PREVALENCE AND SEVERITY OF RESTLESS LEGS SYNDROME AMONG PHYSIOTHERAPY STUDENTS

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ABSTRACT

Objective: To find and compare prevalence and severity of Restless Legs Syndrome among physiotherapy students.

Study Design: Comparative cross-sectional survey.

Place and Duration of Study: The study was conducted in Azra Naheed Medical College from Jan to Apr 2016.

Material and Methods: The sample size was 222 whereas, 219 students participated in the study. The students qualifying the four criteria were further evaluated through RLS rating scale. The RLS scores ranged from 0-40, where 0=none; mild=1-19; moderate=11-20; severe=21-30 and very severe=31-40.

Results: Total 219 students participated in the study. Whereas, 54 students were diagnosed as RLS sufferers out of which 18(39.7%) students were male and 36(60.3%) students were female. The mean RLS score was 19.67 i.e. mild to moderate. However no significant difference was found between male and female students having RLS symptoms.

Conclusion: It was concluded that RLS is a sleep disorder that affects both male and female. It prevails mostly among female students than male students. Severity of RLS symptoms are mild to moderate among students.

Keywords: Disorder, movement, prevalence, restless legs syndrome.

INTRODUCTION

There are many types of abnormal movements in the human bodies. Among such movements, the occurrence of restless legs syndrome (RLS) is most frequent. RLS was first reported in 1945 by Ekbom1 and is also known as Willis-Ekbom Disease (WED). Restless legs syndrome is a neurological disorder in which individuals desire to move their legs due to abnormal sensations[2]. Restless leg syndrome is a associated with sleep distrubances that is described by abnormal leg movement. It includes both sensory and motor disorder. It affects sleep, mood and quality of life[3]. RLS causes sleep disturbance and thus causes behavioral problems during daytime. The prevalence of RLS has been reported in many studies in relation with mental and physical health status and associated RLS symptoms among individuals[4]. Treatments are available for this condition but there are many cases of restless legs syndrome that are still under diagnosed.

It is a feeling of severe restlessness and unpleasant sensation in legs. Its symptoms manifest when legs are at rest. Creeping sensation is usually found between ankle and knee. It can also be felt in thigh and often in feet. It is usually bilateral or may be unilateral sometimes. Conditions become worst in the evening or night. RLS can be treated through exercise[5], diverting the attention or taking cold or hot baths. Patients are also advised to walk few steps. Restless leg syndrome can be in idiopathic or symptomatic form. Positive family history and long periods of physical inactivity cause RLS to occur however, movement helps to relive from pain. Sleep deprivation is a serious issue in patients. Diagnosis of this condition cannot be confirmed merely through laboratory tests. Although pathophysiology of this syndrome is not completely known[6] however, people having anemia[7], imbalanced dopamine, abnormality in

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Received: 29 Jun 2016; revised received: 01 Jul 2016; accepted: 13 Jul 2016

brain iron transport[8], environmental factors[5], diabeties[9], renal failure or few chronic conditions can cause this syndrome. There were no well-known physical anomalies linked with this disorder. RLS symptoms are different in children than adults[10]. People suffering from this condition explain feelings like burning or ants crawling in legs[11]. Itis observed that majority of people with RLS don't receive any medical care and are treated by pulmonologists, working in sleep medicine[12]. RLS causes daytime headache resulted in effected day time functioning[13], depression[14] and social isolation. Such individuals suffer from lack of concentration[15]. Several researches have been conducted in the Western countries regarding RLShowever; no such studies have been conducted in Pakistan. Therefore, the purpose of this study was to find prevalence and severity of restless legs syndrome among physiotherapy students.

MATERIAL AND METHODS

This comparative cross-sectional study was conducted at Azra Naheed Medical College (ANMC), Lahore from January-April 2016. All the students except first semester students of physiotherapy department of ANMC were considered as population of the study. A sample of 222 students was selected by convenient sampling. The actual response rate was 98.6% i.e. 219 students participated in this study. Initially, consent wastaken from the physiotherapy students, afterwards the National Institute of Health (NIH) diagnostic criteria was applied to diagnose restless legs syndrome (García-Borreguero et al, 2007)[16].

1. An urge to move the limbs with or without sensations.
2. Improvement with activity.
3. Condition worsening at rest.
4. Condition worsening in the evening or night.

Participant of the study had to answer all above four (4) questions[17]. The students who met this criterion were further evaluated through the International Restless Leg Syndrome Scale (IRLSS) to check the prevalence and severity among student. This scale defines clinical feature of RLS and consisted of ten statements with five options ranging from 0-4. Where 0=none; mild=1-19; moderate=11-20; severe=21-30 and very severe=31-40. The minimum score of RLS could be 0 whereas maximum score could be 40. The IRLSS has good convergent validity, high inter-examiner reliability, internal consistency and test–retest reliability.

Married studentsof both gender were included in the study. Besides that, students with any history of trauma, recent infections, physically handicapped and first semester students of Doctor of Physiotherapy (DPT) wereexcluded from the study.The data were analyzed by using SPSS-16. Percentage, standard deviation and t-test were applied. The t-test were applied to measure severity (0-4) and overall

Table-I: Prevalence of restlessness among the study group (n=219).

Gender		Restlessness		Total	*p*-value
		Negative	Positive		
Male	Count	69	18	87	
	% of Total	31.5%	8.2%	39.7%	
Female	Count	96	36	132	0.269
	% of Total	43.8%	16.4%	60.3%	
Overall Count		165	54	219	
% of Total		75.3%	24.7%	100.0%	

df=1

score (0-40) of RLS among students having this syndrome.

RESULTS

Overall, 219 students participated in this study. After applying diagnostic criteria, only 54 (24.7%) students were found having RLS while 165 (75.3%) students were not having RLS (table-I). However, there was no significant difference (p=0.269) found between male and female students having RLS. The mean score of RLS was found 19.67 (SD=6.65). Minimum score of RLS was found 3 and maximum score of RLS was found 34. The age of the participants ranged from 20-35 years. The severity of RLS was also measured from statement no.1 to statement no.10. Although mean value of severity was found greater in female (Mean=2.611) than male (Mean=2.333) however, no significant difference was found between male and female regarding

Table-II: Mean difference in severity of restless legs syndrome among study group.

Statements	Gender	N	Mean	Std. Deviation	Std. Error Mean	T	df	Sig. (2-tailed)
S1	male	18	2.1111	.90025	.21219	.429	52	.669
	female	36	2.0000	.89443	.14907			
S2	male	18	1.8889	.90025	.21219	-1.177	52	.245
	female	36	2.1667	.77460	.12910			
S3	male	18	2.5556	.70479	.16612	4.491	52	.000
	female	36	1.6667	.67612	.11269			
S4	male	18	1.6667	.97014	.22866	.000	52	1.000
	female	36	1.6667	.82808	.13801			
S5	male	18	1.4444	.98352	.23182	-1.785	52	0.080
	female	36	2.0000	1.12122	.18687			
S6	male	18	1.8889	.75840	.17876	-.824	52	.413
	female	36	2.1111	1.00791	.16798			
S7	male	18	2.0000	.97014	.22866	-.650	52	.518
	female	36	2.1667	.84515	.14086			
S8	male	18	1.6667	1.08465	.25565	-1.819	52	.075
	female	36	2.2222	1.04502	.17417			
S9	male	18	1.7778	1.43714	.33874	-.501	52	.618
	female	36	1.9444	.98400	.16400			
S10	male	18	1.7778	1.06027	.24991	-1.144	52	.258
	female	36	2.1667	1.23056	.20509			
Overall Severity of Restless legs Syndrome	male	18	2.333	0.68599	0.16169	-1.299	52	0.200
	female	36	2.611	0.76636	0.12773			

Table-III: Mean difference of overall restless legs syndrome scores.

Variable	Gender	N	Mean	Std. Deviation	Std. Error Mean	T	df	Sig. (2-tailed)
Overall Restless legs Syndrome score	male	18	18.7778	7.02563	1.65596	-0.681	52	0.499
	female	36	20.1111	6.66667	1.11111			

severity of RLS. All statements except statement no. 3(p=0.000) were found non-significant (table-II). The overall severity of restless legs syndrome was also found non-significant (p=0.200). Similarly, no significant difference (0.499) was found regarding overall RLS score of male (Mean=18.77, SD=7.025) and female (Mean=20.111,SD=6.666)students (table-III).

DISCUSSION

This study showed that 8.2% male and 16.4% female met the diagnostic criteria. In a previous research conducted by Shalash et al. (2015) on medical students, there were 389 participants. Out of 389, only 46 participants met the four diagnostic criteria. There were 19 male and 27 female. The RLS prevalence was 11.9%. Whereas, in the present study, 24.7% prevalence of RLS was found among students. In both the researches high frequency of RLS has been observed in the female as compared to those in male[17]. It is obvious that female are more prone to RLS than male. This study shows that 16.4% female had RLS symptoms. In a study that was done by Berger et al (2004) shows 10.6% RLS prevalence and reported that women get affected twice as compared to men[18]. The prevalence of this syndrome increases with the age i.e. in forties and fifties[5] It is more common among females than males therefore, females are found at increased risk of having RLS. Moreover, Work problems due to sleepiness are reported nine fold among ladies than men[19].

Another objective of this study was to find the severity of Restless legs syndrome. The overall score of RLS revealed that students were suffering from RLS had mild to moderate RLS. Mostly no treatment is required in case of mild symptoms[20]. However, symptoms of RLS can be reduced by Gabapentin as compared to placebo effect.Patients of RLS can be treated by modifying lifestyle like less use of alcohol, caffeine, and tobacco. It can also be treated by maintaining a proper sleep pattern or patients might get some relief from doing exercise but these efforts does not eliminate RLS symptoms[21]. Cirillo and Wallace (2012) reportedthat RLS caused elevated risk level for particular limitations like sitting for long periods, difficulty in moving heavy weight objects or while climbing stairs. This study classified relationship between severity of restless legs syndrome but failed in categorizing primary RLS vs. secondary RLS[22].

CONCLUSION

It was concluded that RLS is a sleep disorder that affects both male and female. It prevails mostly among female students than male students. Severity of RLS symptoms are mild to moderate among students.

Restless legs syndrome is a sleep disorder that is characterized by an urge to move legs. The severity of discomfort varies from person to person. Mostly students get relief by moving around. There is an increased risk of RLS in female participants as compared to male participants. Mean value of RLS severity of mild to moderate level among students. It is also concluded that there is more prevalence of RLS in senior semester's students as compared to junior semester's students. RLS can be due to some underlying conditions for example anemia, cardiac disease or any other chronic condition but pathophysiology of this disorder is still not completely understood.

CONFLICT OF INTEREST

There is no conflict of interest for conducting this research. It is free from all biases.

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