Original Article

Daily travelling and low back pain in university students

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Objective: To find out the frequency of risk factors which cause low back pain in daily travelling younger population.

Methodology: A descriptive cross sectional survey was conducted from 10 November 2012 to 10 April 2013 and 315 students were recruited through non probability purposive sampling technique from different universities of Rawalpindi and Islamabad, Pakistan The data were recorded through a semi-structured questionnaire.

Result: 68.9% participants were female and 31.1% were male. 85.1% of subjects who reported low back pain were travelling in sitting position and14.9% were travelling in standing position. Low back pain was more common in those who traveled by bus (48.6%), 28.6% via van, 6.8% on motor bike and 1% on other type of vehicles (rickshaw or bicycle). 4.8% subjects felt pain at the start of the day, 31.1% perceived pain during travelling, and 38.1% felt pain at the end of the day and 26.0% had pain after travelling.

Conclusion: Majority of sufferers were females and majority travelled in sitting position. Majority of students travelled on bus and most of the felt pain at the end of day. It is recommended that awareness about the good posture during travelling should be created in university students. (Rawal Med J 2014;39: 25-27).

Keywords: Low back pain, travelling, sitting position.

INTRODUCTION

It is reported that almost 80% of the population have low back pain once in their lives.[1] This is not specific to some areas but is present in all cultures and ethnic groups at some time.[2] It is second after upper respiratory tract illness and only 14% have pain that persist more than two weeks.[3] The nature of low back pain varies according to the external or internal stimulus mechanism but it seriously affects the quality of social and working lives.[4]

It was observed that the percentage of persons having issues in capacity is always higher than the percentage of persons having issues in performance.[5] The Global Burden of Disease (GBD) 2010 estimated that this is one of top ten DALYs (Disability-adjusted life years) causes' disease or injuries.[6] Certain risk factors like heavy occupational work, depressive moods, obesity, repetitive work and heavy lifting can enhance the level of impairments or can cause the low back pain.[7,8] Specific physical and psychological demands of work can act as independent risk factors for low back pain.[9] It is also more prevalent in female gender, daily smokers, heavy job holders[10] and have indirect impact on the quality of life.[11] The relationship of travelling, chair support during travelling, travelling posture and low back pain is present and need to be precisely identified.[12]

The low back pain is associated with life style, driving motor vehicle and in commercial travelers[13] and has relationship with work body vibration during travelling.[14] The poor sitting posture while working or travelling can be the contributing factors for development of low back pain.[15] The purpose of this study was to determine the risk factors among university students associated with daily travelling and to create awareness about its prevention.

METHODOLOGY

A descriptive cross sectional survey was conducted from 10 November 2012 to 10 April 2013. A sample of 315 students was recruited through non probability purposive sampling technique from different universities of Rawalpindi and Islamabad, Pakistan. All university students of who travelled by bus, car or van and had low back pain were included in study. The data were recorded through a semi-structured questionnaire. The questions included distance of travelling, posture during travelling, type of vehicle, duration of journey and intensity of pain were asked and reported. The descriptive analysis of data was done using SPSS 17.

RESULTS

Out of 315 participants, 217 were female and 98 were male. 268 (85.1%) travelled in sitting position while 47 (14.9% travelled in standing position. 191(60%) students daily travel distance ranged from 11 to 30 km (Table 1).

Table 1. Distance travelled.

	Number	Percent
11-30km	191	60.6
31-50km	83	26.3
51-70km	21	6.7
71-90km	15	4.8
91-110km	5	1.6
Total	315	100.0

Most subjects travelled in bus and van (Table 2).
Fifteen (4.8%) subjects had pain at the start of the day, 98(31.1%) during travelling, 120 (38.1%) at the end of the day and 82(26.0%) subjects perceived pain after travelling.

Table 2. Vehicle for travel.

Mode	Number	Percent
Bus	153	48.6
Van	90	28.6
Car	53	16.8
Motorbike	16	5.1
Any other	3	1.0
Total	315	100.0

DISCUSSION

With increase of sedentary life style, low backache is getting common among adults as well as older people. It was observed in one study that the age of different students did not matter; the younger students carried approximately the same as the oldest one. This study also showed that the females were more likely to have low back pain as compared to males. Some studies emphasized sitting duration and reported that the increased sitting time had more constrain on low back.[16] There is little difference noted in gender and race.[17] The history of earlier onset of low back pain is associated with chronic low back pain in adults, implying that prevention in adolescence may have a positive impact in adulthood. Students of high schools have noted to have higher prevalence of low back pain.[18]

Studies on whole body vibration, as in travelling showed that the unnatural posture or bad posture during travelling or work frequently adopted in most of the workers can be the source of low back pain.[19] A descriptive study was conducted to rule out the whole body vibration and the posture demands for low back pain in truck drivers. The truck drivers were observed in their sitting posture, frequency of such postures (bending, twisting and leaning) through different techniques. It was concluded that such posture and other related activities were risk factors for developing of low back pain.[20]

The systemic review of different epidemiological evidence proposed that the whole body vibration had some link with low back pain. Biomechanical studies showed a resonance at 4–5 Hz. At the resonance the transmissibility exceeds 1.0, and is dependent on seat attenuation, posture and seat back inclination. Increased spinal loading is evidenced by increased muscle activity, muscle fatigue, muscular tightness and intra disc pressure, and by decreased static stature.[21]

CONCLUSION AND RECOMMENDATIONS

It is concluded that, majority of students were females and travelled in poor sitting posture. Majority of students travelled on bus and most of the students felt pain at the end of day. It is recommended that awareness should be created about posture in university students.

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