greater influence on sleep quality than gender differences alone.

The findings further indicated that there was no significant difference in nomophobia between male and female Physical Education students. Although male students reported a slightly higher mean nomophobia score, the difference was not statistically significant. The widespread use of smartphones among both genders for communication, academic purposes, social networking, and entertainment may explain the similarity in nomophobia levels. Fernández-de-Castro et al. (2023) support this finding, who found no significant gender differences in nomophobia among university students. Likewise, a recent meta-analysis reported that gender was not

significantly associated with nomophobia among university populations. The findings are also in agreement with Taş and Eker (2021), who observed that gender was not a strong predictor of nomophobia when compared with other psychological and behavioral factors. Therefore, the present results suggest that nomophobia is a common phenomenon among young adults irrespective of gender.

#### VIII. CONCLUSION

It was concluded that there was no significant difference in sleep quality and nomophobia between male and female Physical Education students. The findings indicate that gender does not significantly influence sleep quality or nomophobia among Physical Education students.

#### IX. CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the research, authorship, and publication of this study.

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