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Research Article

**PREVALENCE AND RISK FACTORS FOR LOW BACK PAIN
IN YOUNG ADULTS: A CROSS SECTIONAL STUDY**¹Dr. Ali Umair, ²Dr. Amara Sarwar, ³Dr. Zaid Aslam^{1,2,3}MBBS; Mohi-ud-Din Islamic Medical college Mirpur AJK, Pakistan.**Article Received:** January 2020 **Accepted:** February 2020 **Published:** March 2020**Abstract:**

Almost 60-80% of adults must face low back pain once in their life period [1]. A study conducted by Andersson has stated that there is 15% incidence of low back pain in adults globally and the point prevalence is 30% [2]. Another study has reported that minimum 50% adults will have an episode of LBP. Literature has reported that the most common reason to visit a physician is LBP which equally affect both genders men and women [3]. Many studies have reported that a very common problem residing among adults is low back pain which has the highest incidence in the third decade of life. [4] A reason stated by some authors is LBP in adults and children may happen because of high physical activity and growth spurts. A study has concluded that LBP is prevalent in subjects with a positive family history in parents or siblings [25]. Similar to this, our study also showed a statistically significant correlation between a positive family history and LBP. Similarly there is positive correlation between sports and other physical activity and low back pain many studies have demonstrated that participants having different types of sport activities have shown no incidence low back pain.

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INTRODUCTION:

Almost 60-80% of adults must face low back pain once in their life period [1]. A study conducted by Andersson has stated that there is 15% incidence of low back pain in adults globally and the point prevalence is 30% [2]. Another study has reported that minimum 50% adults will have an episode of LBP. Literature has reported that the most common reason to visit a physician is LBP which equally affect both genders men and women [3]. Many studies have reported that a very common problem residing among adults is low back pain which has the highest incidence in the third decade of life. [4] A reason stated by some authors is LBP in adults and children may happen because of high physical activity and growth spurts. [5]. In opposing to this statement, Faibank et al observed that students who were having low back pain were mostly avoiders of sports activities as compared to those who were in sports activities [6]. Adults who have experienced lbp at the age of 14 years are more prone to have higher incidence 25 years later as compared those who never had experienced lbp at the age of 14 years [7, 8]. However, by limiting and avoiding the LBP in early adolescence can stop aggravating the lbp, and therefore eventually it would reduce the associated morbidities. And to avoid the risk factors of low back pain it is important to rule out the modifiable and non-modifiable risk factors. Studies have reported that higher body mass index is linked with an increased risk of lbp incidence. [9] Moreover a study conducted by web et al has showed that hereditary has essential role in the existence of low back pain and a positive family history has strong association with the incidence of LBP incidence [10]. Risk factors are not limited to physical factors there are many other factors such as anxiety, stress, depression, and other possible risk factors of LBP [11-14]. These are the aggravating factors in the progression of the lbp from an acute episode to the chronic problem.

Although various studies in the literature have examined the incidence, prevalence, and risk factors for LBP in young adults, there is a paucity of data regarding this topic in young adults. Given this gap in the literature, we conducted a cross-sectional study that aimed to evaluate the prevalence of LBP and the various risk factors for LBP in young adult.

MATERIALS AND METHODS:

A total of 135 young adults aged between 18 and 35 years were enrolled. A detailed questionnaire collected data regarding the participant's sociodemographic profiles assessed. Anthropometric measurements, including height and weight, were measured, and BMI was calculated. Pain was assigned a score of 0–100. After obtaining ethical permission, all subjects

were requested to complete the questionnaire in the presence of an investigator. Informed verbal consent was obtained from all study participants. The data were analyzed using the SPSS version 20. Percentages and proportions were calculated. The chi-square test was used for categorical variables. For categorical variables chi-square was used.

RESULTS:

Out of 135 included subjects, 74 (54.7%) were males and 64 (45.3%) were females. Maximum of the participants (90.6%) were aged 21–30 years (mean, 24.49 years; range, 18–35 years).

Almost 9.7% of the subjects belonged to the upper class, 75.8% belonged to the middle, and 14.5% belonged to the lower class. 10.2% were smokers whereas 64% reported coffee intake occasionally whereas 26% reported regular use of coffee.

Out of 135 15.6% were married and 84.6% were unmarried. We found that LBP is precipitated by studying for >5 hours on an average. Scores of 10 were considered to be significant; 94.1% had scores of Results indicated that the following factors were associated with LBP in young adults: marital status, previous history of spine problems, strenuous exercise, satisfaction in current employment position, monotony, stress, number of daily study hours, and family history of spine problems. Satisfaction with current employment position, monotony, stress, and family history of spine problems were identified as significant predictors of LBP. In contrast, age, sex, smoking, coffee intake, mode and duration of travel, diet, frequency of weightlifting, wearing heels, studying posture, and frequency and type of sports activities were not associated with LBP.

DISCUSSION:

Literature has reported that low back pain is one of the most common reasons of the health care visit which is the major cause of the work absences in many countries of the world. LBP is more prevalent in the developing countries. It is more significant in the third decade of life [15]. Occurrence of low back pain at very early age would result in the progression of the disease consequently it can turn into chronic low back pain which reduces the quality of life.

This current study included 135 young adults, to evaluate the prevalence of low back pain but also analyzed its potential risk factors. Recommendations are provided to prevent the modifiable risk factors with which one can expect a reduction in LBP incidence and prevalence. A study conducted by Hestbaek et al. concluded that the prevalence of lbp in young adults is 32.4% as observed in the same study [16]. Moreover the

results of other authors Linton *et al.* and Thomas *et al.* which indicate that there is comparatively higher incidence of chronic low back pain in females as compared to males [17]. Hoy *et al.* conducted a meta-analysis and revealed that there is high prevalence and incidence of low back pain in smokers as compared to non-smokers moreover the intensity of pain is stronger in adolescents as compared to adults [18]. Currie *et al.* had stated no link between coffee intake and low back pain. Many other studies have suggested that the occurrence of low back pain has stronger association with BMI [19]. The current study has showed no remarkable association between BMI and LBP development.

Static muscle load and flexion of the lumbar spine have been postulated as risk factors for LBP development; thus, prolonged sitting or sitting in an abnormal posture can aggravate LBP [20]. Psychosocial factors are essential in the development of LBP.

Nuwayhid *et al.* [21] showed that there was no correlation between LBP and job dissatisfaction, whereas other authors [22] demonstrated a significant impact of job dissatisfaction on LBP. Moreover, dissatisfaction with one's job or position can lead to the progression of acute LBP to chronic LBP [23]. In our study, LBP prevalence was significantly higher in the dissatisfied group. Stress had a statistically significant correlation with LBP. Previous research revealed LBP recurrence, which can eventually become chronic [24]. In this study, 3% of subjects had at least one LBP recurrence in the past year.

A study has concluded that LBP is prevalent in subjects with a positive family history in parents or siblings [25]. Similar to this, our study also showed a statistically significant correlation between a positive family history and LBP. Similarly there is positive correlation between sports and other physical activity and low back pain many studies have demonstrated that participants having different types of sport activities have shown no incidence low back pain [26 27 28].

Similarly, our study did not find a significant correlation between LBP and frequency of wearing heels or weightlifting. Some studies demonstrated that socioeconomic status has an inverse association with LBP; however, we did not find any significant association between these two factors [29]. This study identified family history as a non-modifiable risk factor, and the number of study hours, marital status, previous history of spine problems, strenuous exercise, job satisfaction, monotony, and stress as modifiable risk factors for LBP in a young population.

Satisfaction of one's current position, family history of spine problems, stress, and monotony appeared to be the major contributing factors for LBP development in young adults, as indicated by logistic regression analysis. Lifestyle modifications such as adequate rest, relaxation, and recreation can reduce and modify stress and monotony, thereby preventing LBP development [30]. The study also identified various modifiable and non-modifiable risk factors for LBP in young adults. Identification of these risk factors at an early stage will prevent the progression of acute LBP to chronic LBP. As chronic LBP has the potential to curb individual quality of life and increase economic burden, creating awareness about the modifiable risk factors in young adult populations may lead to lifestyle modifications, thereby improving their quality of life and increasing productivity.

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