Prevalence of Neck Pain Among Dental Student in Mehsana District

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Abstract **-Neck pain is a global concern, especially prevalent among college students. Professions like dentistry are particularly prone due to repetitive tasks and poor ergonomics. Assessment tools like the Neck Disability Index (NDI) and Numerical Pain Rating Scale (NPRS) gauge the impact and severity of neck pain. The purpose of this study is to assess Neck pain and Functional disability among dental students. This cross-sectional analysis study was carried out on dental students of the Final year, Interns and Post graduate students, in clinical practice Faculty of Dental Sciences And Narsinhbhai Patel Dental College & Hospital. A convenient sample of 100 students. In this study, 72% students have neck pain in which 55% students have mild disability and 18% students have moderate disability. It also shows that under graduate students (final year) have 45.45% neck pain, Internee students have 68.18% neck pain and Post graduate students have 69.56 % Neck pain.**

Index Terms **Dental students, Neck Pain, Neck Disability Index, Numerical Pain Rating Scale.**

I. INTRODUCTION

Around the world, pain is a significant clinical, social, and economic issue for communities.[1] Neck pain is a multifactorial disease, and is a major problem in modern society. Although neck pain may not be the most common musculoskeletal disorder, it is still very important.[2] In the general population, the average prevalence of neck pain is 23.1% and the incidence of neck pain is very high in college students (48%-78%). [3] Studies have defined neck musculoskeletal disorders in relation to neck pain in two ways: first, by taking into account symptoms that occur in the neck, and second, by taking into account symptoms in addition to physical examination results. Measurements and observations of ergonomic exposure that are unique to the neck area should be made, including work-load assessments [4]. Previous studies have identified a number of risk factors for neck pain, including being female, getting older, having a higher BMI, smoking, using electronics excessively, experiencing negative emotions, and not having supportive social networks.[6] Numerous health conditions and posture-related issues, such as osteoarthritis, spinal stenosis, herniated disks, pinched nerves, tumors, and physical strain are common causes. [7] These kinds of issues in this profession are caused by improper prolonged repetitive working habits, the observational requirements of this field, as well as recurrent movements of the upper body/upper limb. Some body parts are subjected to statically constant high pressure due to extended periods of work, brief rest intervals, and repetitive movements of organs. This can cause pain, spasms, tingling, stiff joints, and other symptoms. Repeated movements and extended static neck positions have been shown to be work-related risk factors for neck pain. [9] The NDI created by Vernon and Mior is the one that is most frequently utilized. The Oswestry Low Back Pain Index was modified, and the result was the Neck Disability Index (NDI), a 10-item scaled questionnaire. The purpose of this questionnaire is to provide the doctor with details about how your neck pain has impacted your day-to-day functioning.[4]

II. NEED OF THE STUDY

Musculoskeletal problems are common in Dental Practitioners. Because of the prolonged static neck position and repeated movements are work-related risk factors for neck pain. So far no studies have been conducted in Mahesana District to find the Prevalence of neck pain in Dental students.

III. AIM AND OBJECTIVE

AIM **:-** The purpose of this study was to assess Neck pain and Functional disability among dental students

OBJECTIVE **:-** The objective of this study was to evaluate dental students in Mahesana district, Gujarat about knowledge, attitude and practices about physical activities during Neck Pain using an interview approach .

IV. REVIEW OF LITURATURE.

[1] Yifang Gao , Zhiming Chen , Shaoqing Chen et al (2023). "Risk factors for neck pain in college students: a systematic review and meta-analysis". This systematic review aimed to identify the personal, occupational, and psychological factors associated with the development of neck pain to promote the development of preventive strategies and early intervention treatment. Seven electronic databases were searched from inception to December 2022 for cross-sectional studies, cohort studies, case-control studies, and randomized controlled trials (RCTs) on neck pain. The quality of the selected studies were assessed by American Agency for Healthcare Research and Quality (AHRQ) or the Newcastle-Ottawa Scale (NOS). Thirty studies were included, including 18,395 participants. And a total of 33 potentially associated risk factors were identified. The author conclude that 11 main risk factors affecting college students neck pain, including improper use of the pillow, lack of exercise, improper sitting posture, history of neck and shoulder trauma, senior grade, staying up late, long-term electronic product usage daily, long time to bow head, high stress, emotional problems and female gender.[3]

[2] Yunzhi Lin, Xuehui Zhang , Hongyan Li et aL (2022). " Musculoskeletal pain is prevalent in Chinese medical and dental students: A cross-sectional study". The objectives of this study were to investigate the prevalence and characteristics of MSP among Chinese medical and dental students and to explore the risk factors for MSP and students' intent to seek medical treatment. An anonymous, internet-based, cross-sectional, open survey was distributed to medical and dental students at Fujian Medical University, Fuzhou, China. A total of 1,178 students responded to the survey (response rate = 79.6%), including 722 medical students and 456 dental students. The age ranged from 16 to 24. There were 553 male students and 625 female students. The author concluded that the prevalence of MSP in Chinese medical and dental students is high, especially for NP and LBP, and is significantly higher in dental students.[1]

[10] Abed AlRaouf Kawtharani , Ammar Chemeisani , Fadi Salman , Ali Haj Younes , Ali Msheik (2023)"Neck and Musculoskeletal Pain Among Dentists: A Review of the Literature". Musculoskeletal disorders (MSD), notably neck pain, are important occupational health issues in the field of dentistry. Many studies were done worldwide to gather data about neck and back pain. This review of the literature aimed to shed light on the current situation of neck pain among dentists worldwide and among Lebanese dentists. In addition, this review aimed to reveal the factors implemented in the pain and the recommendation to lessen the impact on the suffering dentists. . This review showed that neck pain reduces drastically the productivity of dentists in up to 40% of the cases.[4]

V.MATERIALS AND METHODS

TYPE OF RESEARCH – Observational study

STUDY DESIGN - Cross sectional study

SAMPLE DESIGN - Convenient sampling

STUDY POPULATION – Dental students

SAMPLE SIZE - 100

STUDY SETTING - Narsinhbhai Patel Dental College & Hospital

STUDY DURATION – February 2024 To March 2024 (2 months)

SAMPLING CRITERIA:

Inclusion Criteria:
1. Dental students of final year, interns & post-graduate students
2. age group of 20 to 30, males and females both
3. students who works atleast 4-5 hours per day since last 1 year.

Exclusion Criteria: [9]
1. Vertebro basilar insufficiency symptoms
2. Any condition involving cervical spine including fracture or dislocation
3. Recent undergone surgery
4. Acute inflammatory problem
5. Tumors
6. Ankylosing spondylitis

TOOLS
1. Pen
2. Laptop
3. Consent form
4. Assessment form

OUTCOME MEASURMENT
1. Neck Disability Index
2. NPRS Pain Scale

DATA COLLECTION PROCEDURE
A Cross sectional study was conducted among 100 dental students in Mehsana District about awareness of Physiotherapy. Both the genders was included in the study. For digital and quickly collection of the information. Neck disability index questionnaire prepared in English language. Form comprised questions with aim of collecting data from dental students about awareness of Physiotherapy. Participants, who was fulfilled the selection criteria, was inform about the study and was requested to sign written informed consent forms. The procedure was explained clearly to all the participants and their consent was taken and ask them to fill Form. The convenience sampling technique was used among Participants. The Data was collected and then it was further used for Statistical Analysis.

STATISTICAL ANALYSIS
The data will be analysed using SPSS for windows. Descriptive statistics was performed for personal characteristics and prolong static posture. The prevalence of neck pain will be determined by considering the number of participants affected and dividing by the total number of participants who answered the questionnaire.

VI .RESULTS AND INTERPRETATION

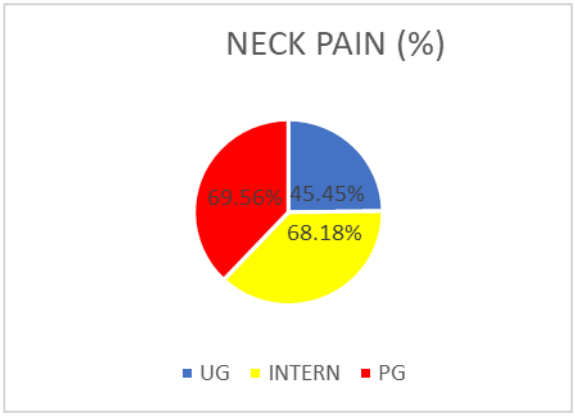
Table 5.1 : Demographic data

TOTAL PARTICIPANTS	100
MEAN AGE	22.69±2.07
MALE	24
FEMALE	76
UNDER GRADUATE	55
INTERNEE	22
POST GRADUATE	23

Table 5.1 is described that the total number of participants were 100 and the mean age was 22.69±2.07 . In this study , number of male students was 24 and number of female students was 76 , in which 55 students were under graduate , 22 students were intern , 23 were post graduate

Table 5.2 : Description of neck pain in students

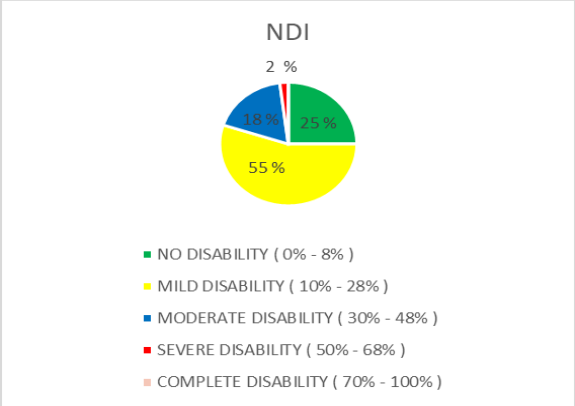
DESIGNATION	RESULT
UG	45.45%
INTERN	68.18%
PG	69.56%



Graph 5.1: Percentage of Neck Pain in students

The Neck Disability Index shows that 25 % students have No disability, 55% students have Mild disability and 18% students have Moderate disability, that shows in the Pie chart.

SEVERITY OF NDI	NO. OF STUDENTS
NO DISABILITY (0% - 8%)	25 %
MILD DISABILITY (10% - 28%)	55 %
MODERATE DISABILITY(30%-48%)	18 %
SEVERE DISABILITY(50%-68%)	2 %
COMPLETE DISABILITY(70%-100%)	0 %



Graph 5.5 : Severity of Neck Pain

VII. DISCUSSION

The purpose of this study was to determine the prevalence of neck pain among dental students at Sankalchand Patel University in Visnagar. Based on inclusion and exclusion criteria, 100 participants with a mean age of 22.69±2.07 were included in the study. The Neck Disability Index and the Numerical Pain Rating Scale were the outcome measures. Based on the Neck Disability Index, the study reveals that undergrad students in their final year experience 45.45% neck pain, intern students 68.18% neck pain, and postgraduate students 69.56% neck pain.

Participants who are male (45.83%) and female (57.89%) report having neck pain, respectively. This indicates that compared to male students, female students experience a higher prevalence of neck pain. Previous research has documented variations in the incidence of neck pain between genders among medical students. In this high-risk group, we also discovered sex-specific risk profiles for neck pain, which validates our study hypothesis. In particular, self-study time, habitual flexed neck posture, static posture duration, and psychological distress were found to be significantly correlated with neck pain in female students. On the other hand, in the male student adjusted model, the only factors that were significantly linked to neck pain were self-study time and psychological distress. [6]

The World Health Organization estimates that 58% of people on the planet will work for one-third of their lives, and that between 30% and 35% of workers face serious occupational risks. Like other professions, the dental field has a number of dangerous factors that, if followed, could put health workers in danger if they don't meet occupational health standards. Research has indicated that dentists are more susceptible than other medical professionals to musculoskeletal issues. It is crucial to identify the ergonomic elements at these individuals' workplaces. [8]

VIII.CONCLUSION

It can be concluded that neck pain among dental students is not of severe nature. The neck is largely prevalent in dental practitioners. That brings along with it a considerable amount of discomfort, lost working time, and economic loss. What we need is preventing its incidence and recurrence by including preventive aerobic and relaxation exercises in weekly activities of dental students. This will help in improving the quality of work in their clinical practice.

IX. REFRENCE

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