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The prevalence of low back pain in physiotherapy students

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Abstract

Background: Low back pain (LBP) is a major cause of disability and the most common work-related musculoskeletal disorder among physiotherapists. This study examined the prevalence of low back pain among students undergoing training to become physiotherapists.

Aim: To study the prevalence of low back pain in physiotherapy students.

Methodology: This study was conducted in VSPM'S college of physiotherapy. I identified 40 physiotherapy in the college who satisfied the inclusion and exclusion criteria.

Conclusion: After survey on physiotherapy students we found 80% of students were suffering from low back pain. We found positive association between the duration and the following activities done in past months.

Keywords: Low back pain, musculoskeletal disorder, physiotherapy

Introduction

Low back pain is a leading cause of disability and inability to work, and expected to attend upto 90% of people at some point in their lives ^[1]. Many studies have attempted to identify and evaluate the contribution of different demographic, physical, socio-economic and occupational factors to the development of spinal pain ^[2] Studies have demonstrated that physiotherapy have high prevalence of low back pain ^[3-7]. The activities of these professional are related to the development of this pain ^[3, 4, 7] It is estimated that low back pain events in this group occur as a consequences of work related injuries. Many physiotherapist report the onset of low back pain in undergraduate course. Infact physiotherapy students are potentially exposed to same low back pain as graduates, such as poor working postures and frequent manual handling activities, often undertaken in difficult environment and with variable training regarding personal safety. In order to evaluate the association between undergraduate physiotherapy study and low back pain. We developed a prevalence study of low back pain in physiotherapy students ^[5, 6].

Aim: To study the prevalence of low back pain in physiotherapy students.

Methodology: This study was conducted in VSPMS College of physiotherapy. I identified 40 physiotherapy in the college who satisfied the inclusion and exclusion criteria.

Inclusion Criteria: Only physiotherapy students were included.

Exclusion Criteria: History of trauma to back.

Procedure: He students were explained about the study in details and if they agree to participate in the study. The questionnaire was provided in the college premises. The questionnaire was asked in English and response was recorded accordingly.

Proforma

1. Sex: Female Male
2. Age: years
3. Height: cm
4. Weight: kg
5. Year level: 1 2 3 4
6. What year did you begin first year? _____
7. Please list your sporting history to date:

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Sport	Date began	Date ceased	Hours per week	Social or competitive
1.				
2.				
3.				
4.				
5.				
6.				

9. How would you rate your current level of fitness?
 Poor, Moderate, Good

10. Approximately how many hours have you spent on the following university activities \in the past month? *Do not include leisure activities.*

A) Sitting looking straight ahead most of the time
(Include lectures, tutorials and tutorials on clinical placement)

0	1-10	11-20	21-30	31-40	41-50	>50

B) Sitting looking down most of the time *(Include private study)*

0	1-10	11-20	21-30	31-40	41-50	>50

C) Practicing techniques on someone else
(Include practicals, tutorials and tutorials on clinic)

0	1-10	11-20	21-30	31-40	41-50	>50

D) Having techniques practiced on you
(Include practicals, tutorials and tutorials on clinic)

0	1-10	11-20	21-30	31-40	41-50	>50

E) Treating patients
(Include clinical placement, and work as a sports trainer/physio aide)*

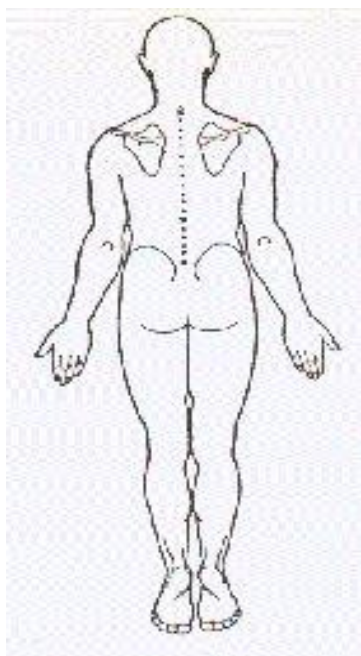
0	1-10	11-20	21-30	31-40	41-50	>50

*Specify clinical placement: _____

The purpose of this section is to collect information on back pain that is not related to pregnancy, menstrual periods or feverish illness such as the ‘flu.

For the following questions please refer to the diagram below. Please answer by putting a cross in the appropriate box – one cross for each question.

- Low back
- Upper back
- Neck



11. Have you ever had low back trouble (ache, pain or discomfort in the area specified, whether or not it extends from there to one or both legs)?

No *Thank you, you have completed this survey.*
 Yes *Continue with question 12.*

12. At the time of the initial onset, what was your age? ____

13. Can you relate the initial onset of low back trouble to a specific incident?

No Yes (Specify): _____

14. Have you ever had to take time off studies or employment for low back trouble?

No Yes

15. What is the total length of time that you have had low back trouble during the last 12 months?

0 days

1-7 days
8-30 days
More than 30 days, but not every day
Every day

Table A) Sitting looking straight ahead most of the time

Duration	Years			
	1ST	2ND	3 rd	4th
0hrs	0	0	0	0
1-10hrs	0	0	0	0
11-20hrs	1	1	0	2
21-30hrs	8	0	9	4
31-40hrs	1	9	1	4
41-50hrs	0	0	0	0
≥50hrs	0	0	0	0

Table B) Sitting looking down most of the time (Include private study)

Duration	Years			
	1st	2nd	3rd	4th
0hrs	0	0	0	0
1-10hrs	0	0	0	0
11-20hrs	0	0	0	0
21-30hrs	5	2	6	2
31-40hrs	5	5	4	7
41-50hrs	0	2	0	1
≥50hrs	0	1	0	0

Table C) Practicing techniques on someone else

Duration	Years			
	1st	2 nd	3rd	4th
0hrs	0	0	0	0
1-10hrs	5	0	3	2
11-20hrs	5	6	2	3
21-30hrs	0	2	4	1
31-40hrs	0	0	1	4
41-50hrs	0	1	0	0
≥50hrs	0	1	0	0

Table D) Having techniques practiced on you

Duration	Years			
	1st	2 nd	3rd	4th
0hrs	0	0	0	0
1-10hrs	7	2	8	3
11-20hrs	3	7	2	0
21-30hrs	0	1	0	6
31-40hrs	0	0	0	1
41-50hrs	0	0	0	0
≥50hrs	0	0	0	0

E) Treating patients

Duration	Years			
	1 st	2nd	3 rd	4th
0hr	0	0	0	0
1-10hrs	0	9	8	5
11-20hrs	0	1	2	2
21-30hrs	0	0	0	2
31-40hrs	0	0	0	0
41-50hrs	0	0	0	0
≥50hrs	0	0	0	1

Discussion

The project titled "Prevalence of low back pain in

physiotherapy students "showed 80% of students with low back pain. The study done by Mierzejewski M Kumar in 1997 showing prevalence of low back pain in among the physical therapist in Edmonton Canada. It is known fact that abnormal position adapted by the students during lectures, private studies in practical or in clinics and while treating patients possibly place stress on soft tissue like muscle, ligament make it very sensitive to minor strain initiating low back pain. The statistical analysis obtained from the study showed that the low back pain among the students of final year was more compare as compare to first, second, third year. The possible reason for this could be they spent more time treating patients in standing, bending and other abnormal posture as compare the students of second and third year while first year do not treat patients and second and third year students spent comparatively less time as compare to the final year for treating patients. Comparing the other position like: 1) Sitting looking ahead most of the time the first and second year students spent more along duration of time as compare to third and fourth year like when attending lectures. 2) Sitting looking down most of the time like while studying more students spent 31-40hrs/week. 3) Whereas while practicing technique on someone else and having technique practiced on you like practical's and tutorials and for mastering manual technique is also one of the reason for pain in the area treated because of inadequate experience and unexperienced hands of undergraduate students. 4) Treating patients, often final year are made to treat the patients more as compare to the second and third year because they carry one year of observation and two years of practice on manual therapy. Hence the time spent by them for treating patient is more as compare to second and third year students. Also the height of treatment bed, height of physiotherapist, weight of body part of patients leads to the abnormal positing of therapist for treatment of patients. The position obtained could be excessive bending, standing on the toes, and excessive extension of the spine, abnormal handling which targets the low back and hence could lead to the low back pain in these students.

Conclusion

After survey on physiotherapy students we found 80% of students were suffering from low back pain. We found positive association between the duration and the following activities done in past months. 1) Sitting looking ahead most of the time. 2) Sitting looking down most of the time. 3) Practicing technique on someone else. 4) Having technique practiced on you. 5) Treating patients. Height of treatment bed, height of therapist or while looking straight, looking down, practicing technique on someone else, having technique practiced on you, treating patient are important factor in producing low back pain to the students. Necessary ergonomics and suggestion should be given for prevention and to minimize future complication.

Ergonomics Advice

1) While standing don't bend your neck and body forward. 2) While sitting, don't sit without back rest, support your back and neck while sitting. 3) Don't bend forward and lift the object always bend yours knees and then lift the object. 4) Avoid reading books while lying. 5) The height of treatment bed should be at waist level. 6) While treating bulky patients use leverage to avoid unnecessary stress. 7) While studying for long time take frequent breaks and do stretching so as to avoid straining the spine. 8) Exercise should be included in daily schedule: a) Lumbar flexion extension exercises. b)

Hamstring stretching. c) Rectus femoris stretching. d) Stretching to abdominals and back muscles. E) Posture correction: while standing bear equal weight on both lower limbs.

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