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A STUDY OF PREVALENCE OF NECK PAIN RELATED DISABILITY AMONG SECONDARY SCHOOL TEACHERS OF SAURASHTRA REGION: AN OBSERVATIONAL STUDY

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Abstract

Objective: To study neck pain related disabilities among secondary school teachers ofSaurashtra region.

Method: A total 121 participants were included. The data was collected with NeckDisability Index (NDI) in google forms. 30-56 years of teachers was selected for the study. The data collection have been done through google form of NDI. Results were calculated with google form analysis.

Results : 65 Males and 56 Females filled the form. 23.97% teachers having neck pain related disabilities. Among them 20% male and 28.57%female were having difficulties in their day to day activities.

Conclusion: According to the study, female teachers have more difficulties in their day to day activities than males. Poor posture during reading and computer work and heavy work load can lead to neck pain and associated disabilities.

Keywords: ***Neck pain, disabilities, teachers***

INTRODUCTION:

One of the most prevalent and significant occupational health issues affecting the working population are musculoskeletal diseases (MSDs), which have a significant negative impact on quality of life. Numerous research projects have been carried out to examine the connection between profession and musculoskeletal pain (MSP). Owing to occupational features, certain worker groups are more susceptible to work-related MSDs. [7]. Teachers are unique among these groups as well. In order to meet teaching production targets, instructors may mobilize their physical, cognitive, and affective capacities when instructing in unfavorable settings, which may result in an overstretching or over-generation of their psycho -physiologic functions (Cardoso et al., 2009).[7]. It is now well acknowledged that MSP has a complex etiology that includes social, psychological, and physical factors that includes age, gender, and daily labor inan inappropriate position.

The prevalence of neck discomfort was similar among school instructors in a systemic study of MSDs. According to a survey of secondary school teachers in Hong Kong, the lifetime prevalence ofneck discomfort is 69.3%, and the prevalence within a year is 66.7% and the incidence was 59.7% after becoming a teacher. Similar results were found in another Chinese study, where secondary school teachers reported 68.2% lifetime prevalence of neck pain, 64.4% during a 12-month period, and 56.8% prevalence of neck pain after becoming teachers. School instructors in a more recent Chinese study showed a high prevalence rate of 68.9% for neck pain during the preceding month. Similar findings have been found in other research, where 59% of Swedish music instructors said they had experienced neck pain in the 12 months prior. Moreover, 47% of Swedish music teachers in a more recent study stated that they had suffered from neck pain in the preceding 12 months. Another research of Swedish music teachers produced findings similarto these. where neck pain affected 44.4% of people. 42.5% of Turkish school teachers in prior research said they had neck problems. PETs, on the other hand, reported the lowest prevalence rate of neck discomfort of all, 9.3%8, in a survey of music.

The International Association for Pain Anywhere from superiorly through the nuchal lineto inferiorly by the first thoracic vertebra and laterally up to the shoulder is considered neck pain[1, 2]. Up to50% of the general population and teachers have it as much as 56.8%[1]. Numerous research papers have examined musculoskeletal discomfort in educators. Numerous studies have been conducted to examine the impact of interventions on mechanical neck pain, but none have found that secondary school teachers in the Saurashtra region are more likely to experience neck discomfort. The purpose of this study is to determine how common neck pain is among Saurashtra region teachers. States and countries have different teaching methods. Teachers who experience neck pain may have a variety of causes.

For instructors, prolonged standing and sitting are the main causes of musculoskeletal pain. Teachers may have neck pain from a variety of teaching responsibilities, including reading a lot, checking assignments, planning lessons, using computers, adopting bad sitting postures, and having a heavy workload. The purpose of this study is to determine the prevalence of neck discomfort and the degree of disability experienced by teachers in their day-to-day work. The Neck Disability Index was the first tool created to evaluate patients' self-rated disabilities who were experiencing neck pain. The NDI was utilized to identify the impairments linked to neck discomfort [10]. Ten questions about everyday activities are part of the NDI. One must indicate which option best describes how tough an activity is for them. A score of more than twenty-two percent indicates a considerable everyday disability.

Need of the study

Musculoskeletal problems associated to the teaching profession are prevalent. Previous research have shown that neck discomfort is the most frequent musculoskeletal problem among teachers. Numerous research havebeen conducted on musculoskeletal diseases in educators, but Studies that particularly address neck pain andimpairments associated with it in secondary teachers are quite rare. Through this study, we can learn more about the challenges that teachers with neck pain faces in their day to day life.

OBJECTIVES OF THE STUDY:

- To study about neck pain related disabilities in secondary school teachers.
- To study about limitations that teachers feel with neck pain.

INCLUSION CRIETERIA:

All the secondary teachers of Saurashtra region with mechanical neck pain.Age should be between 30-56 years.

Minimum teaching experience should be of 2 years.

EXCLUSION CRIETERIA:

The person who has neck pain with other pathologies(Radiculopathy ,myelopathy, tumour etc.) were excluded.

The person who has other systemic diseases were excluded.The person who don't want to fill the form.

The person who has recent fracture was excluded.

SCOPEOFTHE STUDY:

The study focus only on secondary school teachers of Saurashtra region.

SUBJECTSAND METHODS:

Data collection and study design:

An observational study conducted on secondary teachers of Saurashtra region using Neck Disability Index (NDI). Consent for collecting data was taken from the principals of the schools. Data was taken in form of google forms of neck disability index. Data was collected between 21st September to 2nd October 2023. Questionnaire was distributed to the Principals of schools and then questionnaire shared by them to respective teachers through social media. Age group included for data collection was 30-56 years. Checked for exclusion criteria and the teachers who fulfilled inclusion criteria was taken for the study. Total 121responses have been recorded and NDI scores counted. Data of Male and Female have been recorded. The included teachers had only mechanical neck pain without any other cause. Teachers who had neck pain other than mechanical pain was excluded from the study. With the NDI scoring,
>22%,it indicates significant disability among secondary school teachers. With this study we can find the activities that are more difficult particularly in teachers of secondary schools.

RESERCH METHODOLOGY

NECK DISABILITYINDEX (NDI) is used to rate disability with neck pain in regular activities. It includes 10 questions that describe Pain intensity, Personal care, Lifting, Reading, Headaches, Concentration, Work, Driving, Sleeping and Recreation. Participant have to respond on 6 point scale, score 0 indicates activity without pain to score 6 that indicates impossible activity.

NECK DISABILITY INDEX (NDI):

Section1: Pain Intensity

1. I have no pain at the moment
2. The pain is very mild at the moment
3. The pain is moderate at the moment
4. The pain is fairly severe at the moment
5. The pain is very severe at the moment
6. The pain is the worst imaginable at the moment

Section2: Personal Care(Washing ,Dressing, etc.)

1. I can look after myself normally without causing extra pain
2. I can look after myself normally but it causes extra pain
3. It is painful to look after myself and I am slow and careful
4. I need some help but can manage most of my personal care
5. I need help everyday in most aspects of self care

6. I do not get dressed ,I wash with difficulty and stay in bed

Section3: Lifting

1. I can lift heavyweights without extra pain
2. I can lift heavyweights but it gives extra pain
3. Pain prevents me lifting heavyweights off the floor, but I can manage if they areconveniently placed, for example on a table
4. Pain prevents me from lifting heavyweights but I can manage light to medium weights if they are conveniently positioned
5. I can only lift very lightweights
6. I cannot lift or carry anything

Section4: Reading

1. I can read as much as I want to with no pain in my neck
2. I can read as much as I want to with slight pain in my neck
3. I can read as much as I want with moderate pain in my neck
4. I can't read as much as I want because of moderate pain in my neck
5. I can hardly read at all because of severe pain in my neck
6. I cannot read at all

Section5: Headaches

1. I have no headaches at all
2. I have slight headaches, which come infrequently
3. I have moderate headaches, which come infrequently
4. I have moderate headaches, which come frequently
5. I have severe headaches, which come frequently
6. I have headaches almost all the time

Section6: Concentration

1. I can concentrate fully when I want to with no difficulty
2. I can concentrate fully when I want to with slight difficulty
3. I have a fair degree of difficulty in concentrating when I want to
4. I have a lot of difficulty in concentrating when I want to
5. I have a great deal of difficulty in concentrating when I want to
6. I cannot concentrate at all

Section7: Work

1. I can do as much work as I want to
2. I can only do my usual work, but no more
3. I can do most of my usual work, but no more
4. I can not do my usual work
5. I can hardly do any work at all
6. I can't do any work at all

Section8: Driving

1. I can drive my car without any neck pain
2. I can drive my car as long as I want with slight pain in my neck
3. I can drive my car as long as I want with moderate pain in my neck
4. I can't drive my car as long as I want because of moderate pain in my neck
5. I can hardly drive at all because of severe pain in my neck
6. I can't drive my car at all

Section9: Sleeping

1. I have no trouble sleeping
2. My sleep is slightly disturbed(less than1hr sleepless)
3. My sleep is mildly disturbed(1-2hrs sleepless)
4. My sleep is moderately disturbed(2-3hrs sleepless)
5. My sleep Is greatly disturbed(3-5hrs sleepless)
6. My sleep is completely disturbed(5-7hrs sleepless)

Section10: Recreation

1. I am able to engage in all my recreation activities with no neck pain at all
2. I am able to engage in all my recreation activities, with some pain in my neck
3. I am able to engage In most, but not all of my usual recreation activities because of painin my neck
4. I am able to engage in a few of my usual recreation activities because of pain in my neck
5. I can hardly do any recreation activities because of pain in my neck
6. I can't do any recreation activities at all

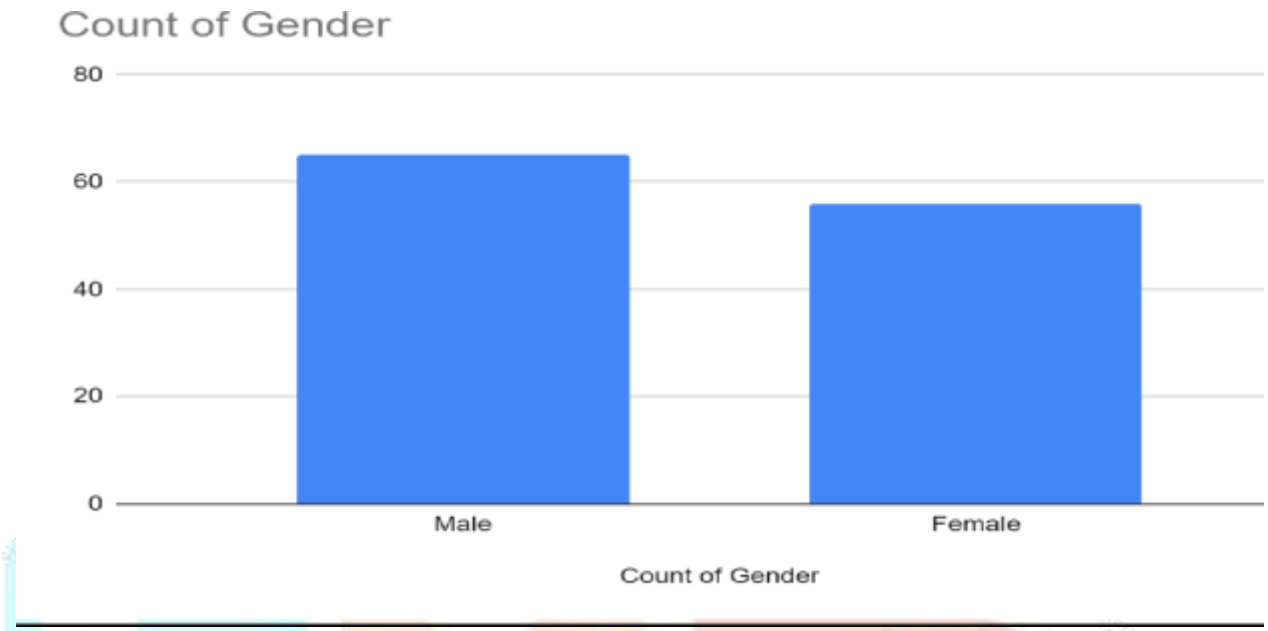
Score: /50 Transform to percentage score x 100 = %points Scoring: For each section the total possible score is 5.

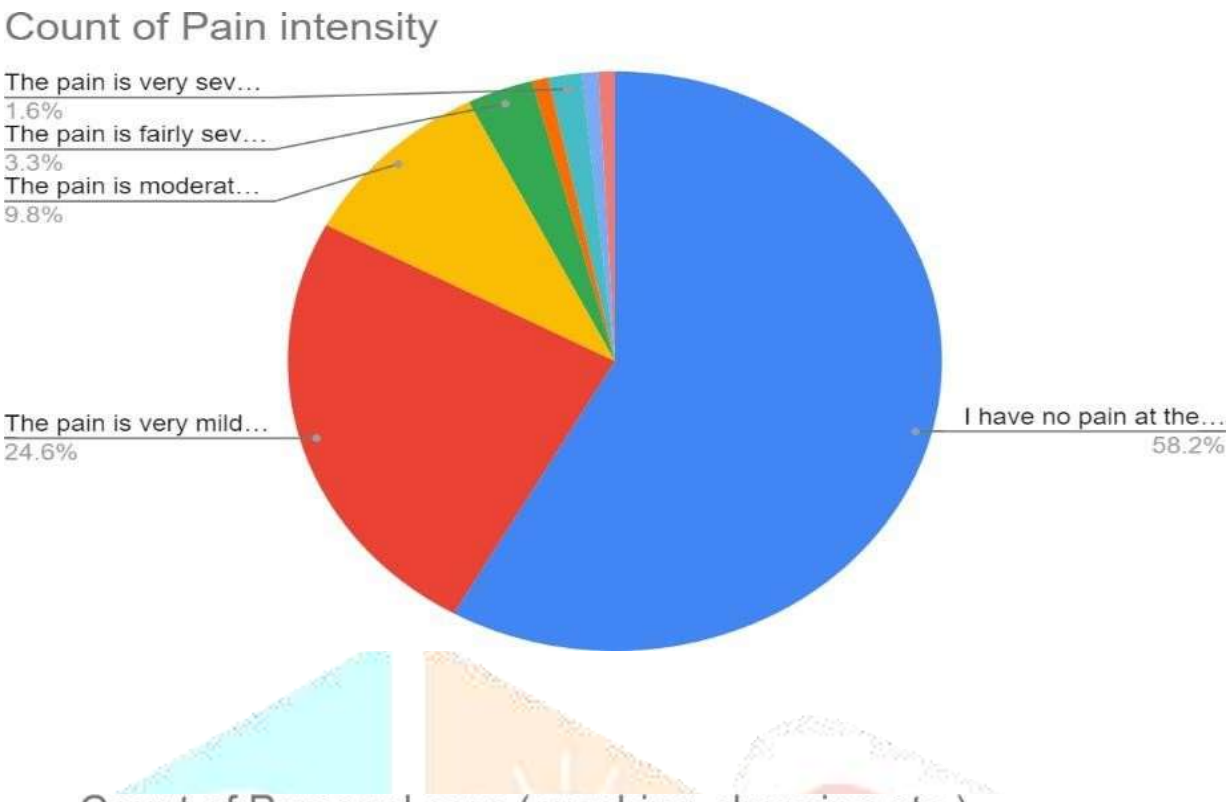
If the first statement is marked the section score=0,if the last statement is marked it=5.

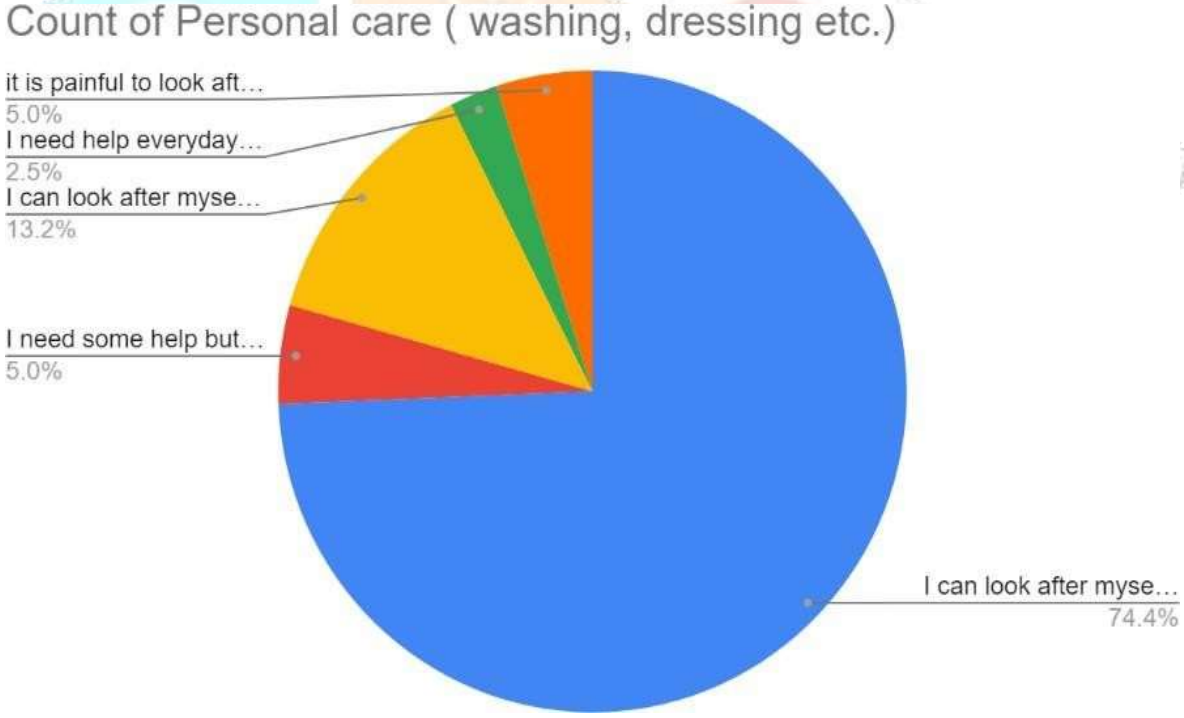
If all ten sections are completed the score is calculated as follows: Example:16(totalscored)/ 50 (total possible score) x 100 = 32%. If one section is missed or not applicable the score is calculated: 16 (total scored)/ 45 (total possible score) x 100 = 35.5% .

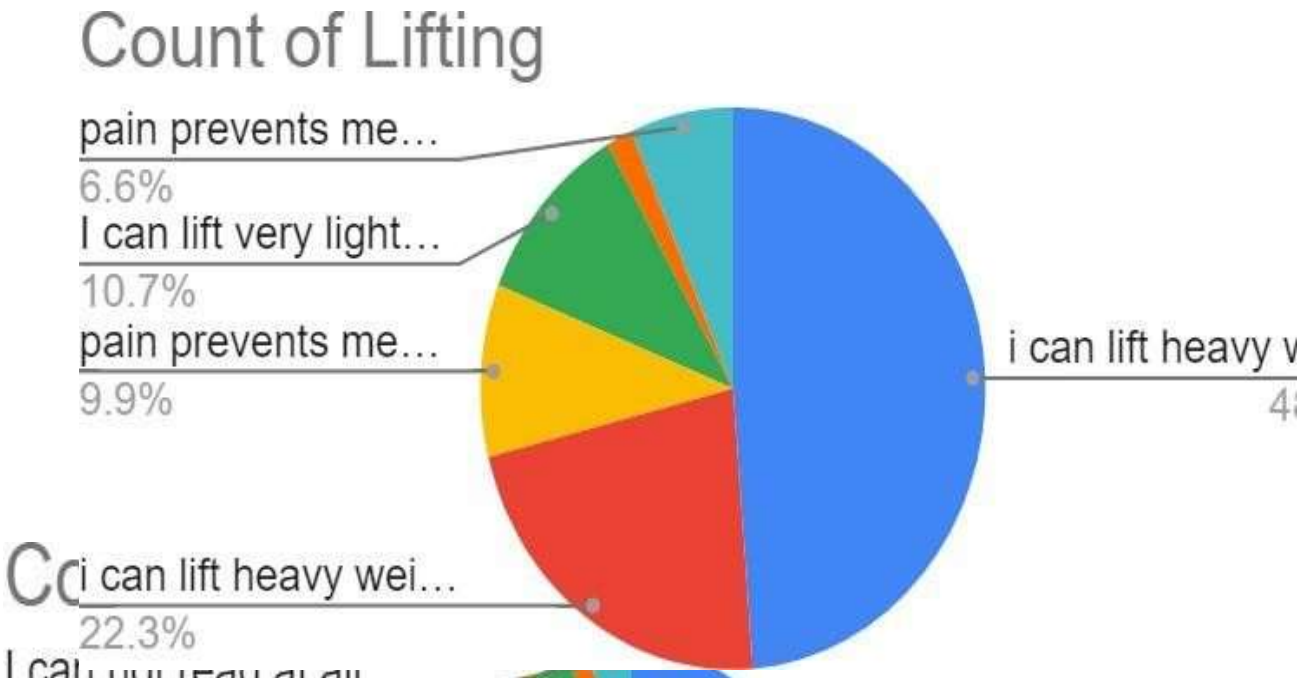
A score of 22% or more is considered a significant activities of daily living disabilities.

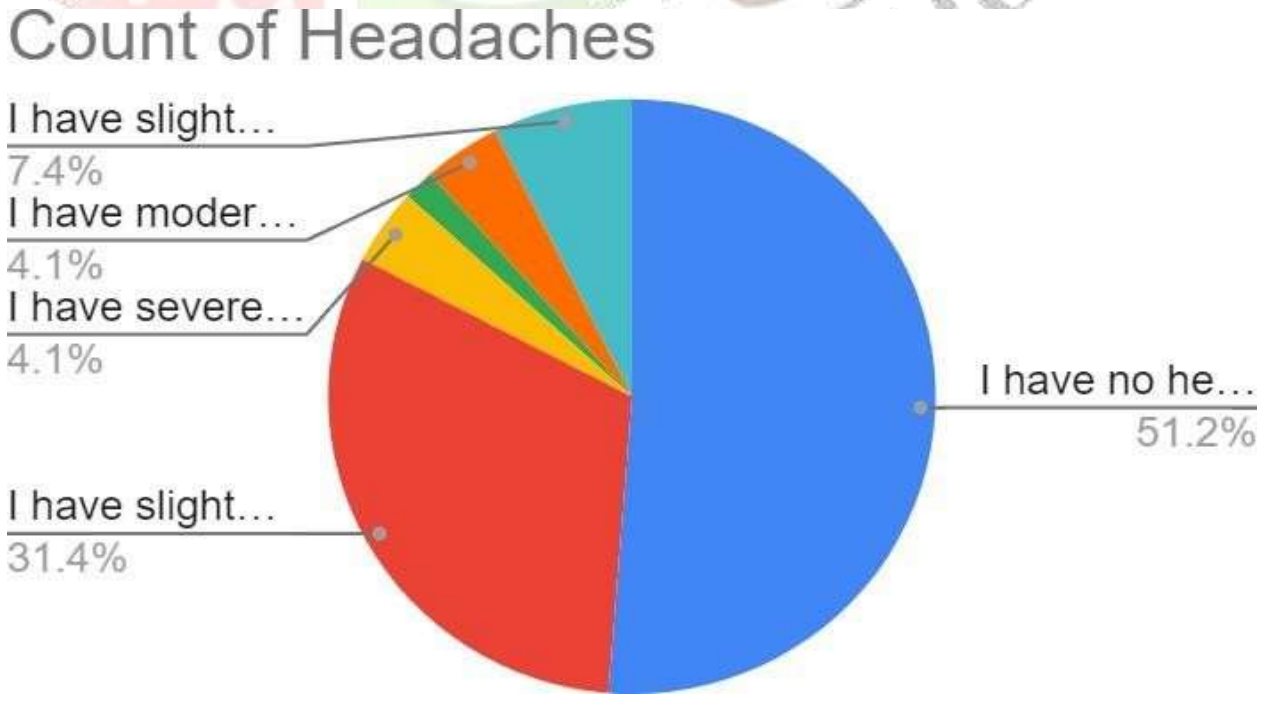
STATISTICALANALYSIS:

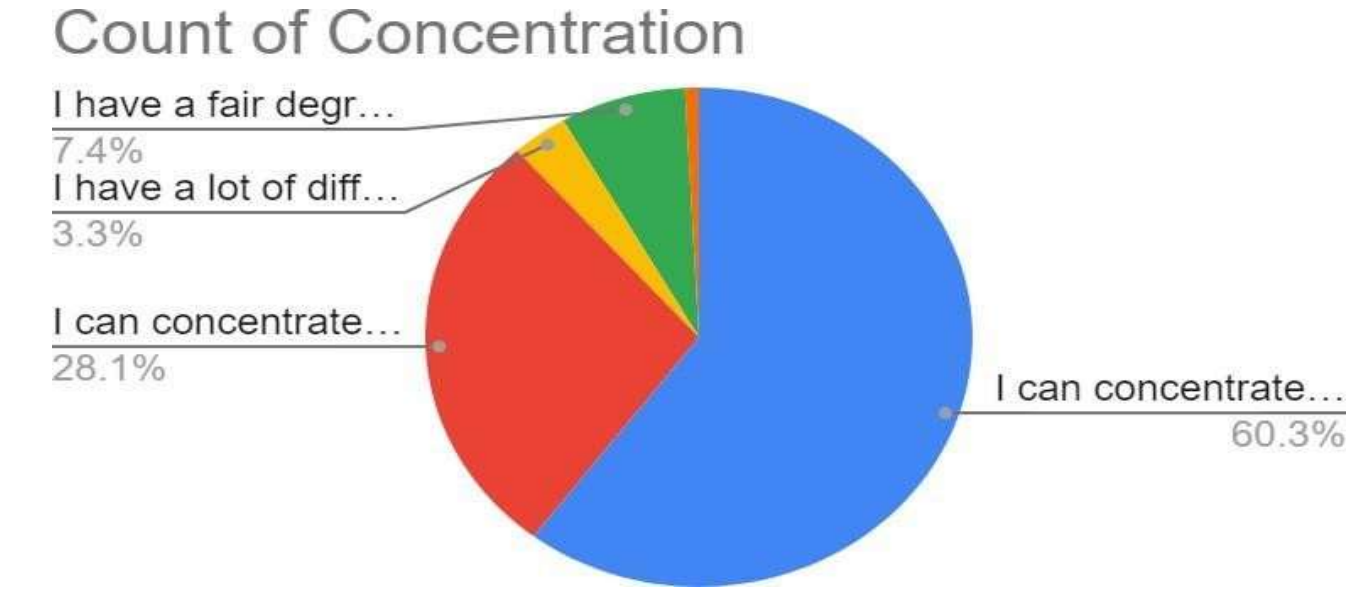


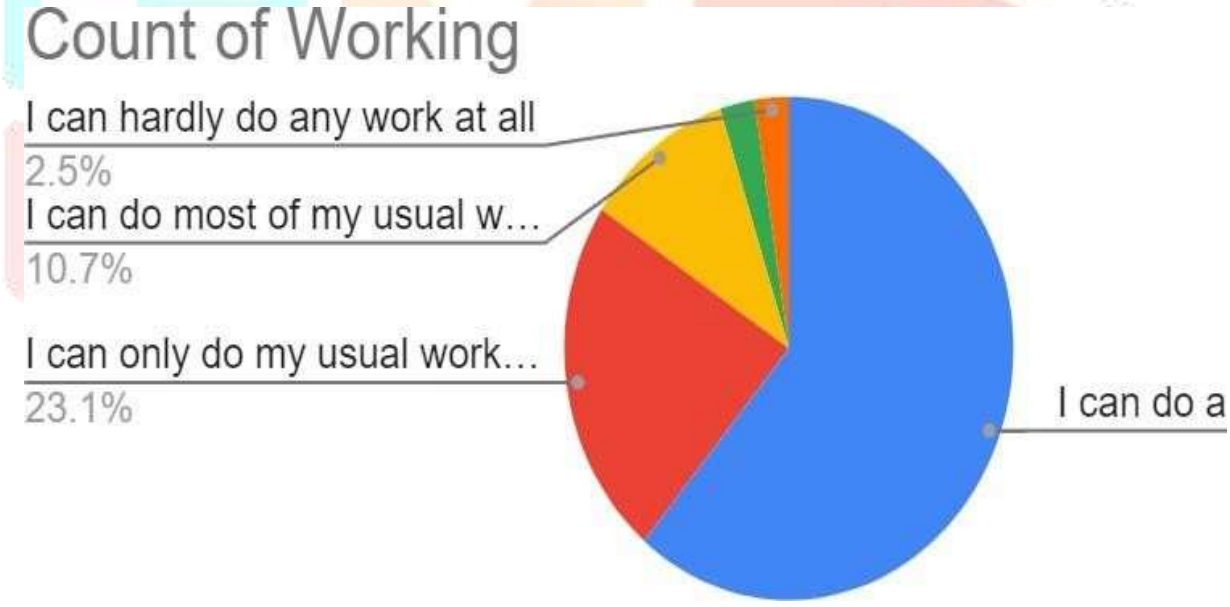

Count of Pain intensity
The pain is very sev…
1.6%
The pain is fairly sev…
3.3%
The pain is moderat…
9.8%
The pain is very mild…
24.6%
I have no pain at the…
58.2%

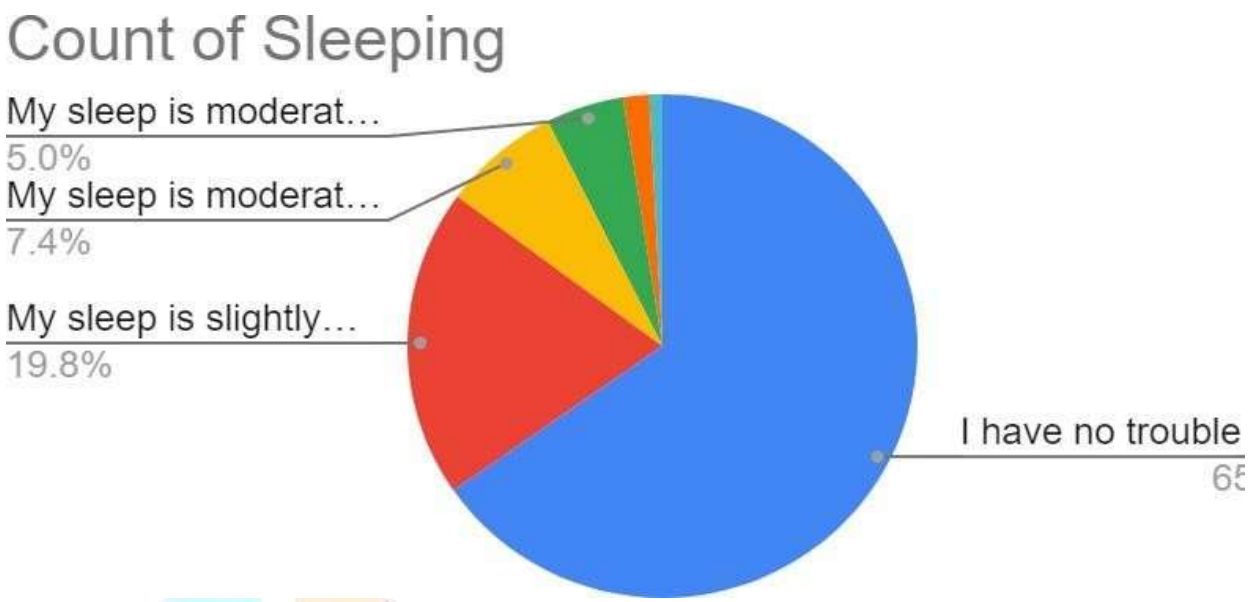

Count of Personal care (washing, dressing etc.)
it is painful to look aft…
5.0%
I need help everyday…
2.5%
I can look after myse…
13.2%
I need some help but…
5.0%
I can look after myse…
74.4%

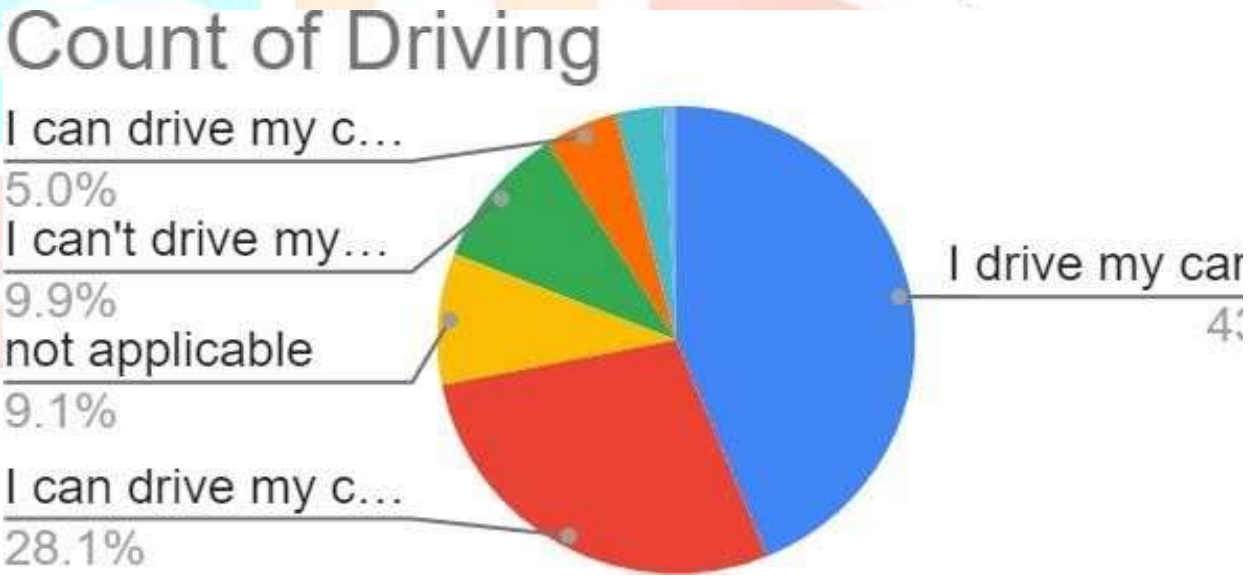

Count of Lifting
pain prevents me…
6.6%
I can lift very light…
10.7%
pain prevents me…
9.9%
i can lift heavy wei…
22.3%
I can read as much…
6.6%
I can read as much…
36.4%
i can lift heavy v
4
I can read as much…
48.8%

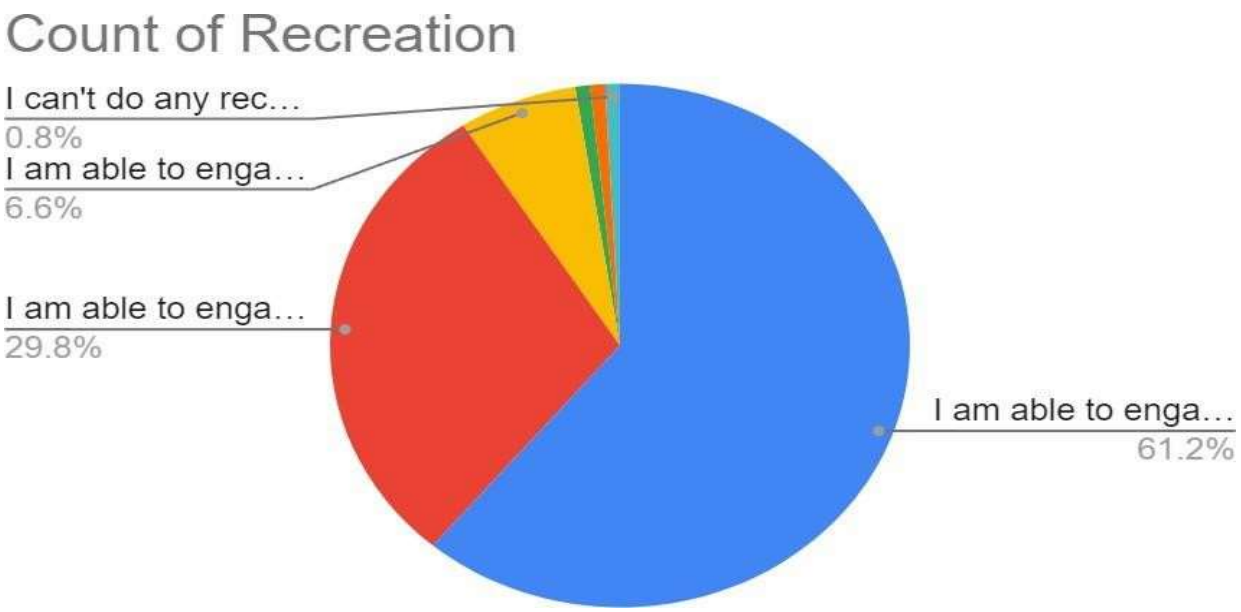

Count of Headaches
I have slight…
7.4%
I have moder…
4.1%
I have severe…
4.1%
I have slight…
31.4%
I have no he…
51.2%


Count of Concentration
I have a fair degr…
7.4%
I have a lot of diff…
3.3%
I can concentrate…
28.1%
I can concentrate…
60.3%


Count of Working
I can hardly do any work at all
2.5%
I can do most of my usual w…
10.7%
I can only do my usual work…
23.1%
I can do a


Count of Sleeping
My sleep is moderat…
5.0%
My sleep is moderat…
7.4%
My sleep is slightly…
19.8%
I have no trouble
65


Count of Driving
I can drive my c…
5.0%
I can't drive my…
9.9%
not applicable
9.1%
I can drive my c…
28.1%
I drive my car
4



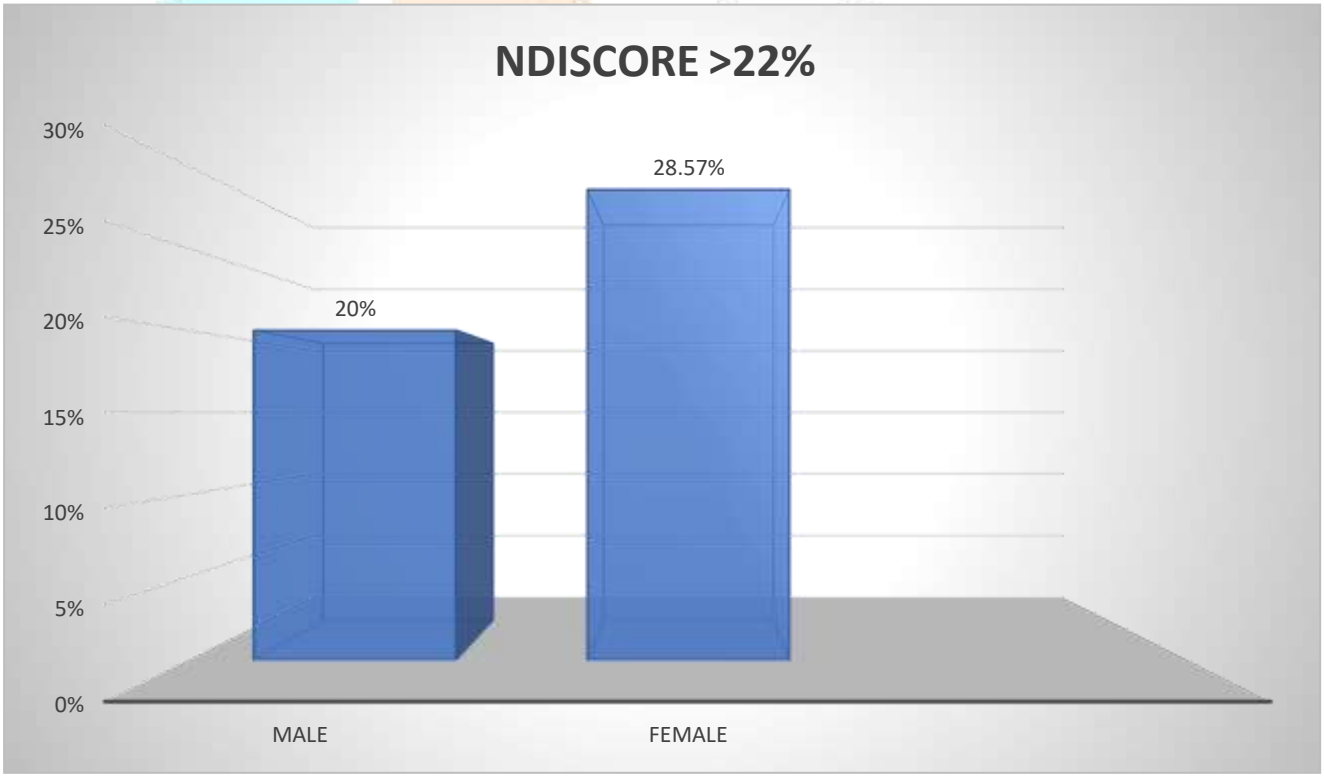


Table1:DistributionofneckdisabilityamonggenderandTotaldisability

Gender	NDI score >22%
Male	20%
Female	28.57%
Total	23.97%

RESULT:

Total 121 responses were obtained from the teachers. 65 males and 56 Females had completed questionnaires. According to responses 58.2% noted no pain at the moment, 24.6% noted mild pain at the moment, 9.8%, 3.3%, 1.6%teachers noted moderate, fairly severe and very severe accordingly. 74.4% has no difficulty with personal care. 13.2% noted personal care with extra pain. 5% noted that they can do his/ herself care but they are slow and careful. 5% notedthey need help but manage most of the personal care. 2.5% need help everydayin personal care. 48.8% noted no pain with heavy lifting, 22.3% can lift heavy weight with extra pain in neck. 10.7% can lift very light weight. 9.9% can lift light to medium weight if that is conveniently positioned. 6.6% can lift heavy weight if it is conveniently positioned.48.8%can read without pain. 36.4% can Read with slight neck pain. 6.6%can read with moderate pain. 3.3% can not read at all. 51.2% have no complain of headaches. 31.4% have slight headacheswhich come infrequently. 4.1% have moderate and severe headaches which come infrequently. 7.4% have slight headaches which come frequently. 60.3% can concentrate without difficulty, 28.1% can concentrate with slight difficulty. 7.4% and 3.3% have fair degree of difficulty and a lot of difficulty in concentration. 61.2%can work normally. 23.1% can do usual work but no more than it.10.7% can do most of the usual work.2.5% can do hardly work at all.43.8% can drive normally, 28.1% can drive with slight pain. 5% can drive with moderate pain. 9.9% can not drive car. For 9.1% this question was not applicable. 65.3% have normal sleep. 19.8% have slightly disturbed sleep. 7.4%have 1-2 hours of sleeplessness. 5% have 2-3 hours of sleeplessness. 61.2% cando recreational activities normally. 29.8% can do activities with slight pain.

6.6% are able to engage most but not all recreational activities. 0.8% can not dorecreational activities. We can say that secondary teachers have mild to moderate disabilities due to neck pain. Most difficulties faced by teachers are lifting and reading that gives mild difficulty to the teacher. Total 23.97% teachers have a significant activities activity of daily living disability. 28.57% females have significant activity of daily living difficulty. 20% males have significant activity of daily living disability.

DISCUSSION:

Teaching is a noble profession and requiring lot of workload to teachers. hard work, anxiety, frequent standing and sitting , reading with inappropriate posture can lead to load on the neck musculature and can lead to mechanical neck pain. Nowadays there is increase in use of computer for teaching which can lead to increase of load over neck musculature. Generally most of the teachers have neck pain felt in some aspects. There are many studies who have done study about musculoskeletal pain among teachers and prevalence of neckpain is higher in teachers than general population in many of the studies.

Longer time of neck pain can lead to increase in disability levels. With severe neck pain, if the teacher works hard and neglect pain, then it can lead to anothersevere complications. It can lead to frequent leaves and early retirement. This study focus on awareness for teachers related to neck pain. In this study we found the teachers have more difficulties in reading, lifting weights and headaches. NDI is most commonly used scale for neck pain. It has 10 sections which contains 6 responses. Scoring given 0-5 according to severity by the patient.

It includes questions like pain intensity, Personal care, lifting, Reading, headaches, Concentration, Work, Driving, Sleeping and recreation. NDI score converted into percentage. If percentage is greater than 22% then we can say that they have significant activity of daily living disability. According to resultprevalence of neck pain disabilities are more in females compare to males.

Teachers faces mild to moderate difficulties with neck pain. Our study states that total 23.97% teachers have significant difficulties in daily living activities.

CONCLUSION:

Our study found that the neck pain and disability of daily living is 23.97% ofteachers of Saurashtra region. Females have more difficulties than males.

Females have 28.57% and males have 20% neck pain related significant limitations. Poor posture during reading and computer work and heavy work load can lead to neck pain and associated disabilities.

Knowledge about proper Posture during Reading, Computer work etc. can lead to improvement in neck pain. Proper guidance about neck pain, proper posture, movement can be given to the teachers. Classroom arrangement can also be done according to proper posture can be done.

LIMITATIONS OF THE STUDY:

The research focuses only on neck pain among secondary teachers of Saurashtraregion.

The research have included only secondary teachers.

REFRENCES:

1. Jani R,Tank K. ImmediateEffect of Dynamic Cuppingon Pain inTeachers with Mechanical NeckPain:AnExperimentalStudy.IndianJournalofPhysiotherapy&OccupationalTherapy Print-(ISSN 0973-5666) and Electronic–(ISSN 0973-5674). 2020 Apr 25;14(2):154-9.
2. Gupta S, Jaiswal P, Chhabra D.Acomparative study between postisometric relaxation and isometricexercisesinnon-specificneckpain.Journalofexercisescienceandphysiotherapy. 2008 Dec;4(2):88-94.
3. Fejer,R.,Hartvigsen,J.Neckpainanddisabilityduetoneckpain:whatistherelation? . *Eur Spine J* **17**, 80–88 (2008).
4. Murugan S, Saravanan P,Avaiya D, Bawa I, Shah C, Vaghasiya E. Prevalence and Risk FactorsforMusculoskeletalPainandCopingStrategiesinSchoolTeachers.JEcophysiol Occup Health. 2021 Jun 17;2021:6.
5. Ehsani F, Mohseni-Bandpei MA, Fernández-De-Las-Peñas C, Javanshir K. Neck pain in Iranianschoolteachers:Prevalenceandriskfactors.Journalofbodywork andmovement therapies. 2018 Jan 1;22(1):64-8.
6. VaghelaNP,ParekhSK.Prevalenceofthemusculoskeletaldisorderamongschoolteachers. National Journal of Physiology, Pharmacy and Pharmacology. 2018;8(2):197-201.
7. KorkmazNC,CavlakU,TelciEA.Musculoskeletalpain,associatedriskfactorsandcoping strategies in school teachers. Scientific Research and Essays. 2011 Feb 4;6(3):649-57.
8. ErickPN,SmithDR.Asystematicreview ofmusculoskeletaldisordersamongschool teachers. BMC musculoskeletal disorders. 2011 Dec;12:1-1.
9. Damayanti S, ZoremM,Pankaj B.Occurrenceofwork relatedmusculoskeletal disorders amongschoolteachersinEasternandNortheasternpartofIndia.InternationalJournalof Musculoskeletal Pain Prevention. 2017 Jan 10;2(1):187-92.
10. PawaliaA,Joshi S,Preeti,YadavVS.Prevalenceofmusculoskeletal painanddiscomfort due toonlineteachingandlearningmethodsduringlockdowninstudentsandteachers:Outcomes of the new normal. Journal of Musculoskeletal Research. 2022 Mar 2;25(01):2150020.
11. AbdulmonemA,HananA,ElafA,HaneenT,JenanA.Theprevalenceofmusculoskeletal pain & its associated factors among female Saudi school teachers. Pakistan journal of medical sciences. 2014 Nov;30(6):1191.
12. CardosoJP,AraújoTM,CarvalhoFM,OliveiraNF,ReisEJ.Psychosocialwork-relatedfactors andmusculoskeletalpain amongschoolteachers.Cadernosdesaudepublica.2011;27:1498- 506.
13. AliasAN,KaruppiahK,HowV,PerumalV.DoesProlongedStandingatWorkAmong TeachersAssociatedWithMusculoskeletalDisorders(MSDs)?.MalaysianJournalof Medicine & Health Sciences. 2020 May 1;16(2).
14. VernonH.TheNeckDisabilityIndex:state-of-the-art,1991-2008.Journalofmanipulativeand physiological therapeutics. 2008 Sep 1;31(7):491-502.
15. VernonH,MiorS.TheNeckDisabilityIndex:astudyofreliabilityandvalidity.Journalof manipulative and physiological therapeutics. 1991 Sep 1;14(7):409-15.
16. MesariaSD.*AnErgonomicAssessmentofMunicipalPrimarySchoolTeachersofSelected TwoCitiesofGujaratState*(Doctoraldissertation,MaharajaSayajiraoUniversityofBaroda(India)).