International Journal Dental and Medical Sciences Research
Volume 4, Issue 6, Nov-Dec 2022 pp 600-604 www.ijdmsrjournal.com ISSN: 2582-6018

Low Back Pain among undergraduate Medical Students in GMC Srinagar: a Cross-Sectional Study

1.Dr. Mufti Noumaan Hussainaie, 2.Dr. Marouf Aslam, 3.Dr. Shafaat Rashid, 4.Dr. Aiman Ahmad Wani,
MS, Department of orthopaedics, GMC Srinagar
MS, Department of orthopaedics, GMC Srinagar
MS, Assistant professor, Department of orthopaedics, GMC Srinagar
Post graduate scholar, Department of orthopaedics, GMC Srinagar

Submitted: 02-12-2022 Accepted: 12-12-2022

I. INTRODUCTION:

The lumbar area, below the costal border and above the gluteal fold, is where low back pain (LBP) or lumbago is felt. This pain or discomfort may or may not radiate to the thigh (1). LBP is a sensorial and emotional experience that could be trauma-related. Since many distinct factors (such as physiological, emotional, and cultural ones) might cause an individual to experience pain stimuli, this disorder is challenging to diagnose (2). It is difficult to explain and express this multifaceted experience or to quantify it in figures or measurable statistics because the complaints are subjective (3).

The clinical history of the patient and a physical examination are used to diagnose LBP, which is divided into three types:

1) LBP that may have a specific spine-related aetiology, 2) LBP that may have spinal stenosis, or 3) LBP without a known cause (4). Since the pain has a known aetiology (congenital, neoplastic, inflammatory, infectious, metabolic, traumatic, degenerative, or functional), the first two diagnoses have established etiologies. This pain affects less than 15% of the adult, adolescent, and paediatric populations (5). On the other hand, the cause of nonspecific LBP is unknown (6)

One of the most prevalent health issues, low back pain (LBP) can affect people of any age, including children and the elderly.(4)(5)Age, gender, obesity, psychosocial factors (stress, anxiety, and depression), level of education, occupational factors, decreased muscle flexibility and mobility, hypermobility, competitive sports, types and methods of carrying and transporting weight, postural habits, level of physical activity, smoking, and domestic factors like computer/videogame use are the main risk factors for LBP.(5)(6)LBP frequently starts in childhood, and the prevalence rate in adolescence is similar to that of adults. Epidemiological studies have revealed a rise in LBP in kids, teens, and young adults [3], but the prevalence rates across studies are highly variable [6]. Due to methodological heterogeneity in studies, including differences in sample age, sample size, definition of LBP, recall period, data extraction strategy, methodology, and challenges in obtaining accurate population estimates, it. According to certain researches [7–10], LBP is very common among medical students. Medical students may have a high prevalence of LBP due to the highly demanding curriculum during their training, which exposes them to stress, sedentary lifestyles, and long hours on hospital wards and clinics. Additionally, having LBP can have an impact on a medical student's performance, attendance at lectures and training, and ultimately, their career progression.

Participants and Methods:

Study Participants:

A cross-sectional study was conducted from October 2021 to December 2021 amongst medical students of GMC Srinagar. The purpose of the study and questionnaire's content were described to the students. 100 medical students were recruited for the purpose of the study.The following demographic information (age, gender, and place of residence), the prevalence of LBP (lifetime, 12-month, and point prevalence), chronic LBP, self-perceived triggers of LBP (stress at the university during the exam period, sitting at the university, uncomfortable mattress, and improper body posture), the impact of pain on daily functioning (sleeping, walking, and performing daily activities). A numerical rating scale from zero (no impact) to six was used to evaluate self-perceived LBP triggers and the effect of pain on daily functioning and mood (extremely strong impact).LBP was described as discomfort between the inferior border of the 12th rib and the inferior gluteal folds in students [3, 13]. The percentage of respondents who reported ever experiencing LBP at

International Journal Dental and Medical Sciences Research
Volume 4, Issue 6, Nov-Dec 2022 pp 600-604 www.ijdmsrjournal.com ISSN: 2582-6018

some point in their lives was used to calculate the lifetime prevalence. The point prevalence referred to the existence of LBP at the time the questionnaire was filled out, while the 12-month prevalence referred to the presence of LBP in the previous year (currently). For our purposes, LBP was considered chronic if it persisted for longer than 12 weeks.

Statistical Analysis:

Using the chi-square test and t-test, statistical differences between male and female students were examined. Statistics were judged significant at a p value of 0.05.

II. RESULTS:

Prevalence of low back pain:

The study's participants had an average age of 22.46 years (SD: 0.95), and 66.0% of them were female students. Out of 100 students who were investigated, 75.8% reported having LBP at some point in their lives, 60% in the past year, and 17% at the time of the study (Table 1). 12% reported having chronic LBP. While the point prevalence was similar in both groups, the lifetime and 12-month prevalence of LBP were considerably greater in female medical students than in male medical students

Table
Prevalence of low back pain among male and female medical students.

Characteristics	**All students (n=100) (%)**	**Males (n=34) (%)**	**Females (n=66) (%)**	**p value**
Age (x ± SD) (years)	22.46 ± 0.95	22.45 ± 1.02	22.46 ± 0.91	0.859
Lifetime prevalence of LBP Yes	76	66	80.9	0.001
12-month prevalence of LBP Yes	60	47	66	0.001
Point prevalence of LBP Yes	17	18	17	0.795
Chronic LBP Yes	12	10	14	0.232

Table 2:

Table 2:
Self-Perceived Subjective Triggers of LBP

Factors	**Males (n=34) (%)**	**Females (n=66) (%)**	**p value**
Weather conditions Small/moderate impact Strong/extremely strong impact	16 5	25 5	0.153
Mental stress during an exam period Small/moderate impact Strong/extremely strong	31 19	35 37	<0.001

impact			
Bad mattress Small/moderate impact Strong/extremely strong impact	36 25	33 28	0.862
Fatigue Small/moderate impact Strong/extremely strong impact	30 32	23 47	0.043
Lack of exercise Small/moderate impact Strong/extremely strong impact	20 28	21 45	<0.001
Improper body posture Small/moderate impact Strong/extremely strong impact	26 50	21 67	0.005

III. DISCUSSION:

The findings of our study showed that among GMC Srinagar medical students, the point prevalence of LBP was 17%, the 12-month prevalence was 59%, and the lifetime prevalence was 76%. The point prevalence is lower than the period prevalence, and both are lower than the lifetime prevalence, according to these results, which are in line with those of other research [1, 7, 14]. Study conducted at GMC Gujarat suggests that, students had a 12-month prevalence of LBP of 47.5% [11], Malaysian students had a prevalence of 46.1% [10], and Austrian medical students had a prevalence of 53.4% [12]. In a Brazilian study of medical and physiotherapy students, only medical students reported lifetime prevalence of LBP, 12-month prevalence of LBP, and point prevalence of LBP, with physiotherapy students reporting a higher prevalence of LBP than medical students in all measures [13].Although the point prevalence of LBP in our study was much greater than that in the Brazilian study, the lifetime and 12-month prevalence of LBP recorded in our study were comparable to those of the Brazilian study. Higher point prevalence in our study may be explained by the participation of fourth-year medical students who were undergoing clinical training, as well as the higher prevalence of LBP among older medical students who, as was previously indicated, are subjected to practical tasks.The Chinese study, which was also done among fourth-year medical students, found that the prevalence of LBP over the course of a year was 40.1%, with a point prevalence.While the point prevalence of LBP was comparable in both sexes—in fact, the rate was lower in female students—female medical students in our sample reported considerably higher 12-month and lifetime prevalence than did male students. Girls had greater lifetime LBP prevalence rates than males, according to research done among children and adolescents [14], hence it is assumed that this will be the case among female students.The most often cited self-perceived subjective triggers with strong/extremely strong impact on LBP occurrence in our study were improper body posture, lack of exercise.However, female medical students, in comparison with male students, significantly more often reported mental stress during an exam period, sitting at the university, fatigue, lack of exercise, and improper body posture as potential triggers for LBP.Taking into account that LBP is a multidimensional disorder, with physical, lifestyle, and psychosocial factors related to its development and maintenance [15-20], a possible explanation for these findings includes that female students, in comparison with males, are more emotionally sensitive and feel fatigued more easily.

Our study has a number of drawbacks. Due to the fact that the study's participants were fourth-year medical students undergoing clinical training, it was not possible to compare the results of students from all six study years. The poll should be expanded to include medical students from other colleges around the state since it has only been conducted at one college. Information bias is likely to be present because data about the experience of LBP, probable triggers were relied on self-reports. We did not gather information on BMI, smoking patterns, or physical activity, which future studies should consider.

IV. CONCLUSION

Students studying medicine in GMC Srinagar frequently experience LBP, which has a big impact on how they behave and function every day. Compared to male students, female students have a significantly higher 12-month and lifetime prevalence of LBP.

REFERENCES

[1]. Australian Institute of Health and Welfare 2016. Australia's health series no. 15. Cat. no. AUS 199. Canberra: AIHW, 2016

[2]. Hakala PT, Rimpela AH, Saarni LA, Salminen JJ. Frequent computer - related activities increase the risk of neck-shoulder and low back pain in adolescents. Eur J Public Health. 2006;16(5):536–541.

[3]. De Vitta A, Martinez MG, Piza NT, Simeão SFA, Ferreira NP. Prevalência e fatoresassociados à dorlombaremescolares. Cad SaúdePública. 2011;27(8):1520–1528.

[4]. Onofrio AC, da Silva MC, Domingues MR, Rombaldi AJ. Acute low back pain in high school adolescents in Southern Brazil prevalence and associated factors. Eur Spine J. 2012;21(7):1234–1240.

[5]. van Duijvenbode I, Jellema P, van Poppel M, van Tulder M. Lum-bar supports for prevention and treatment of low back pain. Cochrane Database Syst Rev 2008:CD001823

[6]. Norman GR, Streiner DL. Biostatitics:the bare essentials. St. Louis: Mosby; 1994.

[7]. Lemos AT, Santos FR, Moreira RB, Machado DT, Braga FC, Gaya AC. Low back pain and associated factors in children and adolescents in a private school in Southern Brazil. Cad SaudePublica. 2013;29(11):2177–2185.

[8]. Bejia I, Abid N, Ben Salem K, Letaief M, Younes M, Touzi M. Low back pain in a cohort of 622 Tunisian schoolchildren and adolescents an epidemiological study. Eur Spine J. 2005;14(4):331–336.

[9]. Sato T, Ito T, Hirano T, Morita O, Kikuchi R, Endo N. Low back pain in childhood and adolescence a cross-sectional study in Niigata City. Eur Spine J. 2008;17(11):1441–1447.

[10]. Silva MR, Badaró AF, Dall'Agnol MM. Low back pain in adolescent and associated factors A cross sectional study with schoolchildren. Braz J PhysTher. 2014;18(5):402–409.

[11]. Mohammad WS, El-Sais WM. Prevalence of non-specific self-reported back pain among adolescents at Hail Territory-Ksa. J Asian Sci Res. 2013;3(10):1036–1045.

[12]. Mohseni-Bandpei MA, Bagheri-Nesami M, Shayesteh-Azar M. Nonspecific low back pain in 5000 Iranian school-age children. J PediatrOrthop. 2007;27(2):126–129.

[13]. Poussa MS, Heliövaara MM, Seitsamo JT, Könönen MH, Hurmerinta KA, Nissinen MJ. Anthropometric measurements and growth as predictors of low-back pain a cohort study of children followed up from the age of 11 to 22 years. Eur Spine J. 2005;14(6):595–598.

[14]. Shan Z, Deng G, Li J, Li Y, Zhang Y, Zhao Q. Correlational analysis of neck/shoulder pain and low back pain with the use of digital products, physical activity and psychological status among adolescents in Shanghai. PLoS One. 2013;8(10)

[15]. Jacobs K, Baker NA. The association between children's computer use and musculoskeletal discomfort. Work. 2002;18(3):221–226.

[16]. Zapata AL, Moraes AJ, Leone C, Doria-Filho U, Silva CA. Pain and musculoskeletal pain syndromes related to computer and video game use in adolescents. Eur J Pediatr. 2006;165(6):408–414.

[17]. Diepenmaat AC, van der Wal MF, de Vet HC, Hirasing RA. Neck/shoulder, low back, and arm pain in relation to computer use, physical activity, stress, and depression among Dutch adolescents. Pediatrics. 2006;117(2):412–416.

[18]. Yao W, Luo C, Ai F, Chen Q. Risk factors for nonspecific low-back pain in Chinese adolescents a case-control study. Pain Med. 2012;13(5):658–664.
[19]. Setchell J, Costa N, Ferreira M, Makovey J, Nielsen M, Hodges P. Individuals' explanations for their persistent or recurrent low back pain: a cross-sectional survey. BMC MusculoskeletDisord 2017;18:466
[20]. Vlaeyen JW, Linton SJ. Fear-avoidance and its consequences in chronic musculoskeletal pain: a state of the art. Pain 2000;85:317–32