



## Original Article

## Prevalence of Migraine and its Association with Neck Pain Among Students of the University of Lahore

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## ABSTRACT

Headaches have been associated with a certain collection of mental difficulties, including sadness, anxiety, worries, and frenzied issues. If untreated, cranial discomfort and atypical headache attacks may cause nervousness and sorrow due to the victim's sense of helplessness brought on by the pain's irrationality **Objective:** To find out the prevalence of migraine attacks and its association with neck pain among students of the University of Lahore **Methods:** Data was collected from 217 students of The The University of Lahore, having migraine and neck pain by using questionnaire of Neck Disability Index and Numerical Pain rating scale for Migraine. The permission was taken from institute and the questions were asked after obtaining consent of student **Results:** Age distribution among students was 20.88±1.644 years with minimum age of 19yrs and maximum 25 yrs. Out of 217, males with the percentage 28.6 % and 71.4 % females. Students with no migraine were 17.1%, mild migraine were 36.9%, moderate migraine were 27.6% and severe migraine were 18.4%. Out of 217, 7(3.2%) had no neck pain, 6(2.8%) had mild neck pain, 115(53.0%) had moderate neck pain, 74(34.1%) had severe neck pain and 10(4.6%) had very severe neck pain **Conclusion:** An association between migraine attacks and neck pain was observed.

## INTRODUCTION

Migraine and headaches have become frequent in recent times. Unease may be caused by the anguish that comes from atypical headache attacks, and depression may result [1,2]. Word 'headache', defined as attacks occurring less than 15 days of the month, may develop into persistent headache, defined as attacks occurring more than 15 days of the month. Attacks connected to persistent headaches satisfy the criteria for headaches without aura according to The International Classification of Headache Disorders-2 (ICHD-2) [3]. The pattern of headache is characterized by excruciating attacks, including migraine, separated by pain-free intervals known as interictal intervals. Even though there is no anguish during the interictal intervals

between attacks, there are still negative effects. Some sufferers grow anxious during these aggravation-free intervals, fully anticipating the next migraine [4,5]. These attacks may be triggered by declining converges of endogenous estrogen before menses or withdrawal of exogenous estrogen while using hormonal contraception. They are described as being of longer duration, more severe, and more difficult to treat than non-feminine migraines. Around half of female migraineurs have headaches related with feminine cycle, with 1.7-2.5-overlap expansion in headache risk during the period - 2 to +3 days comparative with the beginning of menses [6]. Headaches' etiology is not fully understood. The focused

sensory system logically initiates headache attacks, even if the aggravation during a headache assault arises from initiating afferent neurons that innervate the cerebral vasculature. Cortical spreading depression may be the cause of, for example, the adverse effects of the headache quality [7]. With an estimated point prevalence of 5.9-22.2% and a 1-year cumulative incidence of 14.6-17.9% in adults, neck pain may be one of the most common outer muscle problems. Although there are many recognized specific causes of neck pain (such as a herniated disc, a rheumatic infection), the majority of neck pain episodes have a mysterious origin and are typically described as vague neck ache [8,9]. The condition put out by Acheson and Jonsson has the following temporary meaning: Acute neck pain can cause 0-3 weeks of discomfort or perhaps disability. Sub-intense neck pain causes 4 to 12 weeks of suffering as well as disability. ongoing neck pain that has lasted for more than a year, resulting in both disability and agony. Patients seeking assistance after roughly a month of not seeking care or being placed on disability leave after at least a month of employment are examples of intermittent difficulties [10]. Explicit back analysis and prior debilitated leave due to back problems increased the chance for short- and long-term wiped-out leave; self-revealed pain and movement restrictions increased the chance for debilitated pass on and handicap benefits due to back and neck pain; and heavy actual responsibility, bowed or curved working position, and low work fulfilment increased the risk for both short- and long-term wiped-out leave [11]. Most cases of vague neck pain are addressed by a wide range of professionals with important consideration, and the most frequently used treatments are the "pensive" method, referral to physiotherapy, and referral to spinal control therapy [12]. In the traditional remedial classification of manual treatment, several systems are coordinated at the outer muscle tissues to alleviate mechanical pain [13]. The first subcategory includes manual foothold, control, and assembly. The second group comprises both core delicate tissue treatments like trigger point therapy, shiatsu, and pressure point massage as well as summed up delicate tissue treatments like the various types of back rubs. We used the various therapy categories of control, activation, manual footing, back rubs, and strain treatments for this audit [14]. The notion of segmenting headache patients into smaller groups in order to study organic and hereditary portrayal, characterize intriguing aggregates, improve headache visualization, and advance toward more successful treatment concepts is still up for discussion [15-18]. The existence of neck discomfort has received special attention among the concurrent and comorbid disorders and side effects found in headache patients. Neck pain has been identified as a common side

effect displayed by headache sufferers during attacks, before to attacks, and even in between attacks. Despite the lack of evidence for causal cervical spine neurotic disorders, 91% of patients with self-reported neck discomfort also experience headache attacks (categorized as a headache or probable headache) [19-23]. The goal of this study was to determine whether neck pain increases the risk of headache chronicity and whether neck pain-related impairments increase with increased frequency of headache attacks. Since headaches are a major cause of work absence and disability, they have a crippling effect on physical, social, and occupational tasks. These deficiencies lower personal happiness. Consciousness of neck pain as a common associated component of headache may influence patients' perspectives on medical service cycles and outcomes and aid in demonstrating accuracy while positively influencing treatment duration.

**METHODS**

Data was collected from 217 students of The University of Lahore, having migraine and neck pain. Data was collected by using questionnaire of Neck Disability Index and Numerical Pain rating scale for Migraine. The permission was taken from institute and the questions was asked from students after consent of student.

**RESULTS**

Students with no migraine were 17.1%, mild migraine were 36.9%, moderate migraine were 27.6% and severe migraine were 18.4% (Table 1).

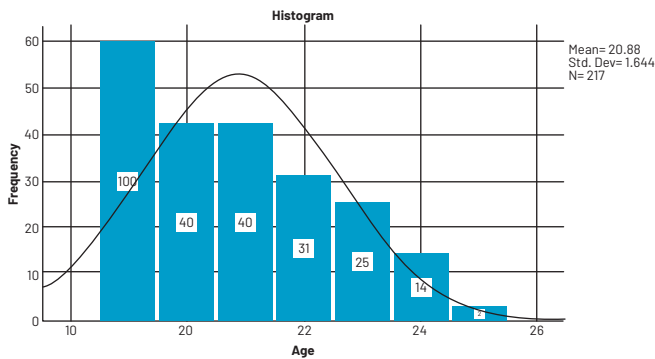
N	Frequency	Percent
No Migraine	37	17.1
Mild Migraine	80	36.9
Moderate Migraine	60	27.6
Severe Migraine	40	18.4

**Table 1:** Descriptive statistics for Pain-NPRS (Migraine)

N	Frequency	Percent
No Neck Pain	7	3.2
Mild Neck Pain	6	2.8
Moderate Neck Pain	115	53.0
Severe Neck Pain	74	34.1
Very Severe Neck Pain	10	4.6

**Table 2:** Descriptive statistics for Neck disability index-NDI

Out of 217, 7(3.2%) have no neck pain, 6(2.8%) have mild neck pain, 115(53.0%) have moderate neck pain, 74(34.1%) have severe neck pain and 10(4.6%) have very severe neck pain (Table 2). Age distribution among students was 20.88±1.644 with minimum age of 19yrs and maximum 25 yrs (Figure 1).



**Figure 1:** Graphical representation of age

## DISCUSSION

According to current study, Age distribution among students was  $20.88 \pm 1.644$  with minimum age of 19yrs and maximum 25 yrs. The gender distribution of students was as follows; males with the percentage 28.6 % and percentage of 71.4 % came out to be females. Students with no migraine were 17.1%, mild migraine were 36.9%, moderate migraine were 27.6% and severe migraine were 18.4%. According to a prior review, Zhe Yu et al. conducted a review in 2019 to examine the potential factors associated with EM neck pain and determine whether there were differences in peri cranial muscle delicacy between EM with and without neck pain. Enlisted personnel were given a headache incapacity score and a neck incapacity file. All patients' cranio-cervical muscle delicacy scores and mechanical torment edge were evaluated during the headache-free interval. Between EM with and without neck pain, there were no significant differences in migraine force ( $p=0.44$ ), headache impairment ( $p=0.71$ ), length ( $p=0.44$ ), or recurrence ( $p=0.85$ ). When compared to EM without neck pain, those who had it scored higher on both the cephalic and neck delicacy scales ( $p=0.01$ ) [15]. According to the most recent evaluation, the percentage of students who are currently unbothered is 55 (25.3%), followed by those who are experiencing moderately intense anguish (39.0%), moderate torment (39.0%), truly extreme torment (25.1%), and serious torment (27.0%). (12.4%). 42 (19.4%) students can frequently take care of themselves without it adding to their stress, whereas 51 (23.5%) students can do so without it adding to their stress. There were 27 (12.4%) students who could take care of themselves, but they were cautious and slow. 28 (12.9%) require assistance frequently in many aspects of self-care, whereas 37 (17.1%) require some support but are able to manage the majority of their own affairs. 32 (14.7%) refuse to get dressed, wash their clothes with difficulty, and stay in bed. As in the previous review, Zenkevich AS et al. led a new review in 2016 to examine neck pain in patients with headache to identify potential comorbidity factors of these diseases. 50 people in total, including 9 men and 41 women,

were identified as having headaches for the review. 50 headache patients received information regarding the occurrence of neck side effects throughout various times of their assaults. Only 10.9 % of the patients reported having neck pain start at a different time than their headache or migraine, compared to the 89.1% of patients who said their cerebral discomfort and neck pain started and ended simultaneously (30 min before cerebral pain, 2 h previously or later than migraine and 12 h later than migraine). Based on our analysis, we have concluded that neck pain begins concurrently with headache attacks and may be necessary for headache to follow similarly [16]. According to a recent study, 33 (15.2%) students can lift heavy objects without experiencing further discomfort, 24 (11.1%) can lift heavy objects, but doing so causes further discomfort, 35 (16.1%) can do so without experiencing further discomfort, 29 (13.4%) can do so without experiencing further discomfort when lifting heavy objects, and 41 (18.9%) can lift exceptionally light objects. 34 (15.7%) students had the freedom to read as much as they wanted without experiencing any severe inconvenience. 23 (10.6%) students had the opportunity to read as much as they wanted despite experiencing some neck pain. 25 (11.5%) people with moderate pain can read as much as they need, 38 (17.5%) people with moderate pain can't read as much as they need, and 49 (22.6%) people with terrible pain can barely read at all. By all accounts, none of the 18 (8.3%) undergraduates had any form of brain pain. 9 (4.1%) people suffer infrequent, mild migraines. A mild migraine affects 13 (6.0%) people occasionally, a moderate brain pain affects 17 (7.5%) people frequently, and a severe cerebral pain affects 10 (4.6%) people frequently. According to a previous evaluation, Christian Lampl et al. directed an investigation in 2015 to determine whether neck pain (NP) is a prodromal headache side effect or if it is related to the headache attack. Information was evaluated from 487 people who suffer from wordy migraines (73.1% females; 77% had headache without quality). 338 patients (69.4%) disclosed NP at any point while experiencing a headache. 36 patients (bunch C; 7.4%) experienced NP between two and forty-eight hours prior to the cerebral pain stage, while 118 patients (bunch B; 24.2%) revealed NP within two hours before the migraine stage and 184 patients (bunch A; 54.4%) experienced NP at the start of the migraine stage. In bunch B, we discovered a significant amount of typical headache-related side effects, and in 82.2% of cases, NP proceeded into the relief of cerebral discomfort. These facts show that NP is a very common component of headache attacks and is therefore likely to be more significant for the attack itself than a prodromal headache side effect [17]. 34 (15.7%) had no trouble concentrating fully when studying, 36 (16.6%) people could

fully concentrate, when necessary, with some difficulty, 35 (16.1%) had a decent amount of difficulty focusing, 25 (11.5%) had a ton of difficulty concentrating, and 35 (16.1%) had a lot of difficulty concentrating. 25 (11.5%) students could complete any amount of work they need to, 15 (or 6.9%) could complete basic tasks, but not more, 16 (7.4%) could perform the majority of routine work but not more, 11 (5.1%) and 14 (6.5%) both struggled to complete even the most basic tasks. 47 (21.7%) students could operate a vehicle with barely any neck pain, 39 (18%) could do so for as long as they need with only a little discomfort, 33 (15.2%) could do so for as long as they need with moderate discomfort, 37 (17.1%) could not operate a vehicle for as long as they need due to moderate discomfort, and 26 (12%) could hardly operate a vehicle at all because of severe discomfort. 35 (16%) had no trouble falling asleep, 33 (15%) were little disturbed while they rest, 39 were somewhat disturbed while they rest, 30 were decently disturbed while they rest, and 37 were tremendously disturbed while they rest. While 27 (12.4%) were unable to engage in any form of entertainment activity, and 26 (12.0%) had the option to engage in all amusement activities with some neck discomfort, 43 (19.8%) had the opportunity to engage in all diversion activities without even the slightest amount of neck pain. Due to pain in their necks, 41 people (18.9%) were able to participate in the vast majority of common recreational activities, and 37 people (17.1%) were willing to partake in a few of these activities. Out of 217, 7 (3.2%) had no neck pain, 6 (2.8%) had mild neck pain, 115 (53.0%) had moderate neck pain, 74 (34.1%) had intense neck pain, and 10 (4.6%) had really severe neck pain. p value was less than 0.05, therefore we reject the unfounded hypothesis and accept the favoured hypothesis. As a result, it was stated that there is a relationship between migraine attacks and neck pain.

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