

FREQUENCY OF LOW BACK PAIN AMONG SCHOOL TEACHERS OF LAHORE, PAKISTAN

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ABSTRACT-Low back pain is a recurrent musculoskeletal complaint in school teachers. It is the pain in the lumbar region at the level of waist and it can also radiate to lower extremities. The pain may aggravate due to movement which may affect daily life activities. The aim of the study was to determine frequency of low back pain in school teachers of Lahore, Pakistan. The current study was an observational study. In this study, thousand school teachers participated. The data was collected using a self-administered Performa from different schools of Lahore, Pakistan including both government and private schools selected randomly. The data analysis was done by using SPSS 16 version. The frequency of low back pain determined was 288 (28.8%) as only 288 teachers reported back pain out of 1000 teachers. There were 98(34%) teachers who were suffering from pain for more than a year while the mean pain intensity was 5.12 which were determined using VAS scale. This study concluded mild frequency of low back pain in school teachers.

Index terms- Lower Back Pain, Back pain, Lumbar pain, teachers.

1. INTRODUCTION

Pain is known as the most occurring manifestation in individuals with MSK complaints for example low back pain.⁽¹⁾ The pain in the lumbar region at the level of waist is usually called Lower Back Pain. It may or may not be felt downwards from the waist to the buttock and even in one or both extremities. It is a common complain affecting a lot of people due to different reasons. Low back pain is familiar as a

significant health and social class complain reported in most of the countries. The pain may or may not aggravate with different movements for e.g. twisting, forward bending or raising a leg. If the pain starts to radiate down the leg it is called sciatica and in most cases it accompany the lower back pain due to impingement of Sciatic Nerve.

The causes of lower back pain are numerous and can be due to various underlying reasons most of them are accounted as strain or sprain. Usually it starts as

muscular pain which afterwards starts to affect other structures even joints and nerves and in some cases even spinal cord gets involved. Many studies have been conducted at both domestic and international levels by different organizations regarding the complaint of Lower Back Pain in school teachers. The results have shown a high prevalence of Lower Back Pain in teachers. The role of teacher is not only limited to teaching but also preparing lessons quizzes and assignments. The ratio of female teachers is notably increasing and the ratio of females with musculoskeletal.

According to a notable research, teachers are at a high risk of disorders related to musculoskeletal system with prevalence between 12% and 84%⁽²⁾ Teachers play a vital role in overall physical and mental health of students. Teaching may be the cause of depression sometimes which can affect the performance of a teacher. ⁽¹⁾The prevalence of low back pain disorder is positively related to female gender.^(3, 4)

Work-related tasks are widely considered to be a major cause of LBP among teachers. It is suggested that inappropriate postures, sitting for a long duration of time while teaching the students or delivering lectures ⁽⁵⁾, and uncomfortable furniture ⁽⁶⁾ are the major risk factors of low back pain among teachers.⁽⁷⁾

It is notable that there should be strategies made to prevent low back pain for the betterment of teacher's health and as well as for the betterment of quality of education given to students.⁽⁷⁾

Ghorbanali Mohammadi ⁽⁸⁾, conducted a study to estimate the prevalence of low back pain in Iran in 2017. The prevalence reported was 68.8%.

According to another study conducted in 2017 in India by P. Ponmathi et.al ⁽⁹⁾, the low back pain prevalence estimated was 28.8%. In 2017, another study was held by E. N. Zamri et.al ⁽¹⁰⁾ in Malasiya.

According to study, the prevalence of low back pain estimated was 48.0% in a sample of 1482 teachers.

In another study conducted in Jordan by Alia Alghwiri and Gregory Marchetti ⁽¹¹⁾, in 2016, the prevalence of low back pain estimated was 46% in

females and 36% in males. Rajan Balakrishnan et.al⁽¹²⁾,2016 estimated 62.5% low back pain in school teachers of Bentong, Pahang. In another study conducted by Erick and Smith⁽⁷⁾ which was conducted in Botswana in 2014. The prevalence of low back pain estimated in this study was 55.7%.

In another study conducted by P. Yue et.al⁽¹³⁾ in 2014 in China. The total sample taken was 500 and the prevalence rate determined was 49%.

The purpose of this study was to estimate the prevalence of low back pain in school teachers. Awareness of it can help to determine the factors which can help to minimize the risk of low back pain.

2. MATERIAL AND METHODS

The study design used in this study was cross-sectional. The total sample size participated in this study was 1000. The data was collected from different schools of Lahore including both government and private schools. Participants included in this study were both male and female staff, who was within the age of 20-60 and teachers with working experience of more than one year. While participants

excluded in this study were those having any fracture or dislocation, with any neurological disorders, any metabolic disorder causing back pain, any recent surgery/operation, arthritis, pregnant ladies, any history of cardiac diseases. Questionnaires were distributed among 1000 teachers of different primary and secondary schools of Lahore. Self-made questionnaires were used which include information regarding their demographic details. VAS scale was added in the questionnaire to check the intensity of pain. After collecting and entering data, data was transferred to SPSS version 16. Pie charts were made of gender and marital status while for other qualitative data bar charts were made and frequency was calculated. For quantitative data, histograms were formed and mean \pm S.D were calculated.

3. RESULTS

There were total 1000 respondents who participated in this study. Out of 1000, 288(28.8%) suffered from low back pain.

Out of 1000 respondents, 246(24.6%) were male and 754(75.4%) were female while 476(47.6%)

respondents were single and 524(52.4%) were married. Teachers who were teaching academic subjects were 770(77.0%), 184(18.4%) were physical education teachers while 46(4.6%) taught music. (Table 1)

TABLE 1: DESCRIPTIVE STATISTICS OF QUALITATIVE VARIABLES

VARIABLES		FREQUENCY	PERCENTAGE
Sex	Male	246	24.6%
	Female	754	75.4%
Marital Status	Single	476	47.6%
	Married	524	52.4%
Subjects Teaching	Academic	770	77.0%
	Physical Education	184	18.4%
	Music	46	4.6%

The ages of participants of this study ranged between 20-59 years. The mean age of the respondents was 30.86years \pm 7.499 years. The minimum age was 20 and the maximum age was 60 years. (Table-2)

TABLE-2: DESCRIPTIVE STATISTICS FOR AGE

Variable	Mean \pm	Minimum	Maximum
Age	30.86years \pm 7.499years	20years	59years

Variable	standard deviation	Minimum	Maximum
Age	30.86years \pm 7.499years	20years	59years

The intensity of pain ranged between 1-10. The mean pain intensity of respondents estimated was 5.12 \pm 2.194 while the minimum pain intensity was 1 and maximum was 10. (Table-3)

TABLE-3: DESCRIPTIVE STATISTICS OF PAIN INTENSITY

Variable	Mean \pm standard deviation	Minimum	Maximum
Pain intensity	5.12 \pm 2.194	1	10

4. DISCUSSION

The study revealed some information about the occurrence of Lower Back Pain in school teachers. Out of 1000 teachers, 288(28.8%) experienced variable degrees of Lower Back Pain. In a recent study conducted by some senior fellows in twin cities (Rawalpindi & Islamabad) a total of 44.4% of the

teachers were being affected by the LBP. Other studies conducted in Amhara Region, Ethiopia indicated 57% low back pain while six different studies in general population of Africa ranged from 28% to 74%^(14, 15). The global review published in 2000 of LBP point frequency in adults was 12–33% and 1-year frequency 22–65%. However, it was higher than the studies conducted in Klang Valley, Malaysia (40.4%), Salvador, Bahia, Brazil (41.1%) and Shanghai, People's Republic of China (40%)⁽¹⁶⁻¹⁹⁾. This research has included both the genders and every age group from different institutions in Lahore to give comprehensive results on the incidence of LBP in school teachers. According to this study, the school teachers affected by low back pain were 28.8% while in a recent study done by Ponmathiet. al in 2017 in Chennai(India)⁽⁹⁾, the frequency of low back pain in school teachers estimated was 28.8% which is similar to this study. Another study conducted in Iran, in 2014 also showed a low prevalence of low back pain reported as 21.8% to 36.5%. . The similarity in the study can be due to the same environmental

conditions as well as approximately same educational system as they both are neighboring countries. The difference in the number of people who are being affected by LBP can be due to the facilities provided to the teachers by the institution. The work load, sitting habits and the type of job also can also be a major factor.

5. CONCLUSION

This study concluded mild frequency of low back pain in school teachers of both primary and secondary school teachers. The frequency of low back pain estimated was 28.8%.

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