

Factors associated with fatigue in clinical and non clinical physical therapy student

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Objective: To determine level of fatigue and factors associated with fatigue in clinical and non clinical physical therapy student.

Methodology: A group of 200 physical therapy students (100 clinical and 100 non-clinical) in Riphah College of Rehabilitation Sciences, Islamabad were selected from semester 1-10. 20 students were selected randomly from each semester (10 males and 10 females). All completed a questionnaire and Multidimensional Assessment Fatigue scale.

Results: There was no difference of fatigue level among clinical and non-clinical physical therapy students (t-score 0.246). 35.5% students did not complain of significant fatigue while 38% had

mild-moderate level of fatigue and 26.5% had severe fatigue. Late night (64%) and less hours of sleep (64%) resulted in more fatigue. Another factor that resulted in more fatigue is travelling hour (72%) and travelling distance (83%). Gender differences in fatigue scores were small, but the variability among female (52%) was higher.

Conclusion: There was no significant difference of fatigue level among clinical and non-clinical physical therapy students. Sleep deprivation, long distance travelling were two major factors of fatigue among students. (Rawal Med J 2014;39:392-394).

Key Words: Fatigue, sleep deprivation, physical activity, students.

INTRODUCTION

Fatigue can be defined as a state, following a period of mental or bodily activity, characterized by a lessened capacity or motivation for work and reduced efficiency of accomplishment, usually accompanied by a feeling of weariness, sleepiness, irritability, or loss of ambition; may also supervene when, from any cause, energy expenditure outstrips restorative processes and may be confined to a single organ.¹ In normal human beings, it is considered as normal process, but in patients it is considered as lack of energy.² Many medical and psychological issues can cause fatigue.²⁻⁴ Around 10% of people are affected by fatigue globally and is more common among females than males.²

During medical education, overwhelming burden of information leaves a minimal opportunity to relax and recreate and sometimes leads to serious sleep deprivation.⁵ Fatigue, which is a common complaint among medical students, is related to poor academic outcomes. There can be many stressors in a student life like academic stress, students having clinical rotation along with education needs to work harder to cope with their routine, uncertain future and

difficulties envisaged for integration into the system.⁶⁻⁹ The objectives of this study were to determine the level of fatigue in clinical and non-clinical students.

METHODOLOGY

This descriptive study was conducted on the undergraduate students of physical therapy of Riphah College of Rehabilitation Sciences, Islamabad, Pakistan in all 10 semesters. A total of 200 students, clinical (n=100) and non-clinical (n=100) including female (n=100) and males (n=100), participated in study. A self-administered questionnaire was given to students who were randomly selected from the list provided by college administration and data were collected in one month. Consent was taken from participants and confidentiality was ensured. To assess the level of fatigue, Multidimensional Assessment Fatigue (MAF) scale was used. Students who would score more than 17.0 would be considered suffering from mild to moderate fatigue and students scoring more than 30.0 would be considered clinically fatigued. Analysis of data was done with SPSS 20.0

RESULTS

Response rate was 100%. Out of 200 students, 100 (50%) were going through clinical rotation and 100 (50%) were not. There were 133 (66.5%) day scholars and 67 (33.5%) hostelites. 129 (64.5%) students had fatigue, out of which 38% had mild to moderate and 26.5% were clinically fatigued. Females had more fatigue than males. A total of 52% females had fatigue and 48% males had fatigue, out of which, 58.5% females and 41.5% males were clinically fatigued (Table 1).

Among day scholars, 67.5% had fatigue, out of which 30.0% were clinically fatigued and 30.1% had mild to moderate fatigue. 50.3% hostelites had fatigue out of which, 13.4% were clinically fatigued and 44.7% were mild to moderate.

There was no difference of fatigue level among clinical and non-clinical students ($p=0.792$). Major factors of fatigue were late night sleep ($p=0.07$), less time of sleep ($p<0.001$), long hours of travelling ($p=0.011$) and long distance travelling ($p=0.037$).

Because of less time of sleep (4 to 6 hours), 65.7% students reported mild to moderate fatigue and 54.5% were clinically fatigued. Due to late night sleep 55% were having mild-moderate fatigue and 56.6% were clinically fatigued (Table 2).

Table 1. Normal sleeping time fatigue level.

	Fatigue level			Total
	Fatigue (>17<30)	Clinically severe fatigue (>30)	Normal (<17)	
Early in night	17	8	12	37
Midnight	42	15	31	88
Late in night	17	30	26	73
Others	0	0	2	2
Total	76	53	71	200

Table 2. Normal sleeping hours fatigue level.

Number of hours of sleep	Fatigue level			Total
	Fatigue (>17<30)	Clinically severe fatigue (>30)	Normal (<17)	
4-6 hours	24	29	29	82
7-9 hours	50	18	39	107
10-12 hours	2	6	3	11
Total	76	53	71	200

Travelling long distance (11-20Km) caused 40.7% mild to moderate and 35.8% students clinically fatigued (Table 3). More time of travelling was reported as causing 20.7% clinical fatigue and 42.1% mild to moderate fatigue (Table 4).

Table 3. Distance travelled per day fatigue level.

Distance travelled per day	Fatigue level			Total
	Fatigue (>17<30)	Clinically severe fatigue (>30)	Normal (<17)	
1-10Km	30	20	50	100
11-20Km	31	19	19	69
21-30Km	15	6	2	23
31-40Km	0	7	0	7
41-50Km	0	1	0	1
Total	76	53	71	200

Table 4. Time of travel per day fatigue level.

Time of Travel per Day	Fatigue level			Total
	Fatigue (>17 <30)	Clinically severe fatigue (>30)	Normal (<17)	
30 mins	32	18	34	84
1 hour	27	18	26	71
2 hours	16	11	4	31
10-15 mins	1	0	7	8
4 hours	0	6	0	6
Total	76	53	71	200

Those students who do not have time to walk in morning 102 (79.2%) were more fatigued than those who had morning walk 53 (74.6%). Out of 102 students 80.2% students had mild to moderate fatigue while 77.3% were clinically fatigued.

DISCUSSION

Students have always been at stake of getting stressed or fatigued, especially in pursuit of highly professional education.¹⁰ A large majority of students perceive them as fatigued at one or other time of life but females are more prone to be fatigued than male students. It was interesting to note that day scholars had more fatigue than hostelites. This has been considered primarily because of travelling distance between college and their residence. Previous studies from medical schools in different countries have reported varying levels of fatigue.^{5-7,11-15}

Multiple tools have been used to assess level of fatigue and effect of fatigue on daily activity. The advantage of MAF is it has wide range and can be used in wide range of subjects.^{5,9,16-18} Sleep deprivation is a major factor for fatigue that effects academic performance and also impact on personal life leaving many personal and social activities and meaningful personal pleasures deferred or postponed.^{6,8,13,19}

CONCLUSION

Fatigue was more common in female students. Day scholar reported more fatigue than hostelites. The clinical rotation had no significant difference of fatigue. Sleep deprivation was the major cause of fatigue. Long hours and long distance travelling was the second major cause of fatigue. Students with no time for morning walk had more fatigue, making it third most common factor reported by students.

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