



ORIGINAL RESEARCH PAPER

Physiology

RELATIONSHIP BETWEEN SELF PERCEIVED INSOMNIA AND EMOTIONAL INTELLIGENCE AMONG PHYSIOTHERAPY STUDENTS

KEY WORDS: Insomnia, Emotional Intelligence, Physiotherapy Students.

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ABSTRACT

Anxiety and Insomnia are major problem of physiotherapy students.1 Sleep plays a very important role in a human being's health. Study showed that sleep deprived students performed worse on attention, memory, emotional intelligence, problem-solving tasks.2

Materials and Methods: A descriptive correlation research design was conducted among 300 Physiotherapy students aged between 18-30 years from Dr. A.P.J. Abdul Kalam College of Physiotherapy, PIMS, Loni by using Insomnia Severity Index and Emotional Intelligence Questionnaire as outcome measures.

RESULTS: Male Physiotherapy students had more Insomnia severity ($t=2.2102$, $p=0.0279$) and their Emotional Intelligence components scores of Self Awareness (SA) (2.2002 , $p=0.0286$), Managing Emotions (ME) ($t=0.0123$, $p=0.9902$), Motivating Oneself (MO) ($t=0.2002$, $p=0.8415$), Empathy(E) ($t=0.3704$, $p=0.7113$) and Social Skills (SS) ($t=0.5088$, $p=0.6133$) was less as compared to female students. The Postgraduate students had more Insomnia severity score as compared to Undergraduate Physiotherapy students.

CONCLUSION: The study concluded that the self perceived Insomnia had indirect relationship on Emotional Intelligence among Physiotherapy students. Components of Emotional Intelligence mostly affected were Self Awareness and Managing Emotions.

INTRODUCTION

Sleep has an important role in the regulation of Central Nervous System and the body's physiological functions, regulating metabolism, catabolism, temperature, learning and memory consolidation.³ Sleep has become an important issue and sleep-related variables (e.g. sleep deficiency, Sleep quality, sleep habits) have been shown to influence performance of workers and students.⁴ Insomnia is very common in different medical field. 90% of the general population has experienced acute insomnia at least once. Approximately 10% of the population may suffer from chronic (long-standing) insomnia.⁵ Insomnia is defined as difficulty initiating or maintaining sleep, or both, despite opportunity and time to sleep, leading to impaired daytime functioning. Insomnia may be a cause or result of poor quality and quantity of sleep. Research on sleep disturbances in physiotherapy students is of particular interest because of the known relationship between sleep and mental health (Emotional Intelligence) and the concern that the academic demands of medical training can cause significant stress.⁶

In a survey of 150 Indian medical students, 30.6% reported an Epworth Sleep Scale (ESS) >10, indicating daytime sleepiness; sleep quality in females was better than in males medical students.⁷ Poor sleep quality and insomnia are pertinent to emotion, and previous studies have investigated the effects of loneliness, complicated grief, hostility, and impulsivity on sleep. Sleep and emotion are closely related, and the importance of this area has been increasingly recognized. Good sleep seems to be associated with high positive emotions, but not necessarily with low negative emotion.⁸ Emotional Intelligence is a set of abilities that enable individuals to organize and manage the emotions of themselves and others. This intelligence includes understanding our own feelings and using them for taking appropriate decisions in personal and business aspects of our lives. Emotional Intelligence could also modulate reactions to sleep loss.⁹

A large body of evidence supports the notion that good quality sleep is important for optimal neurocognitive and psychomotor performance as well as physical and mental health.¹⁰ So, it is important to know whether Physiotherapy students have sleep problems, to know the extent of their problem, and also whether their sleep disturbance has any effect on emotional intelligence and academic performance or quality of life.

Objectives:

1. To study the relationship between self perceived Insomnia and Emotional Intelligence in Physiotherapy students.
2. To find out whether self perceived Insomnia and Emotional Intelligence will be more in male or female Physiotherapy students.

MATERIALS AND METHODS:

1. **Study Setting** : Department of Neuro Physiotherapy, PIMS, Loni.
2. **Study Design** : Descriptive Correlation Study
3. **Source of Data:** Physiotherapy students from Dr. A.P.J. Abdul Kalam College of Physiotherapy, PIMS (DU), Loni, Dist. Ahmednagar.
4. **Sample** : 300
5. **Sampling Method** : Convenient sampling
6. **Study Duration** : 2 months (10th Sep 2017 - 10th Nov 2017)
7. **Inclusion criteria**
 - Undergraduate and Post graduate Physiotherapy students of Dr A.P.J. Abdul Kalam College of Physiotherapy, PIMS (DU), Loni.
 - Both genders.
 - Age between 18-30 years
8. **Exclusion criteria**
 - Participants suffering from psychiatric illness.
 - Participants having Cognitive and perceptual deficits.
9. **Variables:**
 - Dependent variable: The Insomnia severity Index and Emotional Intelligence Questionnaires.
10. **Materials to be used:**
 - Data recording sheet.
 - Insomnia Severity Index Questionnaire and Emotional Intelligence Questionnaire.

11. Description of Tool:

1. Insomnia severity Index questionnaire

The Insomnia severity Index questionnaire was explained by Charles M. Morin, Ph.D from the University of Laval. It has 7- item self report questionnaire assessing the nature and severity of insomnia. A 5-point Likert scale which says 0- None, 1-Mild, 2-Moderate 3-Severe, 4- Very severe, yielding a total score ranging from 0-28. The total score interpreted as follows: No clinically significant insomnia(0-7); Sub threshold insomnia(8-14); Clinical insomnia(moderate severity) (15-21); Clinical insomnia (severe)(22-28).

2. Emotional intelligence questionnaire

The Emotional Intelligence, the self-assessment questionnaire was designed to get the thinking about the components of five qualities of self awareness, managing emotions, motivating oneself, empathy and social skills. It was Daniel Goleman first brought emotional intelligence to a wide audience with his book in 1995. The Emotional Intelligence has 50 questionnaires which used to assess the 5 qualities which described above. The scale, which says 1- does not apply at all, 2-applies about half time, 3-always applies to you, yielding a total score ranging from 0-50. The total score is interpreted as follows: The area is a strength for you(35-50), Giving attention to where you feel you are weak(18-34), The area is a development priority(10-17).

Data collection procedure:

The investigator obtained approval from the Institutional Ethical Committee Ref no PIMS/CPT/IEC/2017/485 of Dr A.P.J. Abdul Kalam College of Physiotherapy, PIMS, Loni. Out of 300 participants 50 students were males and 250 students were females according to inclusion and exclusion criteria. The participants willing to participate were asked to signed a written and informed consent. All the participants were explained the nature of the study. The Insomnia Severity Index and Emotional Intelligence questionnaires were explained. The participants were given the questionnaire to be filled. The study was carried out for 2 months. Collected data were statistically analyzed and interpreted.

RESULTS:

Out of 300(100%) Physiotherapy students, 50 males (17%) and 250 females (83%). Mean age of the participants were (19.78±1.88). Graph no.1 explained the score of Insomnia among the Physiotherapy students. The first year were having higher score of insomnia (10.52±5.35) compared to other students. They were falling under sub threshold Insomnia.

Table .2 obtained the sub scores of Emotional Intelligence among the Physiotherapy students. The first year had higher score compared to other students. Their Emotional Intelligence as follows Self Awareness (39.75±4.93), Managing Emotions (33.91±5.26), Motivating Oneself (36.01±4.73), Empathy (37.6±4.67) and Social Skills(37.17±5.42). The score interpretation of Emotional Intelligence questionnaire for First year Physiotherapy students was in strength category.

Table no3: reported about Gender distribution in Physiotherapy students. The male students had higher score in Insomnia severity 10.86±5.14 and the female students had higher score in Emotional Intelligence Self Awareness(39.22±4.75), Managing Emotions (33.07±5.13), Motivating Oneself(35.22±4.88), Empathy (36.45±5.10) Social Skills(36.24±5.39). The 'p' values some were significant in Insomnia severity and Self Awareness. Others were not significant.

DISCUSSION:

Obtained results showed that the total score of Insomnia severity was significant with Emotional Intelligence's sub scales in targeted samples which indicated that those students who had higher level Insomnia severity had less Emotional Intelligence. Finding of current study correlated previous findings which confirmed that Physiotherapy students who had less sleep their Emotional Intelligence was reduced. Furthermore there was statically significant relationship between Insomnia severity and some subscales of Emotional Intelligence. There are number of reasons

that sleep can interfere with the Emotional Intelligence(EI). Most Physiotherapy students occasionally experience sleeping problems due to stress, hectic schedules, and other outside influences.

As reported Graph no.1 obtained the scores of Insomnia severity Index (ISI) among the Physiotherapy students from first year to post graduate students. There was the significant difference in mean score of Insomnia severity Index from First Year to Postgraduate students. The mean value of Insomnia severity index for first year (10.52±5.35) and were having p value of 0.0136. The second year had mean score of ISI is (9.59±5.32) and the p value was 0.0517. While the Third year were having the mean value of ISI was (9.24±5.06) and the p value was 0.0209. The Fourth year were having mean value of ISI was (7.19±4.93) and the p value was 0.0098. The Interns had the value of ISI was (7.97±4.21) and the p value was 0.0623. While the Post graduate having the mean value of ISI was (9.95±5.38) and the p value was p>0.10. The Third year were having more sub threshold Insomnia than other students. Because due to the more studies in academic year.

Table no.2 showed the sub scores of EI among the Physiotherapy students. The first year student had higher level of EI as compared to other year students. The score interpretation of Emotional Intelligence questionnaire for First year Physiotherapy students was in strength category.

Table no.3 reported the Gender distribution among the Physiotherapy students. The male students had higher mean score of Insomnia compared to female students. The male students had mean score of insomnia 10.86±5.14 and female had score of 9.08±5.21. Their 'p' and 't' values were 0.0279 and 2.2102. They were significant to each other. The female students had higher mean score in Emotional Intelligence and their subscales as follows SA(39.22±4.75), ME(33.07±5.13), MO(35.22±4.88), E (36.45±5.10) and SS(36.24±5.39). Their 'p' and 't' values as follows (0.0286, 2.2002), (0.9902, 0.0123), (0.8415, 0.2002), (0.7113, 0.3704) and (0.6133, 0.5088). SA score was significant but other scores of ME, MO, E and SS were significant.

Hamideh Azimi Lolaty, Abdolhakim Tirgari et al(2014) in their study on "Emotional intelligence and related factors in medical sciences students of an Iranian university" concluded that The emotional intelligence was correlated with gender, psychiatric history of the students and his/her family, experience of stressful life events, interest in the field of study grade of study, and marital.2

STUDY LIMITATION

- Study was limited to students of Dr.A.P.J. Abdul Kalam college of Physiotherapy.

FUTURE SCOPE OF STUDY

- Future study can be done on "Effect of music and breathing exercises on Insomnia severity and Emotional Intelligence among physiotherapy students."
- Further study can be carried out in different faculty to investigate the relationship between Insomnia and Emotional Intelligence.
- The study can be done on "Effect of movement therapy on Insomnia severity and Emotional Intelligence among Physiotherapy students."

CONCLUSION

The present study provides preliminary information on the relationship between self perceived Insomnia and Emotional Intelligence was significant between the Physiotherapy students in Dr. A.P.J. Abdul Kalam College of Physiotherapy in Loni. It was found that the male students had more Insomnia severity and their Emotional Intelligence components scores of Self Awareness, Managing Emotions, Motivating Oneself, Empathy and Social Skills was less as compared to female students. So Insomnia had indirect effect on their Emotional Intelligence. The Postgraduate students had more Insomnia severity score as compared to Undergraduate students. Some of the Emotional Intelligence components were affected. Present study can be concluded on a

note that a good sleep habits may improve the Emotional Intelligence.

Graph no. 1: The score of Insomnia among Physiotherapy students.

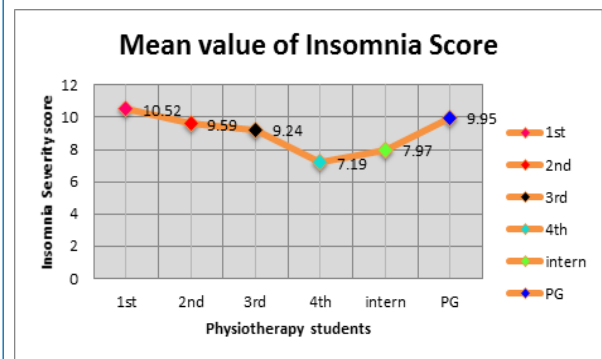


Table no.2: The sub scores of EI among the Physiotherapy students.

Year of students	SA M±SD	ME M±SD	MO M±SD	E M±SD	SS M±SD
First	39.75±4.93 (N=104)	33.91±5.26 (N=104)	36.01±4.73 (N=104)	37.6±4.67 (N=104)	37.17±5.42 (N=104)
Second	38.75±5.42 (N=61)	33.36±4.88 (N=61)	34.44±5.01 (N=61)	35.95±5.43 (N=61)	35.09±5.47 (N=61)
Third	38±5.24 (N=37)	31.86±5.36 (N=37)	34.29±7.05 (N=37)	35.24±5.64 (N=37)	35.62±5.3 (N=37)
Fourth	38.19±4.76 (N=42)	32.5±4.51 (N=42)	35.26±3.97 (N=42)	35.4±5.23 (N=42)	35.9±4.83 (N=42)
Interns	39.02±5.38 (N=34)	32.41±5.85 (N=34)	35.23±5.31 (N=34)	36.61±6.43 (N=34)	35.47±7.41 (N=34)
PG	38.54±4.57 (N=22)	32.4±5.82 (N=22)	34.81±5.19 (N=22)	34.95±5.56 (N=22)	36.09±4.87 (N=22)

Table no.3: Gender distribution in Physiotherapy student.

Variables	Males (M±SD)	Females (M±SD)	Unpaired 't' test value	'p' value and Significance
Insomnia	10.86±5.14 (N=50)	9.08±5.21 (N=250)	2.2102	0.0279, Significant
SA	37.56±5.44 (N=50)	39.22±4.75 (N=250)	2.2002	0.0286 Significant
ME	33.06±5.71 (N=50)	33.07±5.13 (N=250)	0.0123	0.9902, Not significant
MO	35.06±6.39 (N=50)	35.22±4.88 (N=250)	0.2002	0.8415, Not significant
E	36.14±6.73 (N=50)	36.45±5.10 (N=250)	0.3704	0.7113, Not significant
SS	35.8±6.64 (N=50)	36.24±5.39 (N=250)	0.5088	0.6133, Not significant

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