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Prevalence Of Cervicogenic Headache In School Going Children Of Age 13 – 18 Years

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Abstract:
Aim: Cervicogenic headache (CGH) is a debilitating condition characterized by head pain originating from the cervical spine. While extensively studied in adults, its prevalence among adolescents, particularly school-going children aged 13 to 18 years, remains poorly understood.
Methodology: This systematic review aims to consolidate existing literature to ascertain the prevalence of cervicogenic headache CGH in this demographic. Through comprehensive search strategies across multiple databases, relevant studies were identified, screened, and synthesized.
Result: The study analyzed the prevalence of Cervicogenic Headache (CGH) in 120 participants, with 70 positive outcomes out of 120 test cases. The percentage of positive results was around 58.33%, with 70 positive outcomes out of 120 test cases.
Conclusion: Despite variations in reported rates, CGH emerges as a significant health concern in this demographic, necessitating tailored preventive and management strategies. Future research endeavors should focus on elucidating the underlying mechanisms, risk factors, and effective interventions to alleviate the burden of CGH among adolescents.

Keywords: cervicogenic headache; triggers; weekend headache; learning difficulties

Introduction

Cervicogenic headache (CGH) is a distinct type of headache characterized by pain originating from structures in the cervical spine and its surrounding tissues. Unlike primary headaches such as migraines or tension-type headaches, CGH arises from underlying cervical musculoskeletal or neurogenic pathology.[1] The term "cervicogenic" implies that the headache originates from the cervical region, typically due to dysfunction or irritation of cervical vertebrae, intervertebral discs, facet joints, or soft tissues like muscles and ligaments.CGH often presents as unilateral head pain, which may radiate from the neck to the occipital, temporal, or frontal regions.[2] Patients with CGH commonly report neck pain and stiffness, restricted range of motion, and tenderness in the cervical region. The pain is usually aggravated by specific neck movements or sustained postures and may be alleviated with rest or manual therapy targeted at the cervical spine.The diagnosis of CGH can be challenging as it shares clinical features with other headache disorders and neck-related conditions. However, certain diagnostic criteria, such as those proposed by the International Headache Society, help differentiate CGH from other types of headaches.[3] Diagnostic techniques may

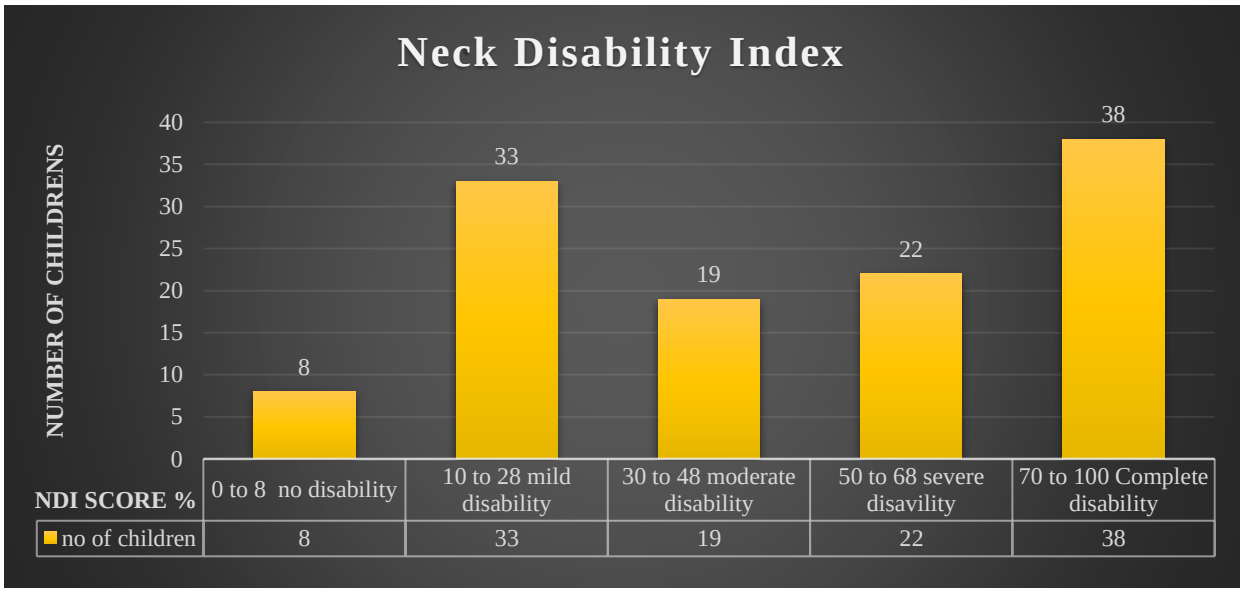
include physical examination, imaging studies (e.g., MRI, CT scans), and diagnostic injections targeting cervical structures.Adolescence is a crucial time for physical, emotional, and mental changes, making it an important time for teenagers to manage their academic performance, mental health, and social connections.[4] If cervicogenic headaches are misdiagnosed or improperly managed, they may interfere with a student's ability to focus on schoolwork and may even cause them to miss class.[5]This study aims to address these concerns by examining the incidence of cervicogenic headache in high school students aged 13 to 18, determining relevant risk factors, and emphasizing the effects on individual and community health.

Methodology

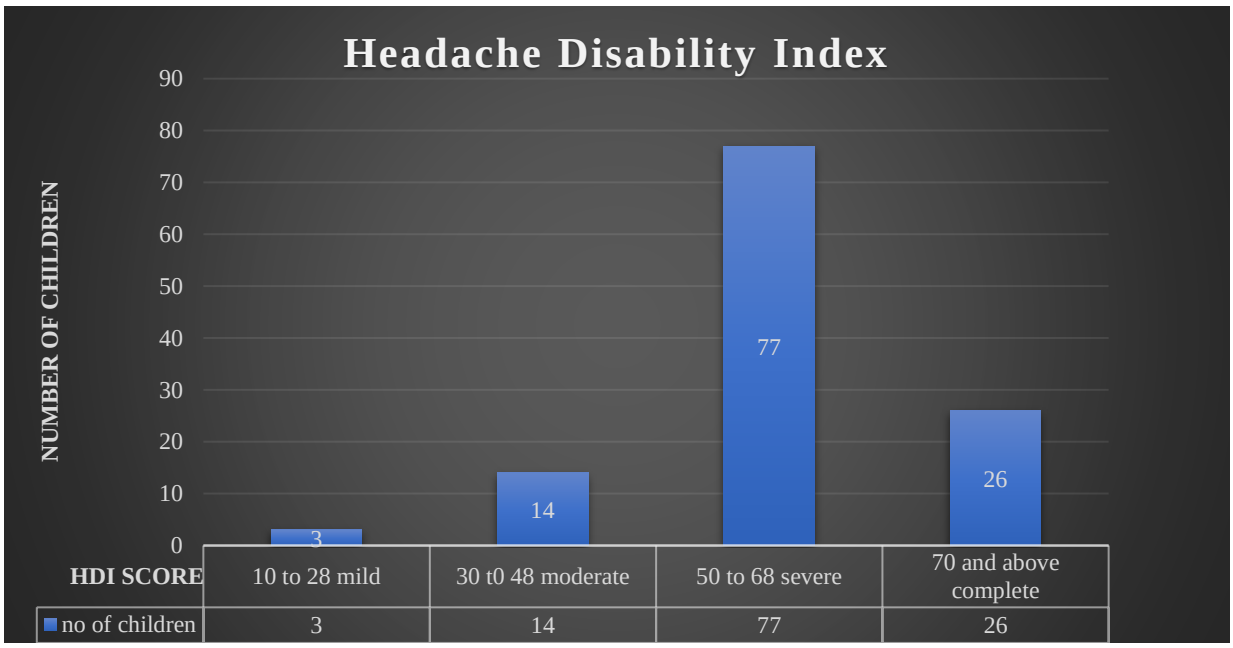
This study focuses on school-aged children from Jhansi, primarily using written questionnaires and manual testing to gather information about their disability and headache impact. The study used conventional screening instruments such as the Neck Disability Index (NDI), Headache Disability Index (HDI), and Neck Pain and Disability Scale (NPAD) to assess the impact of these conditions on daily functioning. And cervical flexion rotation test for correct evaluation. The sample size was determined through convenience sampling, with 120 participants chosen for their accessibility and statistical significance.InclusionCriteria:Focused on school-going adolescents aged 13 to 18 years, Reported prevalence or incidence data of cervicogenic headache, Published in English-language peer-reviewed journals, Utilized standardized diagnostic criteria for cervicogenic headache.Exclusion Criteria: Reviews, case reports, editorials, or conference abstracts, Not focused on adolescents aged 13 to 18 years.variables1. Independent VariablesAge: The age range of participants, specifically adolescents aged 13 to 18 years.Gender: The gender distribution of participants, including male and female adolescents. GeographicRegion: The geographical location where the study was conducted, which may influence the prevalence of cervicogenic headache.Dependent Variables:Prevalence of Cervicogenic Headache: The proportion of school-going adolescents aged 13 to 18 years diagnosed with cervicogenic headache within a specified population.The data was collected and entered using the Epi-Info software version 3.5.1. They were presented as a percentage of the qualitative variables and on average with standard deviation for the quantitative variables. The association between the independent variables and the dependent variable was estimated by the chi-square test or Fisher's test as appropriate.

Result

The study analyzed the prevalence of Cervicogenic Headache (CGH) in 120 participants, with 70 positive outcomes out of 120 test cases. The percentage of positive results was around 58.33%, with 70 positive outcomes out of 120 test cases. The cervical flexion rotation test was performed on the participants, indicating that many have difficulty rotating their necks due to the frequency of positive results.The findings suggest that individuals with good outcomes may still require additional testing and intervention. The inability to move one's neck freely can be a source of discomfort and a drag on one's overall quality of life, making it crucial for medical professionals to identify patients with limited neck mobility.The results show that 59% of respondents feel handicapped due to headaches, with 48% feeling restricted in daily activities. 43% feel misunderstood about the impact of headaches, with 43% feeling lost control. 52% restrict recreational activities, with 55% experiencing anger. 47% feel they lose control, with 56% less likely to socialize. 60% feel their spouse or family and friends don't understand their experiences due to headaches. The data highlights the significant impact of headaches on daily activities, recreation, socialization, and relationships. Emotional responses such as anger, frustration, and fear of losing control are reported by a significant number of respondents. The findings emphasize the need for comprehensive headache management strategies, including medical and psychosocial interventions. Addressing the emotional and social aspects of headache disability is crucial for improving the overall well-being of individuals with chronic headaches. In summary, the Headache Disability Index data underscores the multifaceted nature of headache impact and the importance of a holistic approach to headache management.



NDI interprets that there are 8 subjects with no disability, 33subjects with mild disability, 19 subjects with moderate, 22 subjects with severe and 38 subjects with complete disability.



The Headache Disability Index (HDI) is a 25 item questionnaire which includes questions that are related to frequency duration of headache, its severity and how it has an effect on activities such as social interaction , work and daily life.

Discussion

The prevalence of cervicogenic headache (CGH) among school-going adolescents aged 13 to 18 years is a significant health concern that warrants attention. This aims to interpret the findings of the systematic review regarding the prevalence of CGH in this demographic, explore potential factors influencing its occurrence, address diagnostic challenges, and discuss clinical implications and future research directions.[6]The systematic review synthesized evidence from multiple studies to determine the prevalence of CGH among adolescents aged 13 to 18 years.[8] Findings revealed a variable prevalence range across different geographic regions and study populations. The observed prevalence rates underscore the importance of recognizing CGH as a prevalent headache disorder in adolescents, with potential implications for their academic performance, social functioning, and overall quality of life.Several factors may contribute to the prevalence of CGH in adolescents.[9] Biomechanical factors such as poor posture, sedentary behaviors, and increased

screen time may contribute to cervical spine dysfunction and headache development. Psychosocial factors including academic stress, anxiety, and depression may exacerbate CGH symptoms. Additionally, environmental factors such as access to healthcare and socioeconomic status may influence CGH prevalence disparities among different populations.[10]Diagnosing CGH in adolescents presents challenges due to overlapping symptoms with other headache disorders and neck-related conditions. Standardized diagnostic criteria, such as those proposed by the International Headache Society, are essential for accurate diagnosis. However, healthcare providers must consider the unique clinical presentation and developmental characteristics of adolescents when applying these criteria.[11] Comprehensive clinical evaluation, including thorough history-taking, physical examination, and diagnostic imaging, is crucial for identifying CGH and differentiating it from other headache disorders.[12]Cervicogenic headaches are caused by a complex set of causes, including stress, worry, depression, and a lack of physical activity.[13] There was no significant gender difference in the incidence of cervicogenic headaches. The findings have far-reaching implications for everyday life, emphasizing the need for early diagnosis, comprehensive therapy, prevention education, and impartial support for adolescents suffering from cervicogenic headaches. Medical professionals must be vigilant in recognizing the condition and providing comprehensive therapy that considers both physiological and psychological aspects.[14] Teachers should emphasize correct body alignment, teach stress management, and incorporate physical education into lesson plans. Implementing a comprehensive approach to better understand and treat cervicogenic headaches in adolescents could improve their overall well-being and academic achievements, ensuring they thrive during the critical adolescent period.[15]

Conclusion

In conclusion, it is crucial to investigate the prevalence of cervicogenic headaches in Jhansi's school-aged population. Pain around the eyes and in the head are typical manifestations of these headaches, which differ from those that originate in the back of the head. In order to get reliable findings, it is necessary to choose a sample that is representative of the whole.

Clinical Implications:
The study findings have important clinical implications for healthcare providers involved in the management of headache disorders among adolescents. Increased awareness of CGH prevalence and recognition of its unique clinical features are essential for timely diagnosis and appropriate management. Multidisciplinary approaches encompassing pharmacological interventions, physical therapy, ergonomic modifications, and psychosocial support may help alleviate CGH symptoms and improve adolescents' quality of life. Moreover, educating adolescents, parents, and educators about CGH risk factors, prevention strategies, and self-management techniques is crucial for promoting headache awareness and reducing disability.

Limitations and Future Directions
Despite the valuable insights provided by the systematic review, several limitations should be acknowledged. These include heterogeneity among included studies, potential sources of bias, and gaps in the existing literature. Future research endeavors should focus on longitudinal studies to elucidate the natural history of CGH in adolescents, intervention studies to evaluate the efficacy of preventive and treatment strategies, and investigations into the underlying mechanisms and psychosocial aspects of CGH development.[16]

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