



PREVALENCE OF WORK RELATED NECK PAIN IN GIRL PHYSIOTHERAPY STUDENTS OF AMRITSAR

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Abstract:

Neck pain is one of the most common musculoskeletal disorders in physical therapists, especially the females. In the present study, an attempt has been made to search the prevalence of neck pain in girl physiotherapy students of Amritsar. A total of purposively selected 194 under- and post-graduate girl physiotherapy students aged 18-26 years from Guru Nanak Dev University, Amritsar were selected for the present cross-sectional study. Modified Nordic Questionnaire and Northwick Park Neck Pain Questionnaire were applied to gather the information. Standard statistical analyses were also done. In results, the prevalence of neck pain was found as 20.10% in girl physiotherapy students of Amritsar with the maximum prevalence (76.92%) in the BMI category of normal weight, gradual onset (53.84%) of pain in majority cases, the maximum (56.41%) 1-7 days of time of neck trouble during last 12 month, with less medication (29.41%) for their neck pain during last one year, with 1-7 days time (55.88%) when neck trouble had prevented them from doing their normal work during the last one year, and the younger students had higher disability index (279.78; 14.11%) than their older counterparts (254.13; 13.32%). It could be concluded that neck pain should be taken care adequately in the early stages of their profession.

Keywords: Neck pain, Modified Nordic Questionnaire, Northwick Park Neck Pain Questionnaire, Girl physiotherapy students.

Introduction:

The prevalence of work-related musculoskeletal injuries is significant in many professions, and this carries a marked impact on professionals (Silverstein et al., 2002). Work related musculoskeletal injuries are considered as one of the largest health problems among physiotherapists, because the nature of the work that therapist expose themselves to have a high risk of pain (King et al., 2009).

Neck pain is one of the most common musculoskeletal disorders, second to low back pain (Wilkinson et al., 1992). It is not life threatening, but can cause stiffness and discomfort. It may occur in many different

conditions and it is also called cervical pain (Nelson and Olson, 1996). Causes of neck pain include flexion of cervical spine for longer duration, repetitive work, psychological job strain and soft tissue work (Bork et al., 1996). Some factors which can increase the risk of neck pain include high demands of job, low social support, female gender, wrong posture, individual's height and inappropriate time period for rest. (Khan et al., 2017).

The prevalence increases with longer prevalence periods and generally women have more neck pain than men. At least for 1-year prevalence, Scandinavian countries report higher mean estimates than in the rest of Europe and Asia. (Fejer et al., 2006). Prevalence of neck pain in

different countries was reported as 83.8% in China, 57% in New Zealand, 52% in India and 48% in USA (Khan et al., 2017). The musculoskeletal injuries among medical students were relatively high and recommended in-depth study of ergonomics and measures to prevent musculoskeletal injuries due to factors related to medical school (Alshagga et al., 2013). Moreover, neck pain was more prevalent in female as compared to male health workers (Zaerian, 2011; Khan et al., 2017). Mechanical neck pain was reported to be common among Taif University female students and more pain was common among students undergoing clinical training (Gharib and Hamid, 2013). Considering the above mentioned fact, also for the restriction of movement during post COVID-19 (after first wave in India during September to December, 2020), in the present study, an attempt has been made to search the prevalence of neck pain in only girl physiotherapy students of Amritsar.

Materials and Methods

Samples: A total of purposively selected 194 under- and post-graduate girl physiotherapy students aged 18-26 years were selected by convenience sampling according to inclusion and exclusion criteria for this cross-sectional study. During September to December, 2020 (after first wave of COVID – 19 in India), initially 211 girl students from Guru Nanak Dev University, Amritsar were recruited, but finally 194 students participated in the study. Age of the subjects was registered from the records of their classes of the university. A self-structured questionnaire including demographic information was applied to the subjects. Prior to the study, a written

consent of the subjects were also taken. The study was approved by Institutional Ethical Committee.

Anthropometric Measurements

Height and body weight of the subjects were measured after Lohmann et al. (1988) and Body Mass Index (BMI) was calculated from height and weight as follows: $BMI = \text{weight (kg)} / \text{height}^2 (\text{m}^2)$.

Modified Nordic Questionnaire

Before distributing the questionnaire, the brief explanation was given regarding the information sheet and purpose of the study. It was a self administered fully validated and reliable questionnaire.

Northwick Park Neck Pain Questionnaire

The questionnaire was developed to measure self-perceived disability from neck pain as described by Hoving et al. (2003). It was also a self administered fully validated and reliable questionnaire.

Statistical Analysis

Standard descriptive statistics (percentages) were analyzed for variables of the subjects using SPSS (Statistical Package for Social Science) version 20.0. To indicate statistical significance, 5% level of probability was used.

Results

Table 1 showed the prevalence of neck pain in girl a physiotherapy student which was found as 20.10%.

Table 1: Prevalence of neck pain in girl physiotherapy students

Total no. of participants	Participants reported neck pain	%
194	39	20.10%

BMI-wise prevalence of neck pain in girl physiotherapy students was given in Table 2. The maximum prevalence (76.92%) of neck pain was found in the BMI category of normal weight, followed by under-weight (15.38%) and over-weight (7.69%).

Table 2: BMI-wise prevalence of neck pain in girl physiotherapy students

Characteristics	Prevalence	%
BMI		
Underweight(<18)	6	15.38%
Normal weight(18-<25)	30	76.92%
Overweight(25-30)	3	7.69%

Table 3 highlighted the prevalence of onset of neck pain in girl physiotherapy students. The highest prevalence of gradual onset (53.84%) was found in the girl physiotherapy students, followed by sudden onset (46.15%).

Table 3: Prevalence of onset of neck pain in girl physiotherapy students

Onset	Prevalence	%
Sudden	18	46.15%
Gradual	21	53.84%

The length of time of neck trouble in girl physiotherapy students during last 12 month was shown in Table 4. The maximum of time (56.41%) was registered in 1-7 days, followed by more than 30 days (23.07%), 0-7 days (5.12%) and everyday (2.56%) in the girl physiotherapy students.

Table 4: Length of time of neck trouble during last 12 month

Days	Prevalence	%
0-7 days	2	5.12%
1-7 days	22	56.41%
8-30 days	5	12.82%
More than 30 days	9	23.07%
Every day	1	2.56%

Table 5 showed the students who seek medication because of neck pain during last 12 months. The majority students (70.58%) did not have any medication for their neck pain, whereas, only 29.41% students attended medication.

Table 5: Students who seek medication because of neck pain during last 12 months

Medication	Prevalence	%
Yes	10	29.41%
No	24	70.58%

The length of time neck trouble had prevented from doing normal work during the last 12 months was given in Table 6. The maximum frequency (55.88%) was found in 1-7 days, followed by 0 days (29.41%), more than 30 days (8.82%) and 8-30 days (5.88%) in girl physiotherapy students.

Table 6: Length of time neck trouble has prevented from doing normal work during the last 12 months

Days	Prevalence	%
0 days	10	29.41%
1-7 days	19	55.88%
8-30 days	2	5.88%
More than 30 days	3	8.82%

Age-wise disability index of neck pain in girl physiotherapy students was shown in Table 7. The younger students of age group 18-22 years had higher disability index (279.78; 14.11%) as compared to the older students of age group 23-26 years (254.13; 13.32%).

Table 7: Age-wise disability index of neck pain in girl physiotherapy students

Age group	Disability Index	%
19-22 years	279.78	14.11%
23-26 years	254.13	13.32%

Discussion

In the present study, the prevalence of neck pain was found as 20.10% in girl physiotherapy students of Amritsar (Table 1). The similar kind of prevalence of neck pain was reported by Khan *et al.* (2017) as 17.62% in female physiotherapists as compared to 4.85 % in their male counterparts. Norden *et al.* (2011) reported 18% prevalence of neck pain in females than 5% in males. Vieira *et al.* (2016), Raouf *et al.* (2014) in Egypt and Rozenfeld *et al.* (2010) in Israel reported higher prevalence of work related musculoskeletal disorders in female physiotherapists than their male counterparts. The reason behind the higher prevalence of neck pain in females might be due to anatomical, physical and physiological differences as compared to males. During routine physiotherapy practice, neck is the most commonly affected anatomical area where more stresses are put due to flexed posture of cervical spine for longer duration of time (Balakrishnan and Naib, 2016).

It was also found in the present study that the maximum prevalence (76.92%) of neck pain in girl physiotherapy students with the BMI category of normal weight (Table 2). The highest prevalence of gradual (53.84%) onset of pain was found among the girl students (Table 3). The maximum of length of time (56.41%) of neck trouble during last 12 month was found in 1-7 days (Table 4). The majority students (70.58%) did not have any medication for their neck pain during last 12 months (Table 5). The maximum frequency (55.88%) was found in 1-7 days time when neck trouble had prevented the girl students from doing their normal work during the last 12 (Table 6).

The total disability index of studied neck pain cases in girl physiotherapy students has been calculated as 533.91 which were 13.69%. When age-wise disability index of neck pain in girl physiotherapy students was studied, the younger students of age group 18-22 years had higher disability index (279.78; 14.11%) than their older counterparts (254.13; 13.32%). Khan *et al.* (2017) also reported that the younger physiotherapists had the higher frequency of neck pain than their older counterparts. Raouf *et al.* (2014) and Balakrishnan and Naib, 2010) also reported that younger physiotherapists had higher prevalence of work related neck pain. In fact, younger physiotherapists had less knowledge and training on actual ergonomic working principles. The limitation of the study was considering only the girl physiotherapists, also the small sample size. These would be taken care in future studies.

Conclusion

The prevalence of neck pain was found as 20.10% in girl physiotherapy students of Amritsar with the maximum prevalence in the BMI category of normal weight, gradual onset of pain in majority cases, maximum 1-7 days of time of neck trouble during last 12 month, with less medication for their neck pain during last one year, with 1-7 days time when neck trouble had prevented them from doing their normal work during the last one year, and the younger students had higher disability index than their older counterparts.

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