

## Sleep Disorders amongst Undergraduate Physiotherapy Students

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**Background:** Sleep problems may have a great impact on the Physiotherapy students' daily life. The aim of the present study was to find out sleep disorders amongst undergraduate Physiotherapy students at Nootan College of Physiotherapy, Visnagar, Gujarat, India 384 315.

**Methods:** Sixty five undergraduate Physiotherapy students (42 females and 23 males) participated in this study. An investigator developed mixed questionnaire was used to assess the sleep disorders amongst the physiotherapy under graduate students.

**Results:** Only 20% (13/65) of participants reported that they had disturbed sleep and 80 % of participants had reported no trouble in sleep.

**Conclusion:** Although negligible in nature, sleep disorders amongst Physiotherapy students may be considered as an emerging concern and sleep hygiene may be taught to undergraduate Physiotherapy students.

**Keywords:** physiotherapy, students, sleep and insomnia.

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### I. Introduction

Sleep is a naturally recurring state of body and mind characterized by altered consciousness, relatively inhibited sensory activity, reduced muscle activity and inhibition of voluntary muscles during rapid eye movement. Sleep is an important part of our daily routine, we spend about one-third of our time in sleep. It is believed that sleep plays a housekeeping role that removes toxins from your brain that build up while you are awake quality sleep and getting enough of it at the right time is essential to survival.<sup>1,2</sup> Without sleep you can't form or maintain the pathways in your brain that let you learn and create new memories, and it's harder to concentrate and respond quickly.<sup>3,4</sup>

Physiotherapy education varies from one country to another country. However, all over the world physiotherapy undergraduate training includes basic education in core subjects, foundation subjects and elective subjects that covers preclinical, para clinical, medical and physiotherapy subjects. In our country at present, bachelor of physiotherapy program is offered with duration of four years and compulsory rotatory internship for six months.<sup>5,6</sup>

Further, it is believed that there is a psycho physiological relationship between stress and sleep.<sup>7</sup> Sleep deprivation experiments suggests how sleep affects the tolerance of stress in the waking state.<sup>8</sup> However gradual partial sleep deprivation to a sleep time of 5 hours seems well tolerated by most individuals.<sup>9</sup> In some cases it has been found that individuals get well adapted to the workaday world that could live with briefer sleeping periods.<sup>10</sup> Anxiety is one of the most important factors deteriorating sleep under conditions of stress.<sup>11</sup> This reduced sleep is in turn stressful for waking behavior. Thus, the relationship between stress and sleep, two factors separated for scientific investigation, is essential and especially important in the problem of insomnia. Some of the authors have reported high level of stress in undergraduate physiotherapy students.<sup>12</sup> This could be due to changing nature of physiotherapy education, changes in educators, increasing concerned about the performance, amount of learning, time demands of the course, number of hours of studying/working and conflict with other activities. Research shows that higher stress predicts poorer sleep.<sup>13</sup> However, the temporal order and whether stress is an outcome of poor sleep or vice versa remains unclear. Since we believed that sleep problems may have a great impact on the Physiotherapy students' daily life. The present study was carried out to find out sleep disorders amongst undergraduate Physiotherapy students at Nootan College of Physiotherapy, Visnagar, Gujarat, India 384 315.

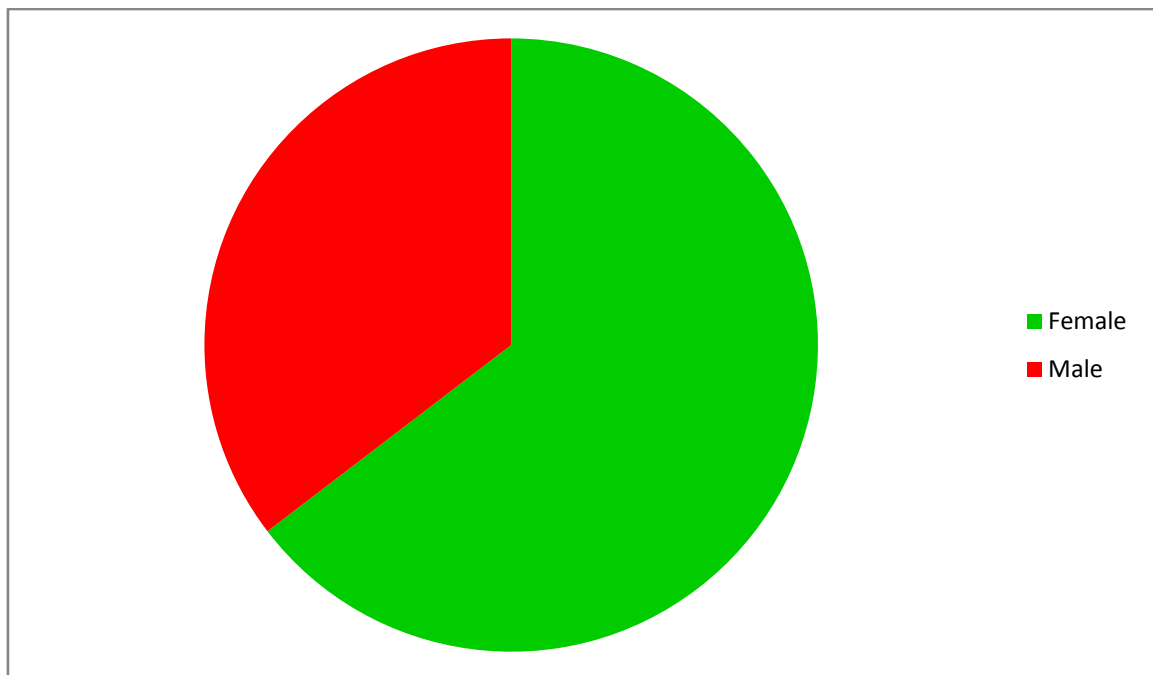
**Methods:** Qualitative study design in form of online mixed questionnaire survey was used for this research purpose. The study was conducted in three phase such as 1) Identification of key participants, 2) Collection of online survey data and 3) Data analysis. Ethical approval for this study was obtained from Institutional Ethical Committee of Nootan College of Physiotherapy (NCP), Visnagar, Gujarat, India 384 315. Phase 1-Identification of key participants: A list of potential participant physiotherapy students was generated by the researchers. This included I, II and III BPT students studying at our college (NCP) at the time of the study. A total of 65 individuals were invited to participate in this survey through email. The inclusion criteria for this study were willingness to participate in the study and ability to understand and reply this survey in English

language. Phase 2-Collection of online survey: For digital and speedy collection of the information, questionnaire was prepared (with the help of [www.surveymonkey.com](http://www.surveymonkey.com)). This was a mixed questionnaire with four closed and six open ended questions (Appendix 1).

The questionnaire was sent to participants through email and reminder mails so as to get better response rate. After one week from 2 July 2019 to 4 March 2019 the data collection was closed and the data received was analyzed. Phase 3-Data Analysis: The data analysis was done with analyze option in [www.surveymonkey.com](http://www.surveymonkey.com).

## II. Results

Analyses of completed questionnaire yielded results and we have described the same: Respondents: A total of 65 participants completed the questionnaire. This included 42 female and 23 male (figure1) physiotherapy undergraduate students studying at Nootan College of Physiotherapy, Sankalchand Patel university, Visnagar, Gujarat, India 384 315. Health: All the participants were asked if they had any health issue at the time of the survey. Response to this question indicated that 95.38% were healthy and 4.62 % reported the health issue at the time of the survey. Snoring: Participants reply about snoring showed that 95.38 % had no snoring during sleep and 4.62 % had snoring during sleep (figure2). Awakening: Respondents were asked about sound sleep or awakening during sleep and the responses indicated 80 % had normal sleep and 20% reported awakening during sleep or disturbed sleep (figure3). Causes of disturbed sleep: Only 59 participants reported that they think sleep disturbance could be due to cold, stress and use of mobile phone. What can help? Stress free environment, peaceful environment, comfortable atmosphere, eating healthy food, exercising daily may be helpful in getting sound sleep.



**Figure 1:** Gender wise distribution of participants

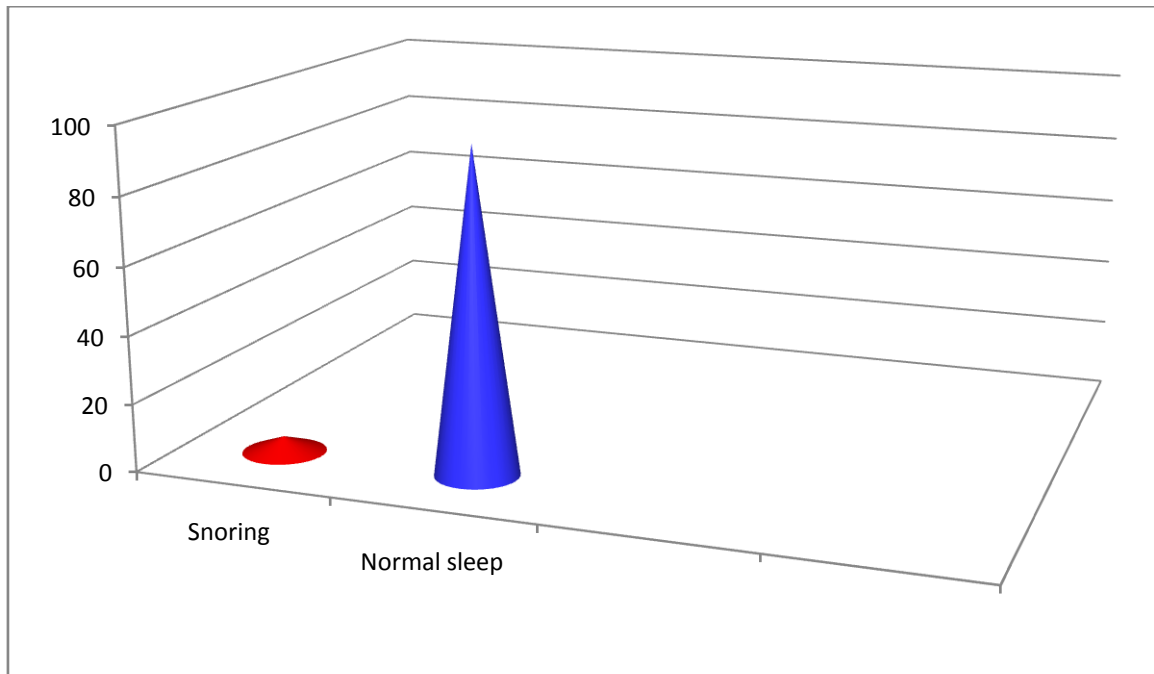


Figure 2: Snoring amongst participants

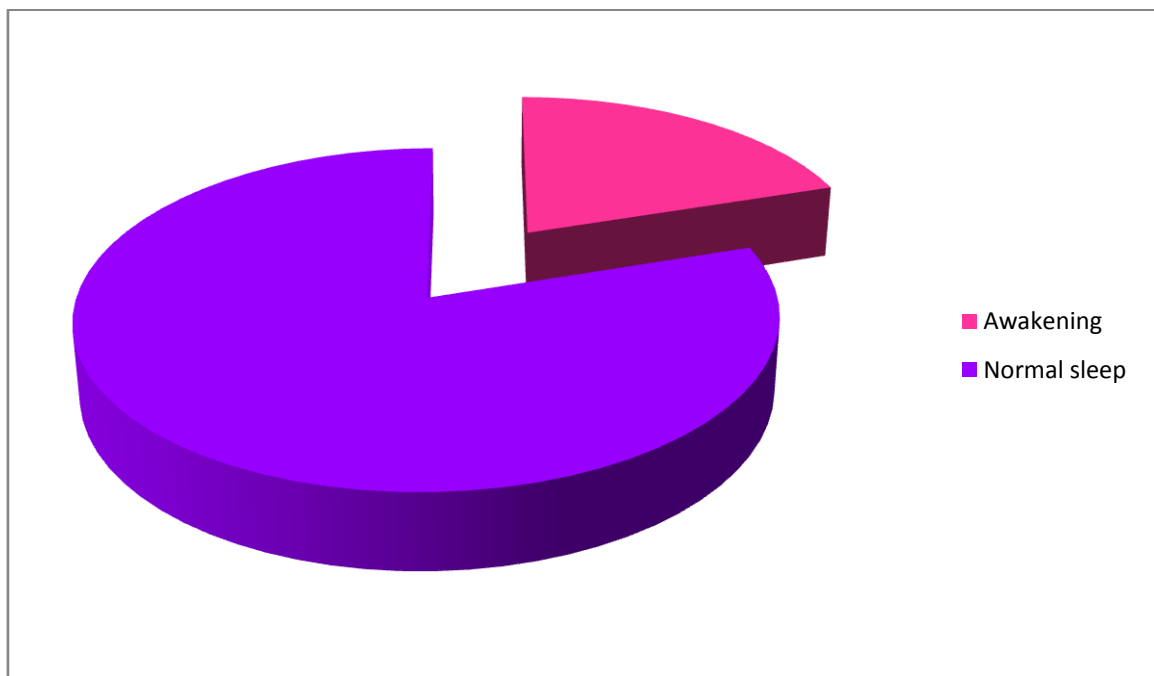


Figure 3: Sleep and awakening amongst participants

### III. Discussion

Results of the study showed that most of the participants were normal health individuals. Almost 80 % had normal sleep and 20% reported awakening 4.62 % had snoring during sleep, during sleep or disturbed sleep. Causes of disturbed sleep were cold or weather changes, stress and use of mobile phone and they felt that stress free environment, peaceful environment, comfortable atmosphere, eating healthy food, exercising daily may be helpful in getting sound sleep. Literature search showed that there is hardly any study that has investigated and reported the sleep disorders amongst undergraduate physiotherapy students and hence it was difficult to interpret our results with the help of published researches in the past. Since this study was not aimed to find out the cause and effect relationship we believe that the small percentage of participants who reported the disturbance in their sleep could be due to various reasons like time management, coffee intake, smoking, use of mobile, lap top, academic stress, self esteem, optimism, sense of self efficacy and psychological distress.<sup>14,15,16</sup>

Some of the limitations of this study include underreporting and sleep problems may be worse than those reported in our study, as students may give socially desirable answers such as not having sleep problems. Thus, this study may be limited by underreporting. Further studies based on longer period with separate data on week days and weekends may be attempted in near future.

#### **IV. Conclusion**

Sleep disorders amongst Physiotherapy students may be considered as an emerging concern and sleep hygiene may be taught to undergraduate Physiotherapy students.

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