



A STUDY NECK PAIN RELATED DISABILITY AMONG MALE BARBER OF BANASKANTHA REGION: AN OBSERVATIONAL STUDY

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Abstract

- **Objective** : To study neck pain related disabilities among male barber of Banas kantha region.
- **Method** : A total 114 participants were included. The data was collected with Neck Disability Index (NDI).
- **Results** : 114 Males filled the form. Among them 40 male barbers have significant disability and 74 male barbers has no disability to mild disability and according to Neck disability score 35.09% male barber has significant disability
- **Conclusion** : According to the study, male barbers have significant difficulties and chances are more increased in older barbers in their day-to-day activities.
- **Keywords** : Neck pain, disabilities, male barber

INTRODUCTION:

Musculoskeletal diseases (MSDs) are among the most common and serious occupational health problems impacting the working population. These conditions have a substantial detrimental effect on quality of life. A multitude of studies have been conducted to investigate the relationship between occupation and musculoskeletal pain (MSP). Certain worker groups are more vulnerable to work-related MSDs due to occupational factors. ^[7].

The complicated etiology of MSP, which involves social, psychological, and physical aspects like age, gender, and daily labor in an unsuitable position, is now widely recognized. The International Association for Pain Anywhere from superiorly through the nuchal line to inferiorly by the first thoracic vertebra and laterally up to the shoulder is considered neck pain. ^[1, 2] Neck pain is defined as pain felt anywhere along the posterior C-spine, from the sup. nuchal line to the first thoracic spinous process (Kazeminasab et al., 2022).^[8] Usually, the posterior side of the neck is where pain is noticed. Usually, throat discomfort rather than neck pain is described when the front of the cervical spine suffers (Peng et al., 2021).^[5] "chronic neck pain" is a phrase used to describe a persistent, usually extensive pain that is accompanied by extreme discomfort in the skin, muscles, tendons, and joints as well as discomfort during both passive and dynamic motions in the cervical and shoulder regions according to Noori et al. (2020).^[4] discomfort felt in the neck or cervical discomfort, can be caused by pinched nerves originating from the cervical vertebrae, tight muscles in the upper back and neck, or any combination of these spinal problems. Neck pain is often related to the head's support structure, the lower neck and upper back. If this support system is negatively disrupted, the surrounding muscles will tense, resulting in neck pain (Jahre et al., 2020).^[9] The epidemiology of neck discomfort indicates an increasing global prevalence of the problem. There are major consequences for individuals, communities, and healthcare due to the increased incidence of neck pain. There are major consequences for individuals, groups, healthcare systems, and organizations associated with the incidence of neck discomfort. Prior research findings indicate that approximately 10.4% and 21.3% of each year, neck pain affects millions of people, with office and laptop workers experiencing greater rates. While some studies show that between 33% and 65% of patients with neck pain get better after a year, most instances are believed to follow a recurrent pattern that causes relapses frequently during the course of a person's lifetime. In the general population, neck pain affects 0.4% to 86.8% of people. Men and women have different prevalence rates, and high-income nations have higher prevalence rates than low- and middle-income nations. Additionally, urban areas typically show a higher rate of prevalence than rural ones. Up until the 35–49 age range, there is an increased risk of experiencing neck pain; the risk thereafter begins to decrease (Kazeminasab et al., 2022).^[8] The aim of this research is to ascertain the frequency of neck pain and the extent of impairment encountered by barbers in their routine tasks. The first instrument designed to assess the self-rated difficulties of patients with neck discomfort was the Neck Disability Index. The deficits associated with neck pain were identified using the NDI ^[6]. A total of ten questions concerning routine activities comprise the NDI. The choice that most accurately sums up how difficult an activity is for you must be selected. A significant daily disability is indicated by a score of more than 22%.

Need of the study:

There are many musculoskeletal issues connected to the barbering trade. According to earlier studies, the most common musculoskeletal issue among those whose jobs necessitate persistently uncomfortable position is neck soreness. Many studies have been done on musculoskeletal disorders in professionals, but there aren't many that specifically focus on neck pain and the limitations that come with it in male barbers. We can discover more about the difficulties faced on a daily basis by male barbers who experience neck pain according to this study.

OBJECTIVES OF THE STUDY:

- To study about neck pain related disabilities in male barbers.
- To study about limitations that male barbers feel with neck pain.

INCLUSION CRITERIA:

- Willingness to participate.
- All the male barbers of Banas kantha region with mechanical neck pain.
- Age should be between 20-60 years.
- Working at least 6 hours a day
- Minimum experience should be of 2 years.

EXCLUSION CRITERIA:

- Any previous musculoskeletal injury.
- Any Congenital deformity
- Any neurological disorders.
- Soft tissue injury or swelling in any part of body.
- Any recent fracture or injury.
- The person who has neck pain with other pathologies (Radiculopathy, myelopathy, tumors etc.) were excluded.
- The person who has other systemic diseases were excluded.
- The person who doesn't want to fill the form.

SCOPE OF THE STUDY:

- The study focusses only on male barbers of Banas kantha region.

SUBJECTS AND METHODS:

Data collection and study design:

An observational study conducted on male barbers of Banas kantha region using Neck Disability Index (NDI). Consent for collecting data was taken from the individuals. Data was taken in form of google forms of neck disability index. Data was collected between 28th of September to 24th of October 2023. Questionnaire was asked to the male barbers and answers given by them to therapist were filled in the google form. Age group included for data collection was 20-60 years. Checked for exclusion criteria and the male barbers who fulfilled inclusion criteria was taken for the study. Total 114 responses have been recorded and NDI scores counted. Data of Male barbers have been recorded. The included male barbers had only mechanical neck pain without any other cause. barbers who had neck pain other than mechanical pain was excluded from the study. With the NDI scoring, >22%, it indicates significant disability among barbers. With this study we can find the activities that are more difficult particularly in barbers of Banas kantha region.

RESERCH METHODOLOGY:

NECK DISABILITY INDEX (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

- I have no pain at the moment
- The pain is very mild at the moment
- The pain is moderate at the moment
- The pain is fairly severe at the moment
- The pain is very severe at the moment
- The pain is the worst imaginable at the moment

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

- I can look after myself normally without causing extra pain
- I can look after myself normally but it causes extra pain

- It is painful to look after myself and I am slow and careful
- I need some help but can manage most of my personal care
- I need help every day in most aspects of self-care
- I do not get dressed, I wash with difficulty and stay in bed.

Section3: Lifting

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

Section4: Reading

- I can read as much as I want to with no pain in my neck
- I can read as much as I want to with slight pain in my neck
- I can read as much as I want with moderate pain in my neck
- I can't read as much as I want because of moderate pain in my neck
- I can hardly read at all because of severe pain in my neck
- I cannot read at all

Section5: Headaches

- I have no headaches at all
- I have slight headaches, which come infrequently
- I have moderate headaches, which come infrequently
- I have moderate headaches, which come frequently
- I have severe headaches, which come frequently

- I have headaches almost all the time

Section6: Concentration

- I can concentrate fully when I want to with no difficulty
- I can concentrate fully when I want to with slight difficulty
- I have a fair degree of difficulty in concentrating when I want to
- I have a lot of difficulty in concentrating when I want to
- I have a great deal of difficulty in concentrating when I want to
- I cannot concentrate at all

Section7: Work

- I can do as much work as I want to
- I can only do my usual work, but no more
- I can do most of my usual work, but no more
- I cannot do my usual work
- I can hardly do any work at all
- I can't do any work at all

Section8: Driving

- I can drive my car without any neck pain
- I can drive my car as long as I want with slight pain in my neck
- I can drive my car as long as I want with moderate pain in my neck
- I can't drive my car as long as I want because of moderate pain in my neck
- I can hardly drive at all because of severe pain in my neck
- I can't drive my car at all

Section9: Sleeping

- I have no trouble sleeping
- My sleep is slightly disturbed (less than 1hr sleepless)
- My sleep is mildly disturbed (1-2hrs sleepless)
- My sleep is moderately disturbed (2-3hrs sleepless)
- My sleep is greatly disturbed (3-5hrs sleepless)
- My sleep is completely disturbed (5-7hrs sleepless)

Section10: Recreation

- I am able to engage in all my recreation activities with no neck pain at all
- I am able to engage in all my recreation activities, with some pain in my neck
- I am able to engage in most, but not all of my usual recreation activities because of pain in my neck
- I am able to engage in a few of my usual recreation activities because of pain in my neck
- I can hardly do any recreation activities because of pain in my neck
- I can't do any recreation activities at all

Score: /50 Transform to percentage score $\times 100 = \%$ 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: $16(\text{total scored}) / 50 (\text{total possible score}) \times 100 = 32\%$.

If one section is missed or not applicable the score is calculated: $16 (\text{total scored}) / 45 (\text{total possible score}) \times 100 = 35.5\%$.

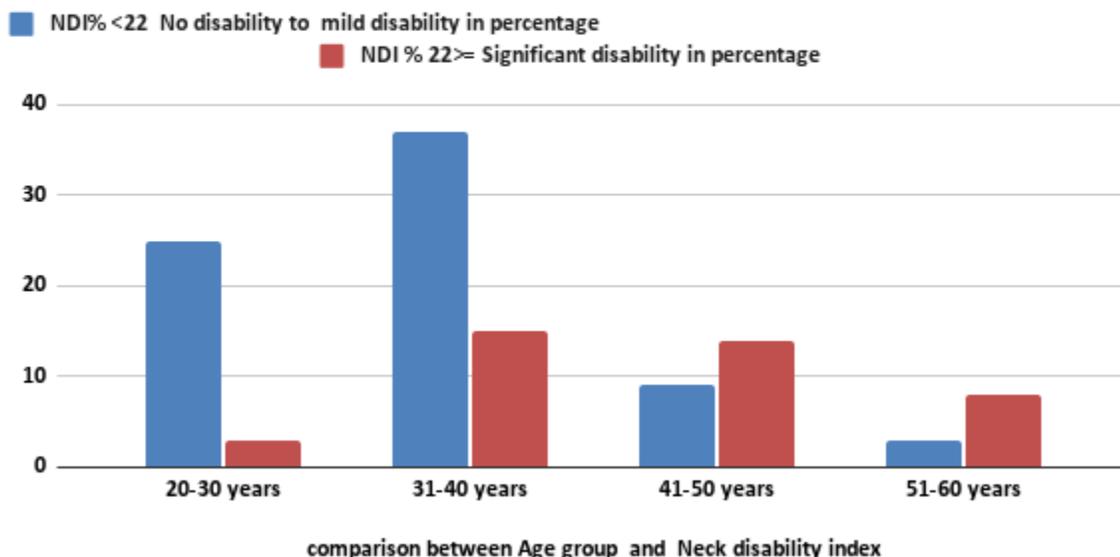
A score of 22% or more is considered a significant activities of daily living disabilities.

Table 1: Neck Disability Index

| | | | | | | |
|-----------------------|---------------------------------|--------------------------------------|--|----------------------------------|--------------------------------|---------------------------------------|
| Pain Intensity | No pain | Mild pain | Moderate pain comes & goes | Moderate pain & not very much | Severe pain comes & goes | Severe pain & not very much |
| | 23.7% | 41.2% | 34.2% | 0.0% | 0.9% | 0.0% |
| Personal care | Look after myself without pain | Look after myself causing extra pain | Painful to look after myself | I need some help | I need help everyday | I do not get dressed, wash difficulty |
| | 56.1% | 30.7% | 12.3% | 0.9% | 0.0% | 0.0% |
| lifting | Lift heavy weights without pain | Lift heavy weights causing pain | Lift heavy weights from table with positioning | Lift light to medium weights | Lift very light weights | Cannot lift/carry anything |
| | 36.8% | 14.0% | 42.1% | 2.6% | 4.4% | 0.0% |
| reading | Read without pain | Read with slight pain | I can read with moderate pain | I cannot read with moderate pain | I cannot read with severe pain | I cannot read at all |
| | 15.8% | 55.3% | 24.6% | 2.6% | 0.0% | 1.8% |
| headache | No headache | Slight headache infrequently | Moderate headache infrequently | Moderate headache frequently | Severe headache frequently | have headaches almost all the time |
| | 52.6% | 36% | 11.4% | 0.05 | 0.0% | 0.0% |
| concentration | No difficulty | Slight difficulty | Fair difficulty | Lot of difficulty | Great deal of difficulty | Cannot concentrate at all |
| | 50.9% | 40.4% | 7.9% | 0.95 | 0.0% | 0.0% |
| working | Do work as I want to | Do usual work, not more | Do most of usual work, but no more | Cannot do usual work | Hardly do any work | can't do any work at all |
| | 18.4% | 62.3% | 19.3% | 0.0% | 0.0% | 0.0% |
| driving | Drive with no pain | Drive with slight pain | Drive with moderate pain | Not drive with moderate pain | Hardly drive with severe pain | Not drive at all |
| | 17.5% | 57.9% | 22.8% | 0.9% | 0.9% | 0.0% |
| sleeping | No sleep trouble | Slight disturbed | Mildly disturbed | Moderate disturbed | Greatly disturbed | Complete disturbed |
| | 58.8% | 31.6% | 8.8% | 0.0% | 0.9% | 0.0% |

| | | | | | | |
|------------|----------------------|------------------------|-------------------------|----------------|----------------|-----------------------|
| recreation | Engaged with no pain | Engaged with some pain | Engaged in most not all | Engaged in few | Hardly engaged | Cannot engaged at all |
| | 56.1% | 35.1% | 7.9% | 0.9% | 0.0% | 0.0% |

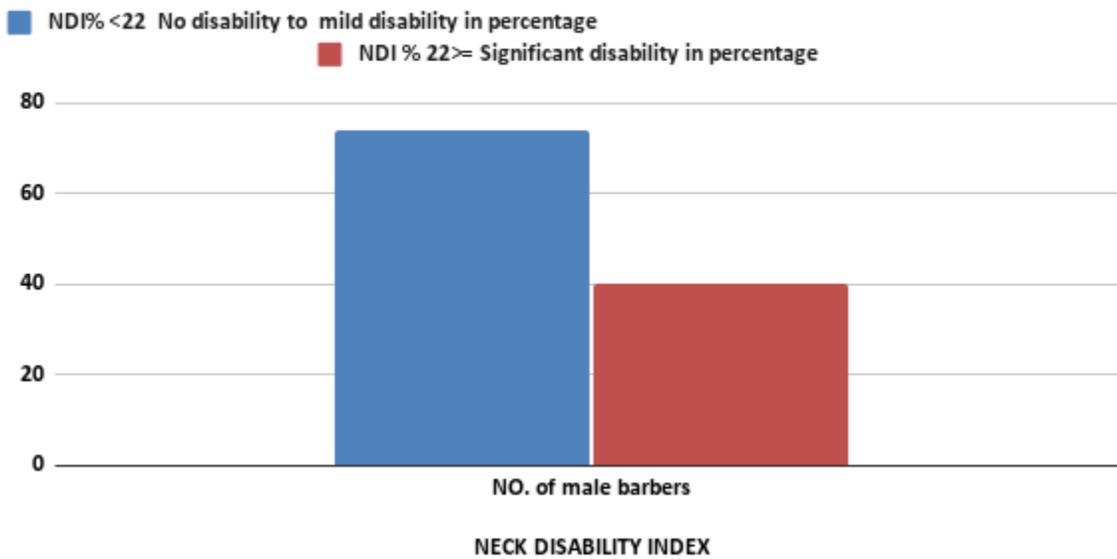
NDI% <22 No disability to mild disability in percentage and NDI % 22>= Significant disability in percentage



| COMPARISON BETWEEN AGE GROUP AND NDI SCORE | TOTAL NUMBER OF MALE BARBERS AMONG 114 | NDI% <22 No disability to mild disability in NUMBER AMONG 114 | NDI % 22>= Significant disability in NUMBER AMONG 114 |
|--|--|---|---|
| 20-30 YEARS | 28 | 25 | 3 |
| 31-40 YEARS | 52 | 37 | 15 |
| 41-50 YEARS | 23 | 09 | 14 |
| 51-60 YEARS | 11 | 03 | 08 |
| TOTAL | 114 | 74 | 40 |

According to the study, male barbers have significant difficulties and chances are more increased in older barbers in their day-to-day activities than males

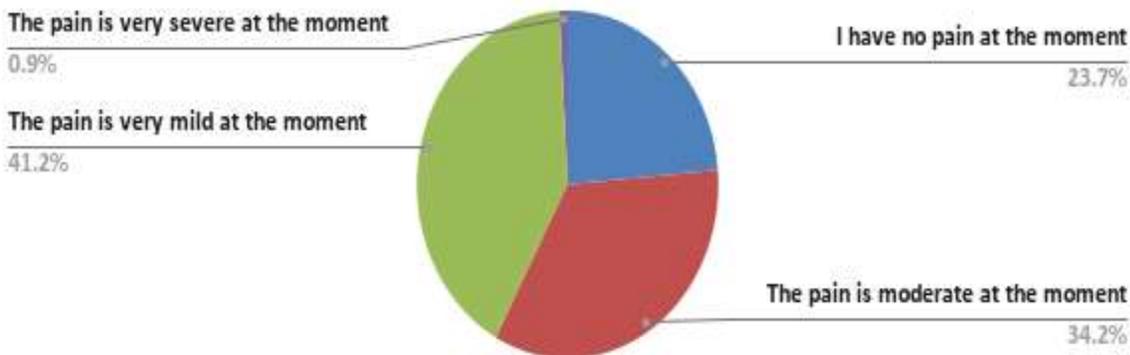
NDI% <22 No disability to mild disability in percentage and NDI % 22>= Significant disability in percentage



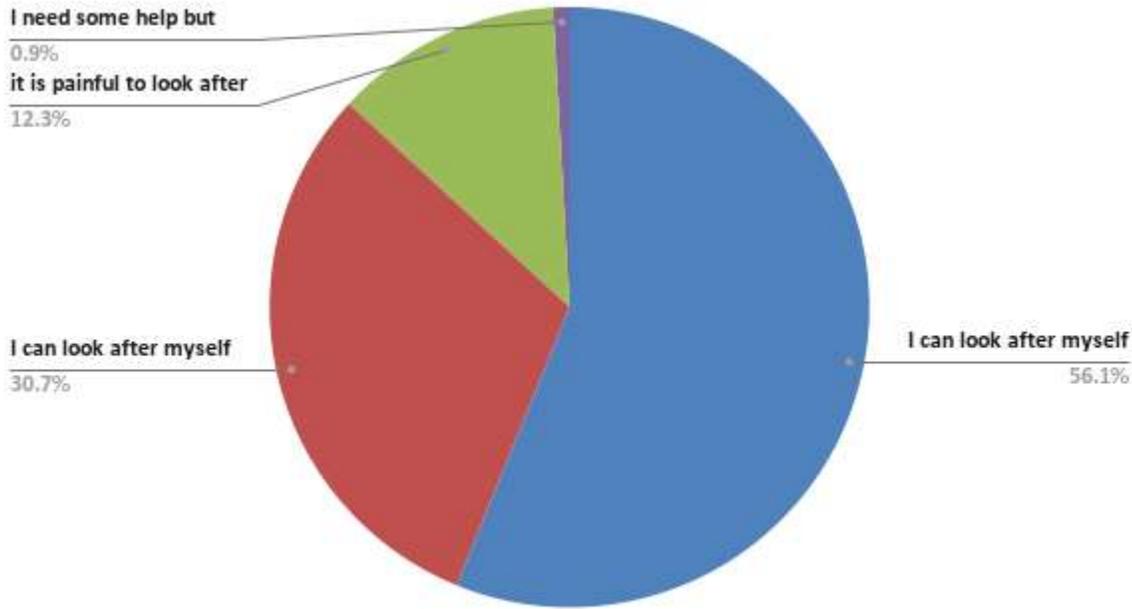
- Among them 40 male barbers have significant disability and 74 male barbers have no disability to mild disability and according to Neck disability score 35.09% male barber has significant disability.

STATISTICAL ANALYSIS:

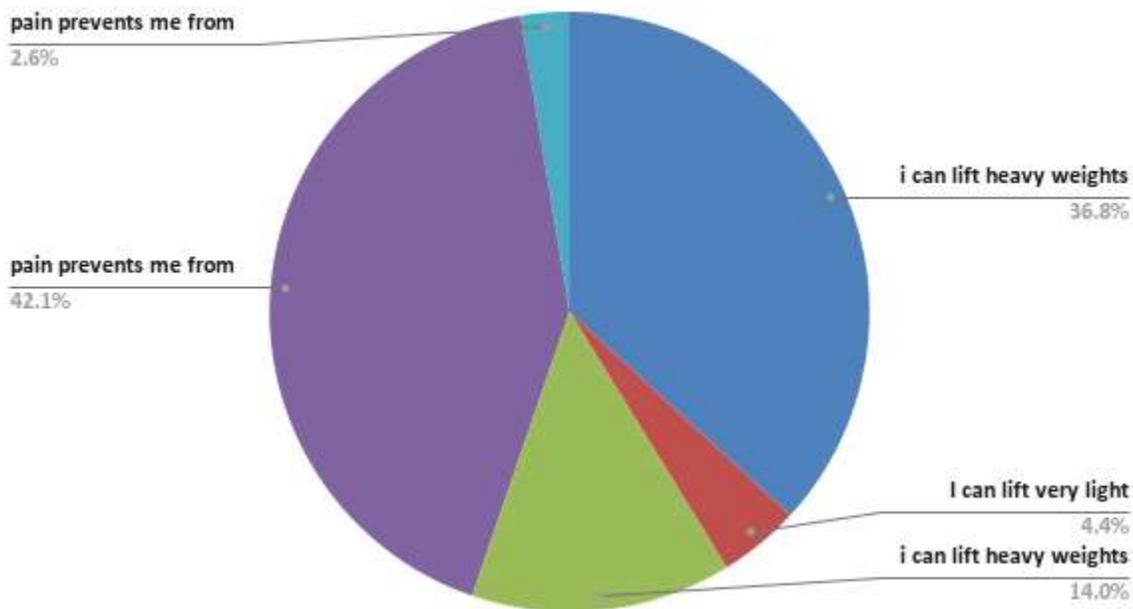
Pain intensity



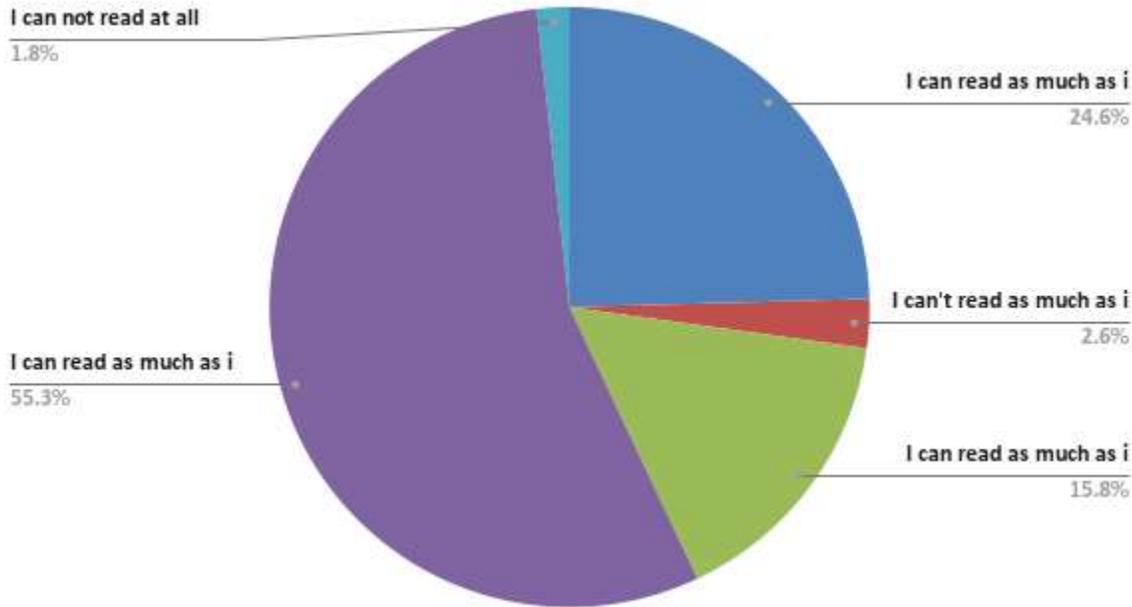
Personal care (washing, dressing etc.)



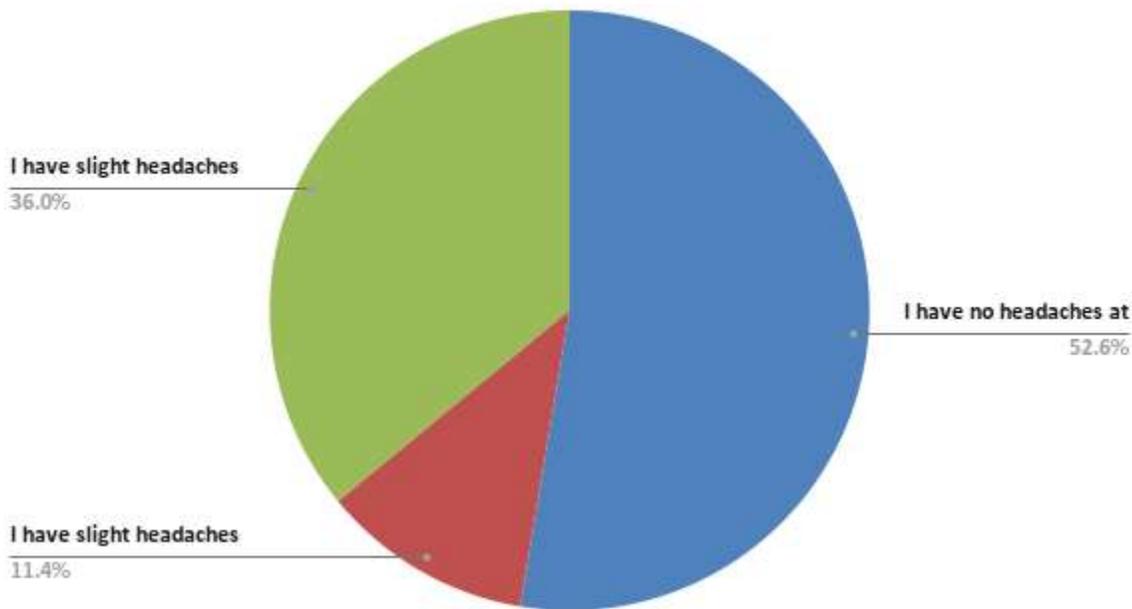
Lifting



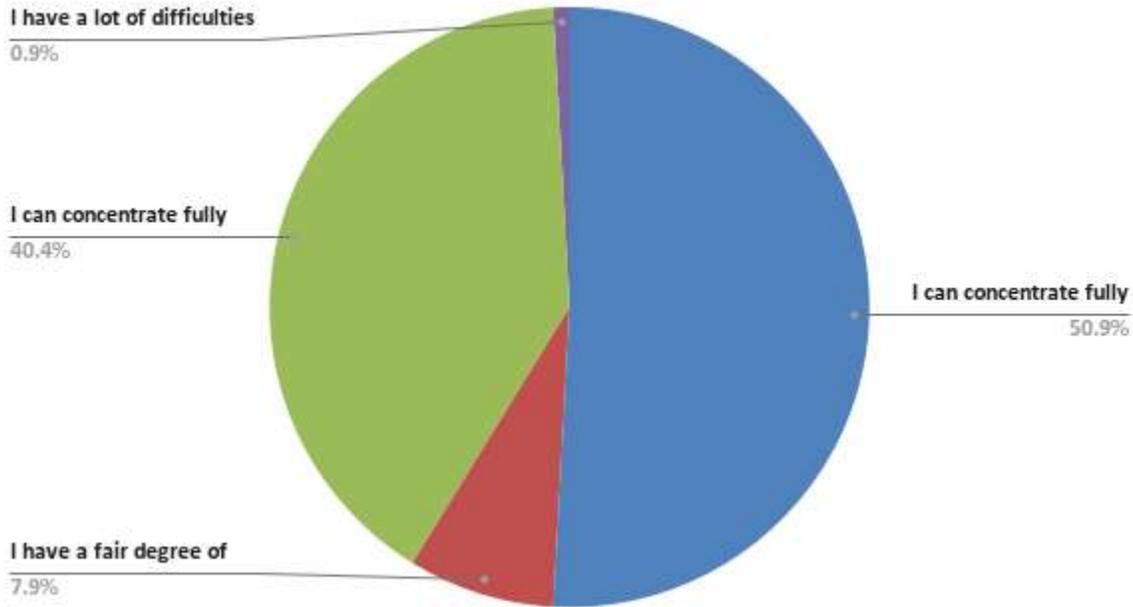
Reading



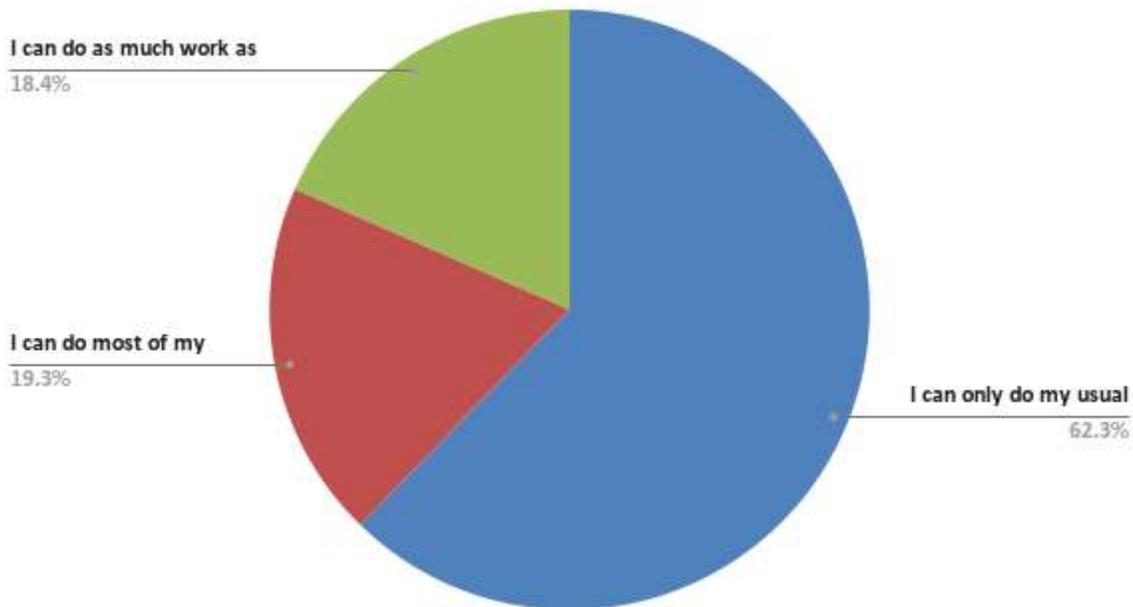
Headaches



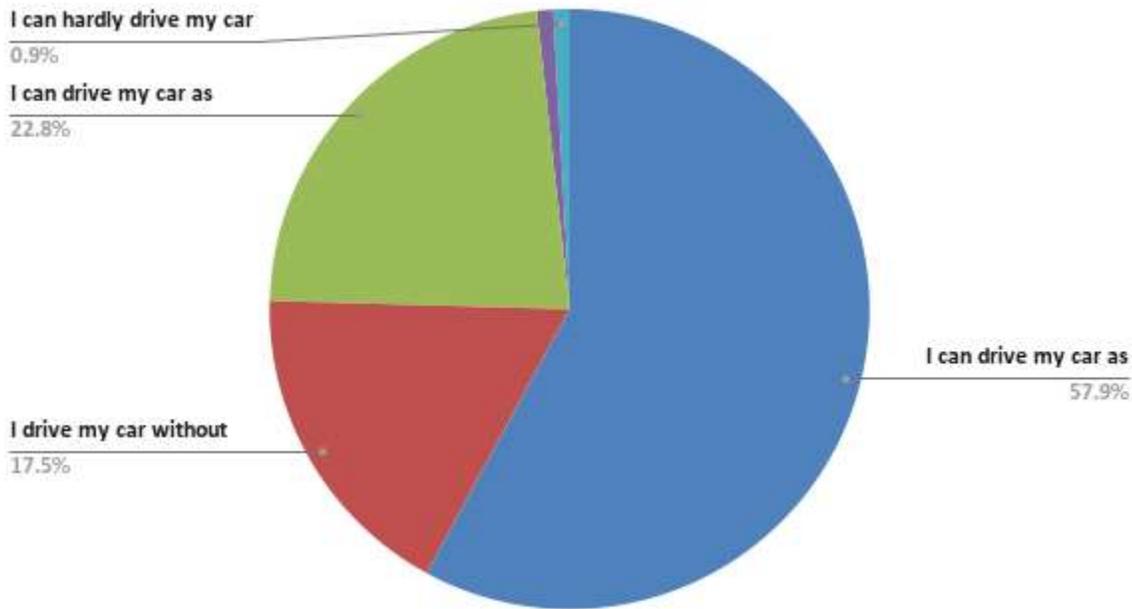
Concentration



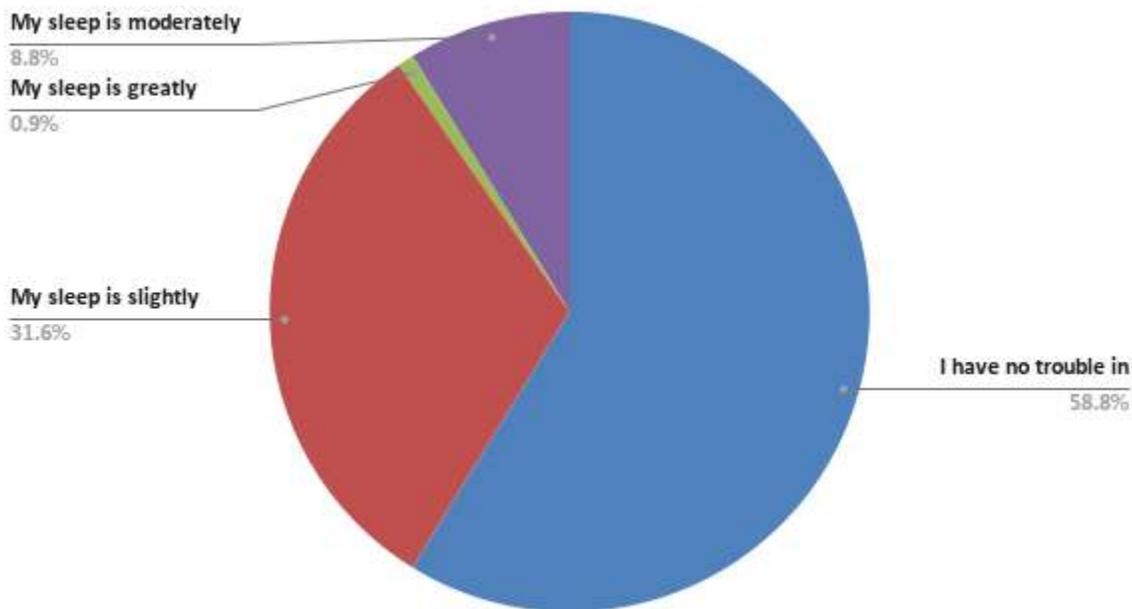
Working



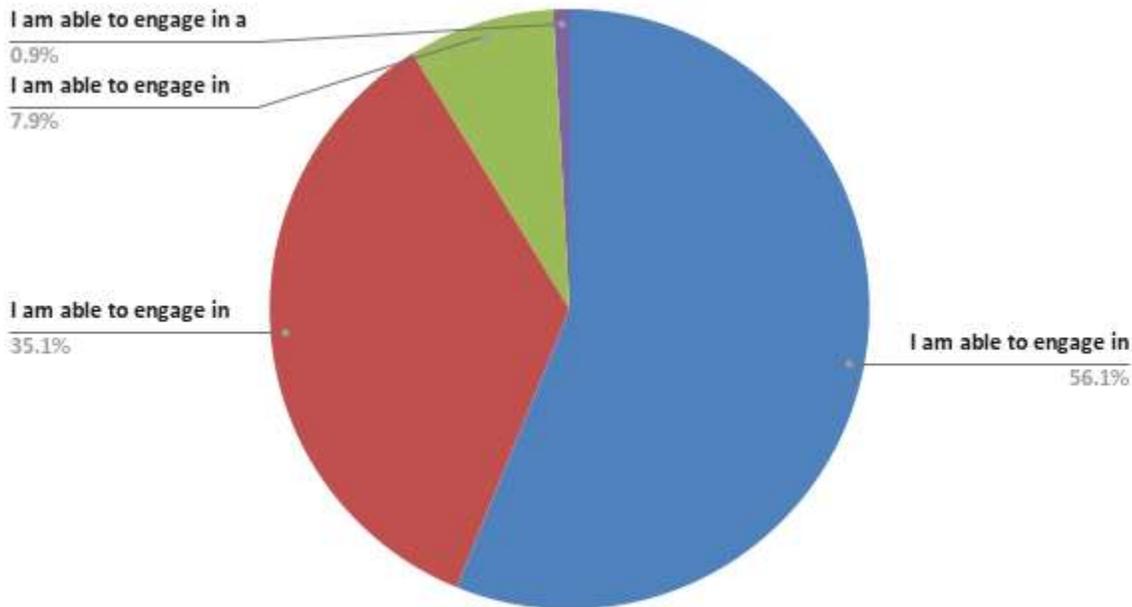
Driving



Sleeping



Recreation



RESULT:

Total 114 responses were obtained from the male barbers. 114 males had completed questionnaires. According to responses 23.7% noted no pain at the moment, 41.6% noted mild pain at the moment, 34.2% barbers noted moderate pain at the moment, 0.9% noted fairly severe accordingly. 56.1% has no difficulty with personal care. 30.7% noted personal care with extra pain. 12.3% noted that they can do his self-care but they are slow and careful. 0.9% noted they need help but manage most of the personal care. NO one need help every day in personal care. 36.8% noted no pain with heavy lifting, 14% can lift heavy weight with extra pain in neck. In 42.1% barber, Pain prevents them from lifting heavyweights off the floor, but they can manage if they are conveniently placed. In 2.6% barber, Pain prevents them from lifting heavyweights but they can manage light to medium weights if they are conveniently positioned. 4.4% can lift very light weight. 15.3% can read without neck pain. 55.3% can Read with slight neck pain. 24.6% can read with moderate pain. 2.6% can't read as much as they want because of moderate pain in their neck. 1.8% cannot read at all. 52.6% have no complain of headaches. 36% have slight headaches which come infrequently. • 11.4% have slight headaches, which come frequently. 50.9 % can concentrate without difficulty, 40.4% can concentrate with slight difficulty. 7.9% and 0.9% have fair degree of difficulty and a lot of difficulty in concentration. 18.4% can work normally. 62.3% can do usual work but no more than it. 19.3% can do most of the usual work. 17.5% can drive his car without any neck pain. 57.9% can drive with slight pain. 22.8% can drive with moderate pain. 0.9% cannot drive car as long as he wants because of moderate pain in my neck. 58.8% have normal sleep. 31.6% have slightly disturbed sleep. 8.8% have 1-2 hours of sleeplessness. 0.9% have 2-3 hours of sleeplessness. 56.1% can do recreational activities normally. 35.6% can do activities with slight pain. 7.9% are able to engage most but not all recreational activities. 0.9% can engage in a few of my usual recreation activities because of pain in my neck. We can say that male barbers have mild to moderate disabilities due to neck pain. Most

difficulties faced by barbers are working. Sleeping that gives mild difficulty to the barber. Total 40 male barbers among 114 barbers with percentage of 35.09% have a significant disability of daily living activities.

DISCUSSION:

profession like barber do cut, dress, groom, style and shave hair or beard and having moderate workload. Hard work, continues handwork, continues standing, working 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 electronic equipment for this kind of job which can lead to decrease of load over neck musculature. Generally, most of the barbers have neck pain felt in some aspect with ages. There are many studies who have done study about musculoskeletal pain among professionals and prevalence of neck pain is higher in barbers than general population due to overuse of neck and hand muscles. Longer time of neck pain can lead to increase in disability levels. With severe neck pain, if the barber works hard and neglect pain, then it can lead to another severe complications. It can lead to frequent pain and early discomfort. This study focus on awareness for barbers related to neck pain. In this study we found the barbers have more difficulties in working, driving, 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 or equal to 22% then we can say that they have significant disability. barbers face significant difficulties with neck pain. Our study states that total 35.09 % male barbers have significant difficulties in daily living activities.

CONCLUSION:

- Our study found that the neck pain and disability of daily living is activities 35.09 % in male barbers of Banas kantha region. 35.09 % male barber have neck pain related significant limitations. According to the study, male barbers have significant difficulties and chances are more increased in older barbers in their day-to-day activities. Poor posture during work and continues standing work with heavy load of head over neck can lead to neck pain and associated disabilities. Knowledge about proper Posture during working, ergonomic chair etc. can lead to improvement in neck pain. Proper guidance about neck pain, proper posture, movement can be given to the barbers. Shop equipment's, adjustable chair and enough rest arrangement can also be done to avoid stress over neck.

LIMITATIONS OF THE STUDY:

The research focuses only on neck pain male barbers of Banas kantha region.

The research has included only male barbers.

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