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Prevalence Of The Cervicogenic Headache Among College Students

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ABSTRACT

Background: Unilateral headache, indications of neck involvement, prolonged awkward head posture, and worsening with neck movement are the hallmarks of cervicogenic headache (CEH), a secondary headache. Cervicogenic headaches can be brought on by excessive neck strain, degenerative diseases such osteoarthritis, a prolapsed disc in the neck, or a whiplash accident. The college students of today spends a lot of time on their smartphones. The neck disability score, headache, and pain severity all showed a substantial positive connection with one another, indicating a clear link between neck pain and prolonged smartphone use. Physiotherapy management was the first line of treatment for cervicogenic headaches.

Objective: The goal was to determine how common cervicogenic headaches were in the college students demographic. **Methodology:** observational and non-experimental.

Outcome measure: Headache disability index.

Procedure: The questionnaires were sent and collected, graded, and statistics were generated after the subjects were chosen based on the inclusion criteria.

Result: This Prevalence study show that 60%of them was not affected and 30% of them with mild and 3% and 2% of them with moderate and severe respectively.SD=14.6303.

Conclusion: According to the study's findings, cervicogenic headaches were common and prone among young people. They may be brought on by prolonged neck flexion from studying or by the strain that using a phone or laptop puts on the cervical region. Cervicogenic headaches can be avoided or controlled with the aid of cervical rotation (self-mobilization) and strengthening exercises, such as deep neck flexors.

Keywords: *Cervicogenic Headache, college students, Prevalence, headache disability index*

1. INTRODUCTION

Single-sided headaches with signs and symptoms of neck involvement were known as cervicogenic headaches. The majority of cases of cervicogenic headache (CEH) are misdiagnosed or confused with other headache conditions (Prevalence of Cervicogenic Headache Among Young Population International Journal of Research-GRANTHAALAYAH 15). The International Headache Society (IHS) provides the CEH diagnosis, which has changed throughout time. Cervicogenic headaches are defined by the International Classification of Headache Disorders (ICHD BETA 3) as "headaches caused by disorders of the cervical spine and its component bony, disc, and/or soft tissue elements, usually but not always accompanied by neck pain." Siavoshi and Blumenfeld (2018).

Sjaastad et al. presented the criteria for diagnosing CEH in 1990, and they revised them in 1998. Van and associates (2003). The International Headache Society classifies headaches. An extensive taxonomy of headaches with diagnostic criteria for headache disorders may be found in the third edition of the International taxonomy of Headache Disorders (ICHD). Primary, secondary, painful cranial neuropathies, and various facial pains were the categories into which they have divided headaches.

Primary headaches, such as tension headaches and migraines, were those that were not brought on by underlying medical conditions or structural issues. According to Cephalalgia (2018), the secondary headaches may be signs of an underlying illness or structural issues. Hence cervicogenic headache was an example of a secondary headache because in this case the main disorder is dysfunction within the cervical structures which is upper cervical segments. Bogduk and Govind (2009).

Depending on the diagnostic criteria used, the prevalence of CEH varies significantly. Using the six affirmative criteria of the Cervicogenic Headache International Study Group (CHISG), a Portuguese epidemiological survey of the general population revealed a prevalence of 1% in headache sufferers. When only five criteria were applied, the prevalence rose to 4.6%[5].Using the CHISG criteria, a population-based survey conducted in Norway discovered a 4.1% prevalence of CEH.

According to the International Headache Society's criteria, the prevalence of CEH in the general Danish population was 2.5%, and it rose among those who experienced headaches often[9]. In a clinic group, CEH was not linked to migraine [9]. The prevalence rates among headache center patients range greatly, from 0.4% to 80% [10-12]. The disparities in prevalence are most likely the result of various study designs and demographics. The many classifications also reflect the difficulty in recognizing and categorizing CEH [1-3].

The aim of study was to study the number of peoples who had cervicogenic headache among college students.Due to ambiguous and inconsistent terminology, cervicogenic headache was frequently misdiagnosed and treated insufficiently. It was sometimes confused with other main headaches, such as migraine and tension type headache. Studies on the prevalence of cervicogenic headaches in South India are non-existent. Although there was a growing body of research on CEH diagnosis and therapy, there was a lack of epidemiological data. According to research conducted on students, those who use smartphones for extended periods of time frequently get headaches, which may be caused by cervical issues or other headache types.

2. METHODOLOGY

The study design was Non-experimental study and study type was observational study.

The samples was collected at MGMCRI medical college. The samples size was 50 and sampling method was convenient sampling method. The study was conducted in MGMCRI campus among college students of school of physiotherapy. The headache disability index were distributed and collected and the samples were selected according to inclusion criteria and exclusion criteria which was mentioned below.

The inclusion criteria were **p**opulation aged 18-24 years who are college students, both men and women included, subjects who experience frequent headaches, subjects who spend excess amount of time using computers/laptops/phones. (more than 5 hours) and the exclusion criteria were recent fracture at the neck region, Individuals who are not willing to participate, recent surgeries related to neck region ,Congenital conditions of cervical spine, People who all having structural deformity.

Procedure: A pre-tested questionnaire (headache disability index) that asked about lifestyle choices, medical history, and demographic traits was used to gather data. The technique was standardized.

We met college students and explained the procedure of this study. After receiving the consent form and demographic details from 50 participants, they were requested to fill the headache disability index.

Headache disability index: The Henry Ford Hospital Headache Disability Inventory/Index (HDI) was created to measure how headaches affect day-to-day functioning. Based on the case history responses of individuals who suffer from headaches, a 25-item headache questionnaire was created. It was then divided into functional and emotional subscales to evaluate how headaches and their treatment affect day-to-day functioning. The Headache Disability Inventory/Index was created by Ramadan NM, Dr. Jacobson GP, and associates.

3. DATA ANALYSIS AND RESULT

Demographics:

The survey received responses from 50 participants. They ranged in age from 18 to 24 years old, and their ages weren't distributed evenly. In that 25 respondents (50%) were male, and the remaining 25 respondents (50%) were female.

The result shows that

TABLE 1: SHOWS THAT AGE DISTRIBUTION AND GENDER AFFECTED

AGE	NO. OF. PARTICIPATION	NO.OF AFFECTED	GENDER AFFECTED		MEAN	S.D
			M	F		
18 - 20	17	6	1	5	21.78	1.99
21 - 24	33	14	5	9		

GRAPH 1: shows the number of participants, standard deviation and mean of age distribution and gender affected

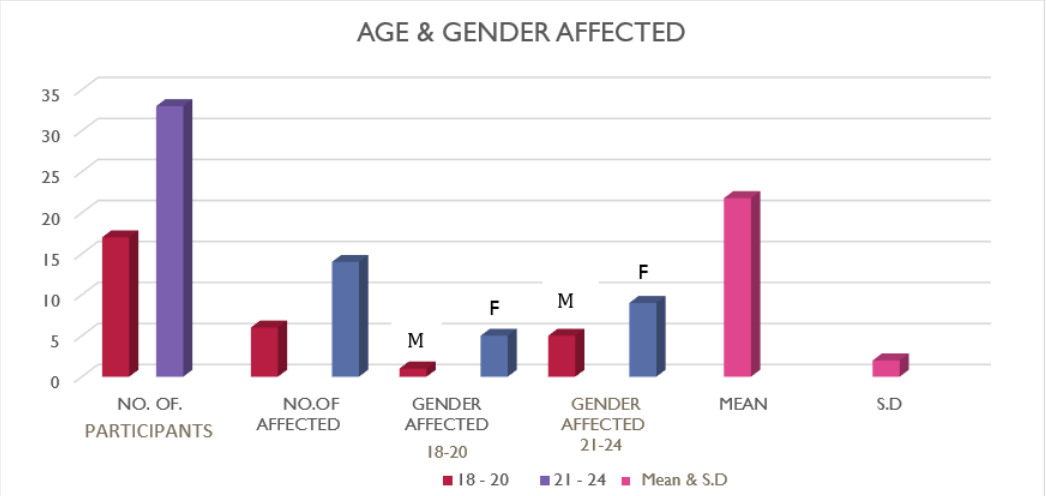
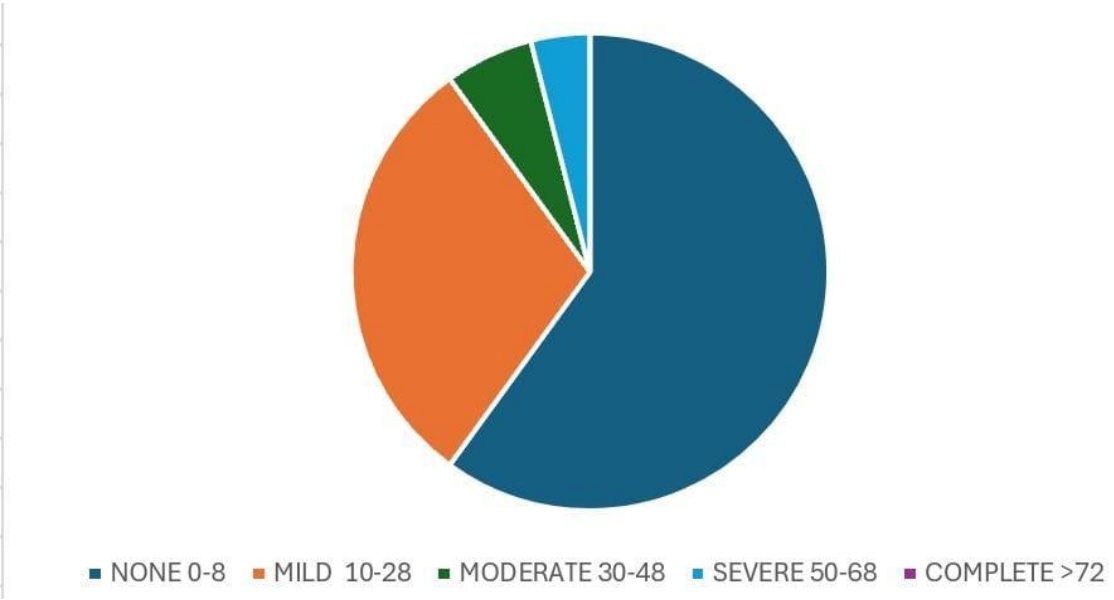


TABLE 2: SHOWS THE PRECENTGE OF THE AFFECTED PARTICIPANTS

Degree of incapacity	HDI score	Numbers of Participants	Percentage
None	0-8	30	60%
Mild	10-28	15	30%
Moderate	30-48	**3**	6%
Severe	50-68	2	4%
Complete	>72	0	0%

GRAPH 2 : shows the percentage of affected people.



4. DISCUSSION

Finding the incidence of cervicogenic headaches among college students were the study's main goal, and the results indicate

that this condition was common among these individuals.A total of the 50 participants who were sampled had a cervicogenic headache propensity, accounting for 35% of the total. Thirty of the fifty respondents said that they frequently had headaches. There were 25 questions on the headache disability index, with a minimum score of 10 and a maximum score of >72. Cervicogenic headache was indicated by a score of 10 or higher. The questionnaire used in this study was created using the cervicogenic headache diagnosis criteria.

Although research had shown that the clinical diagnosis of cervicogenic headache was legitimate, the diagnosis was still debatable. Although there wad little epidemiological data, there was a growing body of research on headache diagnosis, management, and quality of life. Since cervicogenic headaches were a secondary form of headache that many individuals were unaware of and were sometimes confused with other headache types, it's critical to get the right diagnosis and provide the right care.Although the precise cause of cervicogenic headache was uncertain, strain may be the culprit, according to a theory.

Given that the majority of respondents selected the option for using smartphones in an extremely flexed neck position on the questionnaire, prolonged usage of smartphones and laptops may be the cause. According to a study by Demirci et al. (2016), using a smartphone may increase the risk of headaches. However, they haven't specified the kind of headache. People who suffer from cervicogenic headaches should be identified and treated appropriately. According to a study by Van et al. (2003) on the quality of life of patients with cervicogenic headache, patients exhibited significant quality-of-life burden and domain scores for physical performance. The primary line of treatment for cervicogenic headaches is physiotherapy.

In the previous study, Their primary discovery is that the prevalence of CEH in the general population aged 30 to 44 is 0.17%. We discovered that, in comparison to healthy controls, the cervical range of motion was significantly decreased and the pericranial muscle tenderness score was much greater on the pain side than the non-pain side [6]. According to the current study, Depomedrol has more therapeutic value when treating episodic cluster headaches, where episodes last a few weeks as opposed to months, and where the patient may be able to get through the episode without the need for systemic treatment and its associated side effects if they receive local steroid injections every two or three weeks on one to three [18].

5. CONCLUSION

According to the study's findings, cervicogenic headaches were common and prone among college students . They may be brought on by prolonged neck flexion from studying or by the strain that using a phone or laptop puts on the cervical region. Cervicogenic headaches can be avoided or controlled with the aid of cervical rotation (self-mobilization) and strengthening exercises, such as deep neck flexors. It's critical to determine the prevalence of cervicogenic headaches in the college students and to provide appropriate therapy as soon as possible. Since cervicogenic headaches were a secondary kind of headache that many individuals were unaware of and were sometimes confused with other headache types, it was critical to make an accurate diagnosis and administer the appropriate medication.

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All authors equally contributed.

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In this research, there was no conflict of interest.

REFERENCES

[1] Sjaastad O, Fredriksen TA, Pfaffenrath V. Cervicogenic headache: diagnostic criteria. The Cervicogenic Headache International Study Group. Headache. 1998;38(6):442-5.

[2] Sjaastad O, Fredriksen TA. Cervicogenic headache: Criteria, classification and epidemiology. Clin Exp Rheumatol. 2000;18(1 Suppl 19):S3-6.

[3] International Headache Society. The International Classification of Headache Disorders. 2nd ed. Cephalalgia. 2004;24(Suppl 1):1-160.

[4] Jull G, Trott P, Potter H, Zito G, Niere K, Shirley D, et al. A randomized controlled trial of exercise and manipulative therapy for cervicogenic headache. Spine. 2002;27(17):1835-43.

[5] Pareira Monteiro J. Estudo epidemiologico e clinico de uma populacão urbana. Cefaleia [Thesis]. University of Porto, Portugal; 1995.

[6] Knackstedt H, Bansevicius D, Aaseth K, Grande RB, Lundqvist C, Russell MB. Cervicogenic headache in the general population: The Akershus Study of Chronic Headache. Cephalalgia. 2010;30(12):1468-76.

[7] Nilsson N. The prevalence of cervicogenic headache in a random population sample of 20-59 year olds. Spine.

1995;20(17):1884-8.

[8] Leone M, D'Amico D, Grazzi L, Attanasio A, Bussone G. Cervicogenic headache: A critical review of the current diagnostic criteria. Pain. 1998;78(1):1-5.

[9] Rothbart P. The cervicogenic headache: A pain in the neck. Can J Diagn. 1996;13:64-71.

[10] Pfaffenrath V, Kaube H. Diagnostics of cervicogenic headache. Funct Neurol. 1990;5(2):159-64.

[11] Beaton K, Jull G. Effectiveness of manipulative physiotherapy in the management of cervicogenic headache: A single case study. Physiotherapy. 1994;80(7):417-23.

[12] Blumenfeld A, Siavoshi S. The challenges of cervicogenic headache. Curr Pain Headache Rep. 2018;22(7):47.

[13] Bogduk N. The anatomical basis for cervicogenic headache. J Manipulative Physiol Ther. 1992;15(1):67-70.

[14] Bogduk N, Govind J. Cervicogenic headache: An assessment of the evidence on clinical diagnosis, invasive tests, and treatment. Lancet Neurol. 2009;8(10):959-68.

[15] Sjaastad O, Bakketeig LS. Prevalence of cervicogenic headache: Vågå study of headache epidemiology. Acta Neurol Scand. 2008;117(3):173-80.

[16] Nilsson N. The prevalence of cervicogenic headache in a random population sample of 20-59 year olds. Spine. 1995;20(17):1884-8.

[17] Haldeman S, Dagenais S. Cervicogenic headaches: A critical review. Spine J. 2001;1(1):31-46.

[18] Cervicogenic headache: Prevalence and response to local steroid therapy. M. Anthon.