

## A Comparative study of Homeopathy and Combined Approach of Homeopathy and Yoga for Chronic Non-Specific Neck Pain in age group 18 to 65 Years

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### Abstract

**Background:** Neck pain ranks among the leading causes of disability globally, particularly affecting young adults. Neck pain ranks 4th in disability causes, affecting 6-20% of the workforce with a 50% lifetime prevalence. Annual rates vary from 15% to 50%, peaking in middle-aged females. GBD Study data shows a 21% increase in pain lasting over 3 months from 2006 to 2016. Despite its significant burden, research efforts remain limited, with only 0.12 trials per million disability-adjusted life years and a total of 30 million globally. Its nonspecific form, often multifactorial in origin, diminishes quality of life, productivity, and socioeconomic status. Effective management strategies, including drugs, surgery, and conservative therapies, remain pivotal, yet the optimal approach is uncertain. Yoga, a burgeoning complementary therapy, shows promise in alleviating musculoskeletal pain, though its specific impact on chronic non-specific neck pain remains underexplored. Homeopathy, known for its individualized approach, offers potential relief for neck pain, yet its efficacy in chronic non-specific cases warrants investigation. A comparative study is thus imperative to discern optimal treatment modalities. **Aim and Objectives:** The aim of this study was to compare the effectiveness of Homeopathy alone versus a combined approach of Homeopathy and Yoga for chronic non-specific neck pain in individuals aged 18 to 65 years.

The primary objective was to compare the effectiveness of both treatment modalities using the Neck Disability Index. Additionally, the study aims to identify commonly indicated Homeopathic medicines for chronic non-specific neck pain. **Materials and Methods:** The study employed a comparative design conducted at the OPD of Motiwala (National) Homoeopathic Medical College and Hospital, Nashik, over a six-month duration with a sample size of 46 individuals aged 18 to 65 years. Participants were selected based on the Neck Disability Index, with eligibility criteria including adults with neck pain in the age group 18-65 years, patient selected on the basis of Neck Disability Index with disability range of mild and above (score- 5 and above), neck pain in the cervical region, possibly with referred or radiating pain in the occiput, shoulders and upper limbs and exclusion criteria such as K/C/O-malignancy, disc degeneration, and pregnancy. Convenience sampling was used to allocate participants into two groups: one receiving Homeopathic treatment alone and the other receiving both Homeopathy and Yoga. Treatment efficacy was assessed using the Neck Disability Index, with data collected via case record format and analyzed using unpaired t-tests. Treatment involved administering the Homeopathic similimum based on symptom totality and recommending yoga practice at home. Regular follow-ups monitored symptom changes, with the final assessment using the Neck Disability Index to evaluate treatment outcomes. **Results:** The combined approach of Homeopathy and Yoga proves more effective than Homeopathy alone for chronic non-specific neck pain in individuals aged 18 to 65 years. Among the most commonly prescribed medicines, Natrum muriaticum was administered to 7 patients, followed by Nux vomica and Phosphorus, each prescribed to 5 patients. **Conclusion:** This study shows no significant difference between the effectiveness of Homoeopathy and combined approach

of Homoeopathy and Yoga for Chronic Non-Specific Neck Pain in the age group 18 to 65 years; But by comparing the average NDI score before and after treatment of both the group; it indicates that the group Homoeopathy and Yoga is more effective than the Homoeopathy group in cases of chronic non-specific neck pain.

**Keywords:** Chronic non-specific neck pain, Neck Disability Index, Homoeopathy, Yoga

### **Introduction**

Neck pain stands as a significant global health concern, ranking fourth among causes of disability according to the Global Burden of Disease 2017<sup>(10)(12)</sup>. Its prevalence ranges from 6% to 20% in the workforce, with a lifetime prevalence of 50%. Neck pain exhibits an annual prevalence between 15% and 50%, with higher rates among females, peaking in middle age.<sup>(10)</sup> Despite its socioeconomic impact, research efforts have been limited, with only 0.12 trials per million disability-adjusted life years globally.<sup>(2)</sup> Chronic non-specific neck pain, often multifactorial, poses challenges due to its complex etiology, affecting quality of life, productivity, and socioeconomic status.<sup>(2)</sup> Traditional treatment methods encompass drugs, surgery, and conservative therapies like exercise and acupuncture.<sup>(2)</sup> However, the optimal conservative approach remains undetermined.<sup>(3)</sup> Yoga, recognized as a complementary therapy, has gained attention for its potential in pain management, yet its impact on chronic non-specific neck pain remains understudied. Meanwhile, Homeopathy, known for its individualized approach, lacks comprehensive research on its efficacy for chronic non-specific neck pain. To address this gap, a comparative study was conducted involving 46 patients aged 18 to 65 years, with one group receiving Homeopathic treatment alone and the other receiving both Homeopathy and Yoga. The study aimed to evaluate treatment efficacy using the Neck Disability Index and identify commonly prescribed Homeopathic medicines for chronic non-specific neck pain. Through this research, efforts were made to contribute to the understanding of effective management strategies for this prevalent and debilitating condition. **Aim and Objectives**

The aim of this study was to conduct a comparative analysis of the efficacy between Homeopathy as a standalone treatment and a combined approach of Homeopathy and Yoga for managing chronic non-specific neck pain in individuals aged 18 to 65 years. The primary objective centered on evaluating the effectiveness of both treatment modalities utilizing the Neck Disability Index as a primary measure of outcomes. Additionally, the study sought to explore and identify commonly indicated Homeopathic medicines for addressing chronic non-specific neck pain. This research endeavor aimed to provide comprehensive insights into optimal therapeutic strategies for alleviating this prevalent and debilitating condition, thereby contributing to the advancement of evidence-based management protocols. **Materials and Methods**

The study employed a rigorous comparative design, executed within the outpatient department of Motiwala (National) Homoeopathic Medical College and Hospital, Nashik, spanning a duration of six months. A cohort of 46 individuals aged 18 to 65 years, presenting with self-reported neck pain for a duration more than 3 months, constituted the study participants. Selection criteria were based on the Neck Disability Index, ensuring inclusion of adults with neck pain while excluding cases of malignancy, disc degeneration, and pregnancy. Utilizing convenience sampling, participants were allocated into two distinct groups: one receiving solely Homeopathic treatment and the

other undergoing a combined regimen of Homeopathy and Yoga. Treatment efficacy was meticulously evaluated using the Neck Disability Index as the primary outcome measure. Data collection employed a structured case record format, facilitating detailed documentation of participant responses. Statistical analysis, employing unpaired t-tests, was conducted to discern treatment effectiveness. The treatment protocol involved administering homeopathic similimum tailored to individual symptomatology, complemented by recommendations for yoga practice at home. Regular follow-up assessments meticulously tracked changes in symptomatology, culminating in a comprehensive final evaluation utilizing the Neck Disability Index to ascertain treatment outcomes. This methodological approach ensured robust evaluation of treatment modalities, contributing invaluable insights into optimal therapeutic strategies for managing chronic non-specific neck pain. **Statistical analysis**

The statistical analysis was done using unpaired t-Test based on the pre and post interventional results of NDI scale.

### Result

The calculated t-value of 1.9622, when compared to the tabulated t-value of 2.02 at a 0.05 level of significance, indicates a lack of statistical significance.

Consequently, the null hypothesis is accepted, suggesting no significant difference in the effectiveness of treatments for chronic non-specific neck pain between those treated solely with Homeopathic medicines and those receiving a combined approach of Homeopathy and Yoga. However, upon closer examination of the data, it becomes evident that the group undergoing the combined approach exhibited a notable reduction in Neck Disability Index (NDI) scores from an average of 25.3 before treatment to 9.39 after treatment, compared to the Homeopathy-only group's reduction from 25.56 to 13.2. This disparity suggests that the group receiving Homeopathy and Yoga experienced a more substantial improvement in NDI scores, indicating greater effectiveness in managing chronic non-specific neck pain in individuals aged 18 to 65 years. Additionally, the most commonly prescribed Homeopathic medicines for this condition were Natrum muriaticum (7 patients), Nux vomica (5 patients), and Phosphorus (5 patients), further contributing to the understanding of effective treatment modalities for this prevalent ailment.

Demographic Variable	N	%
<b>Gender</b>		
<b>Male</b>	<b>13</b>	<b>28%</b>
<b>Female</b>	<b>33</b>	<b>71%</b>

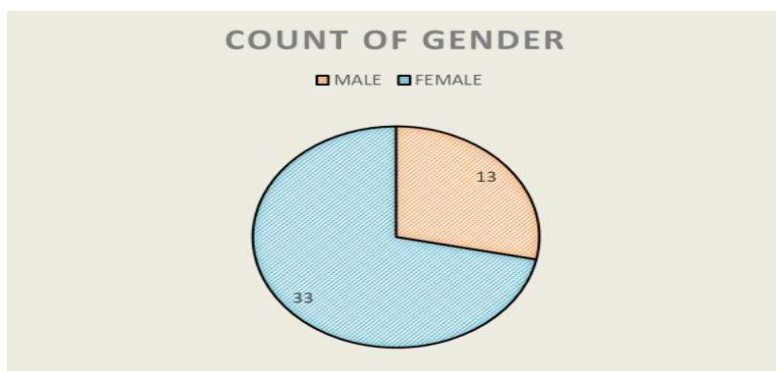


Figure01- Graphical representation showing count of total number of males and females involved in the study.

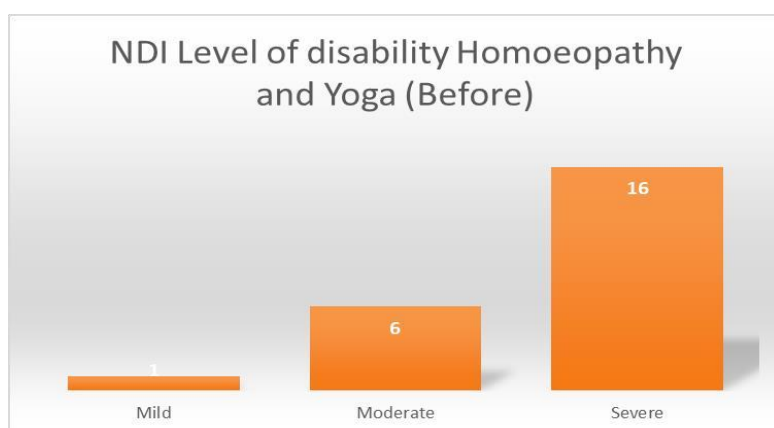


Figure02- Graphical representation of level of disability of Homoeopathy and Yoga group (Before).

Figure number 02 shows the - Graphical representation of level of disability of Homoeopathy and Yoga group (Before)

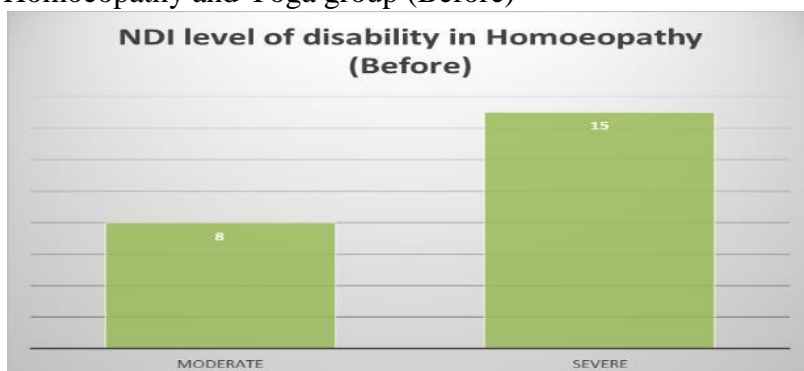


Figure03- Graphical representation of level of disability of Homoeopathy group (Before).

Figure 03 shows Graphical representation of level of disability of Homoeopathy group (Before).

Both the groups one receiving solely Homeopathic treatment and the other undergoing a combined regimen of Homeopathy and Yoga treatment efficacy was meticulously evaluated

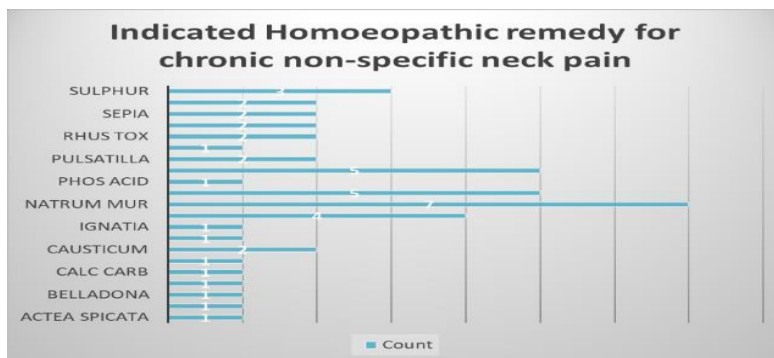


Figure04- Graphical representation of most indicated remedy among patients of chronic non-specific neck pain

Figure 04 shows Graphical representation of most indicated remedy among patients of chronic non-specific neck pain

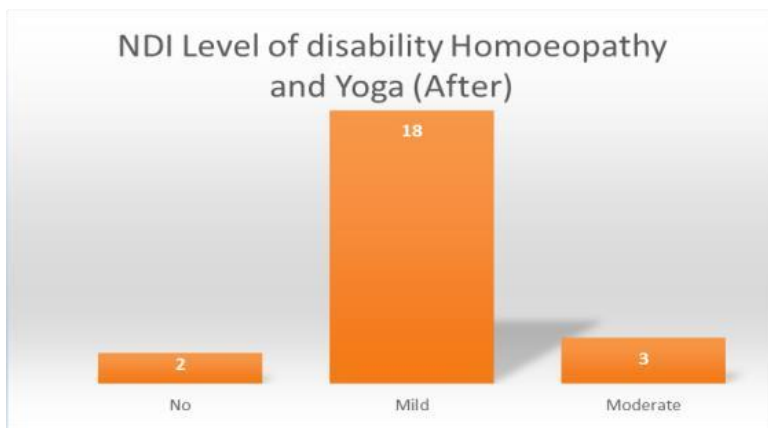


Figure05- Graphical representation of level of disability of Homoeopathy and Yoga group (After).

Figure number 05 shows Graphical representation of level of disability of Homoeopathy and Yoga group (After).

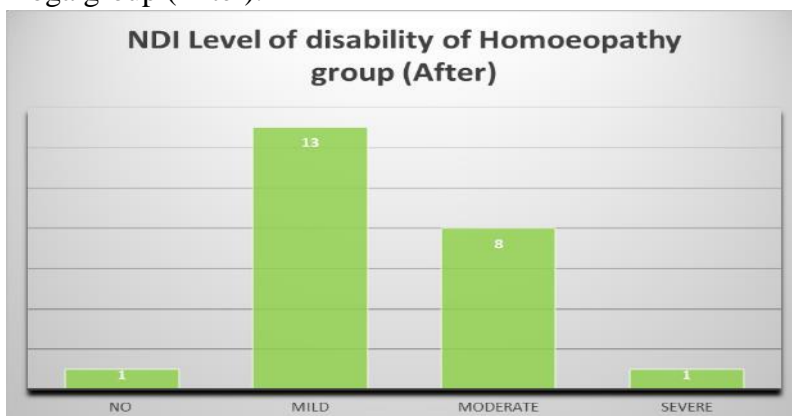


Figure06- Graphical representation of level of disability of Homoeopathy group (After)

Figure 06 shows Graphical representation of level of disability of Homoeopathy group (After).

After the conduction of Homoeopathic case Taking appropriate Homoeopathic indicated medicines were prescribed and Regular assessments with follow-ups for 6-month period were considered. After which the statistical analysis of the results showed the aforementioned determinants.

	Average NDI score before treatment	Average NDI score after treatment
Group: Homoeopathy and Yoga	25.3	9.39
Group: Homoeopathy	25.56	13.2

Above table shows the group - Homoeopathy and Yoga, consisting of 23 samples the average NDI score before treatment was 25.3 which reduced to 9.39 after treatment. In group -Homoeopathy, consisting of 23 samples the average NDI score before treatment was 25.56 which reduced to 13.2 after treatment.

After analyzing the data for effect in cases of chronic non- specific neck pain treated with combined approach of Homoeopathic treatment and Yoga. using the t test; the Calculated t-value of 11.59 significantly exceeds the tabulated t-value of 2.07. The calculated p value is  $<0.0001$ .

Consequently, we embrace the alternative hypothesis with a high degree of statistical confidence.

Sample Size (n)	Standard Deviation(d)	Calculated t value(t)
23	6.61	11.59

Analyzing the data for the effect in cases of chronic non- specific neck pain treated with Homoeopathy using t- test, The Calculated t-value of 9.60 significantly exceeds the tabulated t-value of 2.07. The calculated p value is  $<0.0001$ .

Consequently, we embrace the alternative hypothesis with a high degree of statistical confidence.

Sample Size (n)	Standard Deviation(d)	Calculated t value(t)
23	6.15	9.60

An unpaired t test was used to compare the mean between the two groups.

Group	Group: Homoeopathy & Yoga	Group: Homoeopat hy
Mean	16	12.3
Standard deviation	6.61	6.15
Standard error	1.38	1.28
n	23	23

Standard error of difference = 1.883  $t = 1.9622$  Degrees of freedom =  $n + n - 2$   
 $= 23 + 23 - 2$

Degrees of freedom = 44

The two-tailed P value equals 0.0561

Calculated value of t is 1.9622

Table value of t at 0.05 level of significance is 2.02 The Calculated t value of 1.9622 is less than the tabulated t-value of 2.02. This difference is considered to be not quite statistically significant. Hence, we accept the null hypothesis. There is no difference in effectiveness of cases of chronic non- specific neck pain treated with Homoeopathic medicines compared to cases treated with combined approach of Homoeopathic treatment and Yoga.

## Discussion

Chronic non-specific neck pain is diagnosed as cervical pain without a known pathological basis as the underlying cause of the complaints. It is one of the most burdensome musculoskeletal disorders in the adult population. Seeing its social and economic impact, it is necessary to find out treatments to reduce pain and improve physical functioning in people suffering from this condition. To the best of our knowledge, this is the first effort to assess the effectiveness of Homoeopathic treatment as well as studying the comparative effect of Homoeopathy and Yoga.

A total of 46 patients were included in the study according to inclusion and exclusion criteria from OPD of Motiwala (National) Homoeopathic Medical College who complaint of self- reported neck pain. The status of improvement was assessed through the Neck Disability Index at the first consultation and at the time of 6<sup>th</sup> follow up of each patient.

Out of 46 total patients, by convenience sampling 23 patients were in Homoeopathy and Yoga group and 23 patients were in Homoeopathy group. 23 patients of Homoeopathy and Yoga group were given Homoeopathic medicine as per totality of symptoms and yoga was advised to perform at home for 30-45 minutes daily for a period of 3 months. Before intervention, there was 1 patient in mild disability, 6 were in moderate disability, and 16 were in severe stage of disability. In subsequent followups it was observed that the pain intensity was increased due to wrong practice of yoga at home. Further after understanding of the same, rectification was done. After intervention 2 patients were in no disability and 18 patients are in mild stage of disability and 3 are in moderate stage of disability.

Out of 23 patients of Homoeopathy group, before administration of medicine 8 patients were in moderate stage of disability and 15 were in severe stage of disability. After administration of the Homoeopathic similimum and after six follow-ups, 1 patient in no disability, 13 in mild disability, 8 in moderate disability and 1 in severe.

The commonly indicated Homeopathic medicines in cases of chronic non-specific neck pain are Natrum muriaticum – 7 patients, Nux vomica – 5 patients, Phosphorus – 5 patients.

The interpretation of result is depicted in tabulation and graphical format. Null hypothesis was accepted and thus it indicates that there is no significant difference in improvement of both the groups, but by comparing the average NDI score before and after treatment of both the group; it indicates that the group Homoeopathy and Yoga is more effective than the Homoeopathy group in cases of chronic non-specific neck pain. Improvement was seen both at physical and mental aspects.

The study of the population in the form of comparative study enabled us to closely evaluate the effect of both the therapies which are safe and cost-effective at the same time. An individualized approach in Homoeopathy is highly effective in treating neck pain. Also, Homoeopathy provides effective relief in pain, stiffness of the cervical spine, and improves the mobility of your neck and hands. The practice of Yoga relieves neck pain by improving the pain-related function disability, improve quality of life, and boost mood. While all the patients benefitted from the yoga intervention, the degree to which they benefitted varied.

The hindrance of maintaining causes was faced in improvement of patient; factors such as age, occupation, gender, habits all had their effect on the outcome of study. Practice of yoga at home can be dubious. Sustained yoga practice seems to be the most important predictor of long-term effectiveness which can be a scope for further research.

Different ergonomic factors affecting and their relationship with neck pain can also be a domain for research in future. Further studies can account for time required for tissue adaptation as a result of comparing different interventions. The imperative for additional rigorous, high-quality randomized control trials is emphasized.

## Conclusion

This study shows no significant difference between the effectiveness of Homoeopathy and combined approach of Homoeopathy and Yoga for Chronic Non-Specific Neck Pain in the age group 18 to 65 years;

But by comparing the average NDI score before and after treatment of both the group; it indicates that the group Homoeopathy and Yoga is more effective than the Homoeopathy group in cases of chronic non-specific neck pain.

## Acknowledgment

We extend our sincere acknowledgment to the Motiwala (National) Homoeopathic Medical College and Hospital, for their invaluable support and collaboration throughout the course of this research. Their contribution has played a pivotal role in facilitating the execution of the study and ensuring access to the necessary resources. We recognize and appreciate the collective efforts of both the institution and the participants, emphasizing their significant roles in the successful completion of this study.

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