

Prevalence of neck pain among dentists

M. Magdalene¹, Dinesh Premavathy^{2*}

ABSTRACT

Introduction: Cervical spondylosis is a clinical condition associated with compression of spinal nerves of cervical region that causes degeneration of the spine. The causative factors for this condition are aging, working nature, etc. **Materials and Methods:** The survey was conducted among dental surgeons using a questionnaire. **Results:** The data were obtained and showed that 56.4% of the dentists had suffered with the neck pain for 10–15 years, sometimes during their practice of dentistry. 20.9% (21%) of the dentists complained of the back pain, 33.6% had pain along the neck side, and 31.8% of the dentists had numbness over the medial side of the arms. 49.1% of the dentists seek medical care for neck pain and 57.3% of the dentists are undergoing physiotherapy as a corrective measure. **Conclusion:** The present study thus concluded that majority of the dental practitioners acquired development of cervical spondylosis. The study might be useful for dental practitioners and creates an awareness about the prevalence of cervical spondylosis.

KEY WORDS: Cervical spondylosis, Dentists, Neck pain

INTRODUCTION

Cervical spondylosis is commonly caused due to the degeneration of the spine. It is characterized as “vertebral osteophytosis secondary to degenerative disc disease.” The major and foremost cause for cervical spondylosis is age-related degeneration. It includes symptoms such as neck pain, cervical radiculopathy, and cervical myelopathy.^[1] It is caused due to many factors such as age, occupation, and trauma.^[2] It is also caused due to degeneration of intervertebral discs. The symptoms include pain and stiffness of the neck. Low back pain and neck pain are the most common problems among dental practitioners. The main reason for the occurrence of neck pain is bowing and bending of their heads, turning of the neck, bowing forward from the midriff, height of shoulders, and general bowing or contorting of the back and neck during their working hours. The pain might be caused by muscle strains and unsteadiness of the spinal vertebra because of postural muscles.

The dental practitioners are at high risk of neck pain issues because of the constrained work and limited

visual field related with the oral pit. These working confinements much of the time cause a clinician to accept unpleasant body positions to accomplish great access and inside the oral depression. More than one portion of the body’s muscles are contracted. This may bring about physiological changes such as back, neck, or shoulder pains. Studies have demonstrated that dental practitioners were reporting that they have progression in the back and neck pain. It is one of the major health problems that they were facing.^[3-6] It has been expressed that common site of pain is on the cervical and lumbar vertebrae.^[7,8]

MATERIALS AND METHODS

The main survey was a questionnaire study. This questionnaire was answered by dentists of Saveetha Dental College, and an online survey was also conducted using Google Forms and it is shared through social media among dentists of Chennai city. To know the prevalence of neck pain among dentists, 100 dentists were selected on age group of 26–30, 31–40, and 41–50 years (both male and female). The questionnaire used for the study consisted of totally 20 questions; among them, 6 questions about general information and 14 questions about specific information on neck and lower back pains, symptoms, and occurrence of pain. The dentists were also inquired

Access this article online

Website: jprsolutions.info

ISSN: 0975-7619

¹Department of Anatomy, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India, ²Department of Anatomy, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

*Corresponding author: Dr. Dinesh Premavathy, Department of Anatomy, Saveetha Dental College, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai - 600 100, Tamil Nadu, India. E-mail: dinesh801anatomy@gmail.com

Received on: 16-01-2019; Revised on: 23-02-2019; Accepted on: 18-03-2019

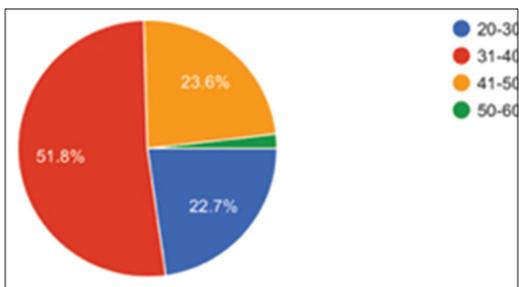


Figure 1: Age group

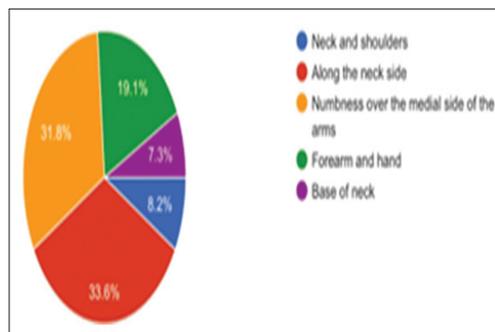


Figure 5: Common site of pain

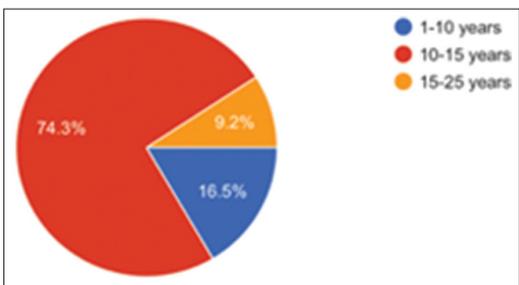


Figure 2: Years of practicing

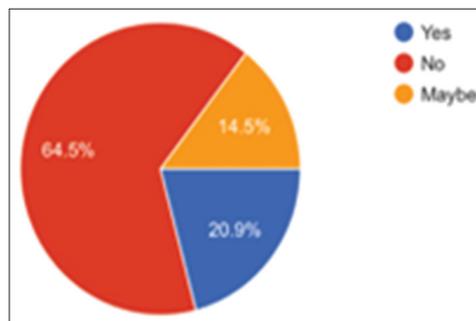


Figure 6: Occurrence of back pain

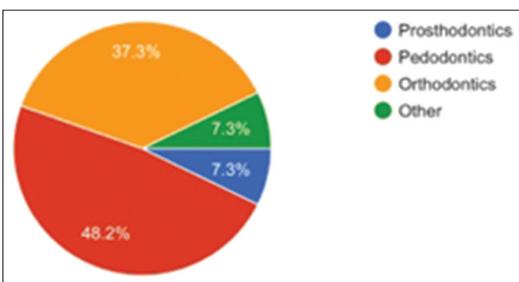


Figure 3: Field of dentistry

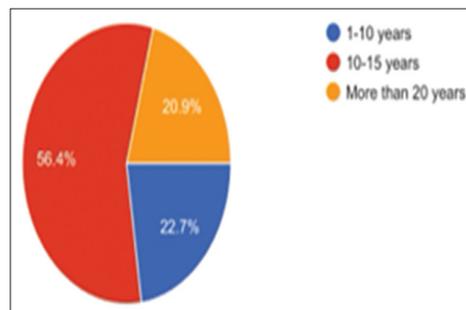


Figure 7: Duration of neck pain

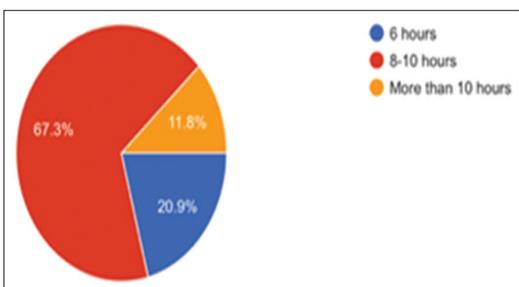


Figure 4: Working hours per day

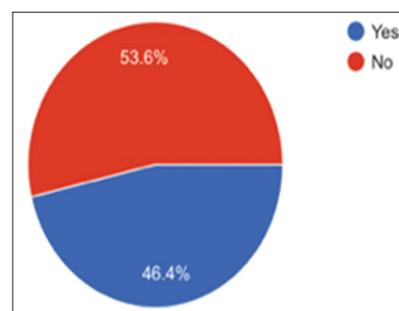


Figure 8: Taking analgesic for neck pain

whether they are undergoing any treatment for neck pain. The questionnaire was printed in the English language. The questions are as follows:

1. To which age group belongs to?

- 31–40 years
- 41–50 years
- 51–60 years

2. How many years are you practicing?

- 1–10 years
- 10–15 years
- 15–25 years

3. Which field of dentistry you belong to?*

- Prostodontics
- Pedodontics
- Orthodontics
- Others

4. How many hours you work per day?*

- 6 h
- 8–10 h
- >10 h

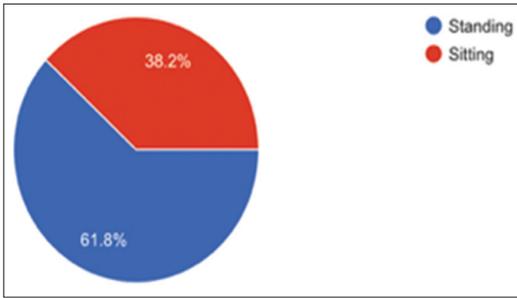


Figure 9: Working status

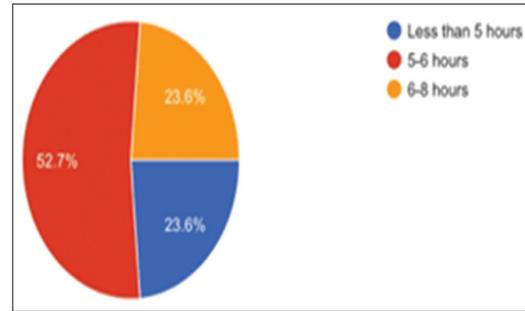


Figure 13: Sleeping hours

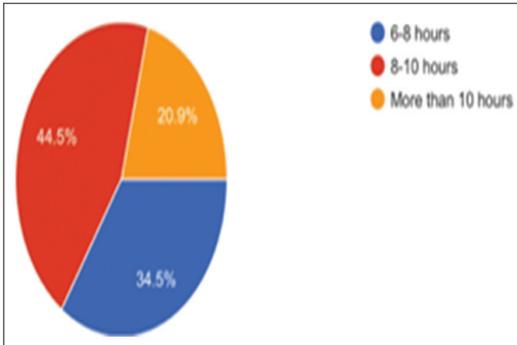


Figure 10: Duration of work by standing

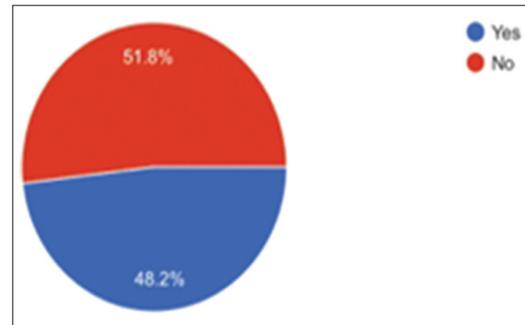


Figure 14: Regular intake food

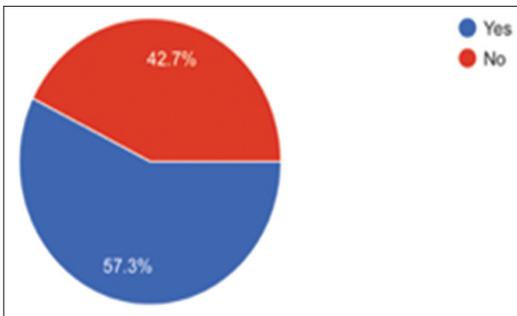


Figure 11: Undergoing physiotherapy as a corrective measure

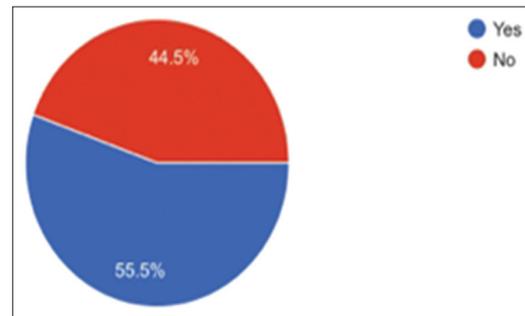


Figure 15: Calcium content in food

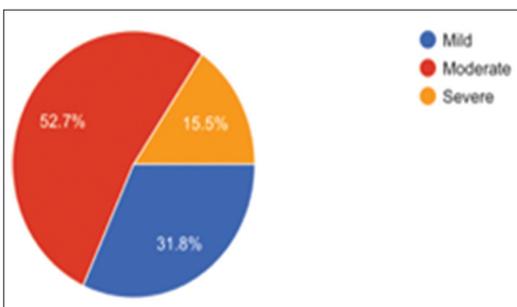


Figure 12: Type of pain

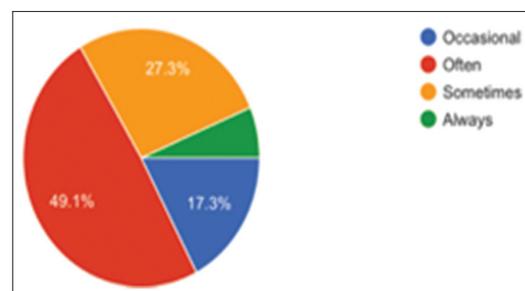


Figure 16: Occurrence of neck pain

5. Which is the common site of pain?*
- Neck and shoulders
 - Along the neck side
 - Numbness over the medial side of the arms
 - Forearm and hand
 - Base of the neck

6. Do you have back pain?*

- Yes
- No
- Maybe

7. How long you are having neck pain?

- 1-10 years
- 10-15 years
- >20 years

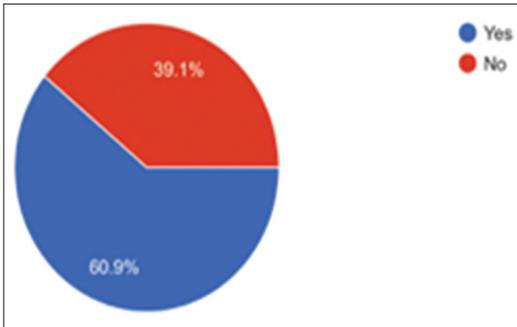


Figure 17: Occurrence of headache or vomiting sensation

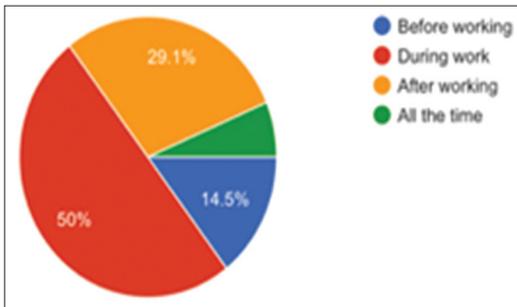


Figure 18: Occurrence of pain in working

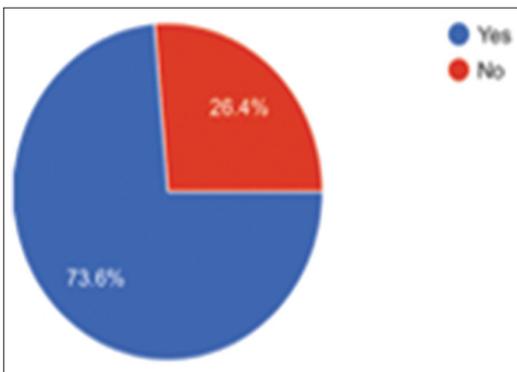


Figure 19: Vomiting sensation

8. Whether you take an analgesic for neck pain?*

- Yes
- No

9. Whether you seek medical care for neck pain?*

- Yes
- No

10. What is your working status?*

- Standing
- Sitting

11. How long you work by standing?*

- 6–8 h
- 8–10 h
- >10 h

12. Whether you are undergoing physiotherapy as a corrective measure?*

- Yes
- No

13. Type of pain*

- Mild
- Moderate
- Severe

14. How many hours you sleep?*

- <5 h
- 5–6 h
- 6–8 h

15. Have you regular food intake at proper time?*

- Yes
- No

16. Whether you will take calcium content in your food?*

- Yes
- No

17. Occurrence of neck pain*

- Occasional
- Often
- Sometimes
- Always

18. Do you have a headache or any vomiting sensation?*

- Yes
- No

19. When pain occurs?*

- Before working
- During work
- After working
- All the time

20. Whether you have vomiting sensation*

- Yes
- No

RESULTS

This study was conducted on 110 dental practitioners; among them, most of them are practicing for 10–15 years (74.3%). Majority of the questionnaires were collected online through Google Forms. Among 110 dental practitioners, majority of the dentists belong to the age group of 31–40 years (51.8%), 41–50 years (23.6%), and 51–60 years (1.9%). Most of dentists are from the department of pedodontics (48.2%), prosthodontics, other departments (7.3%), and orthodontics (37.3%). Most of the dental practitioners are suffering from neck pain; among them, some of the dentists are suffering from neck pain for 10–15 years (56.4%) due to many factors such as irregular posture, due to their working

status and overbending of their head. Since most of the dentists work by standing (61.8%), among 61.8%, most of them work by standing for 8–10 h (44.5%).

Because of their long standing, most of the dental practitioners suffer from neck pain. About 50% of the dentists have neck pain during their work and 29.1% of the dentists have neck pain after their work. The major location for the occurrence of pain is along the neck side (33.6%) which occurs often (49.1%). About 20.9% of the dentists are also suffering from neck pain and also back pain. Furthermore, most of the dentists have vomiting sensation (73.6%). Some of them are taking analgesic for neck pain (46.4%), but most of them are undergoing physiotherapy as a corrective measure (57.3%) [Figures 1-19].

DISCUSSION

A cross-sectional study was carried out to assess the prevalence of neck pain and risk factor associated with the cervical spondylosis among the dental surgeons. The most common site for neck pain was along the neck side, i.e., cervical region.^[11] In dental practitioners, overstrained and back pain and neck and shoulder-related problems are more common.^[12] Some of the dentists are undergoing physiotherapy as a corrective measure for their neck pain. It may be inferred that neck pain among dental practitioners is of extreme condition [Figures 9-12].

The neck pain is a great extent and most common in dental practitioners that causes a lot of distress, lost working time, and financial misfortune. To prevent the occurrence of neck pain, some of the measures have to be taken such as proper posture while working and decreasing the time of standing. Neck pain among dentists occurs very often due to overbending of their heads. 50% of dentists suffer from neck pain during their work. It also caused due to their improper posture.^[13-16]

CONCLUSION

From the results, it can be concluded that majority of the dental practitioners have experienced neck and lower back pain some of the time amid their routine with regard to dentistry. Neck pain is more predominant than back pain principally because of postural their working status. More examinations are required to appreciate the study of disease transmission, hazard factor, and its effect on dental specialist and hygienist. These results

are again consistent with other studies where the most common area involved was the cervical region.

REFERENCES

1. Ferrara LA. The biomechanics of cervical spondylosis. *Adv Orthop* 2012;2012:493605.
2. Bist PK, Peethambaran AK, Peethambar GA. Cervical spondylosis: Analysis of clinical and radiological correlation. *Int Surg J* 2018;5:491-5.
3. Szymańska J. Disorders of the musculoskeletal system among dentists from the aspect of ergonomics and prophylaxis. *Ann Agric Environ Med* 2002;9:169-73.
4. Sharma P, Golcha V. Awareness among dentists of physical activity role in preventing MSD. *Indian J Dent Res* 2011;22:380-4.
5. Sharma P, Golcha V. Awareness among dentists of physical activity role in preventing MSD. *Indian J Dent Res* 2011;22:380-4.
6. Devereux JJ, Vlachonikolis IG, Buckle PW. Epidemiological study to investigate potential interaction between physical and psychosocial factors at work that may increase the risk of symptoms of musculoskeletal disorder of the neck and upper limb. *Occup Environ Med* 2002;59:269-77.
7. Alexopoulos EC, Burdorf A, Kalokerinou A. Risk factors for musculoskeletal disorders among nursing personnel in Greek hospitals. *Int Arch Occup Environ Health* 2003;76:289-94.
8. Binder AI. Cervical spondylosis and neck pain. *BMJ* 2007;334:527-31.
9. Vernon HT, Humphreys BK, Hagino CA. A systematic review of conservative treatments for acute neck pain not due to whiplash. *J Manipulative Physiol Ther* 2005;28:443-8.
10. Canadian Chiropractic Association, Canadian Federation of Chiropractic Regulatory Boards, Clinical Practice Guidelines Development Initiative, Guidelines Development Committee (GDC), Anderson-Peacock E, Blouin JS, *et al.* Chiropractic clinical practice guideline: Evidence-based treatment of adult neck pain not due to whiplash. *J Can Chiropr Assoc* 2005;49:158-209.
11. Harris GR, Susman JL. Managing musculoskeletal complaints with rehabilitation therapy: Summary of the Philadelphia panel evidence-based clinical practice guidelines on musculoskeletal rehabilitation interventions. *J Fam Pract* 2002;51:1042-6.
12. Vernon H, Humphreys BK. Manual therapy for neck pain: An overview of randomized clinical trials and systematic reviews. *Eura Medicophys* 2007;43:91-118.
13. Sarig-Bahat H. Evidence for exercise therapy in mechanical neck disorders. *Man Ther* 2003;8:10-20.
14. Al Wazzan KA, Almas K, Al Shethri SE, Al-Qahtani MQ. Back and neck problems among dentists and dental auxiliaries. *J Contemp Dent Pract* 2001;2:17-30.
15. Aker PD, Gross AR, Goldsmith CH, Peloso P. Conservative management of mechanical neck pain: Systematic overview and meta-analysis. *BMJ* 1996;313:1291-6.
16. Valachi B, Valachi K. Preventing musculoskeletal disorders in clinical dentistry: Strategies to address the mechanisms leading to musculoskeletal disorders. *J Am Dent Assoc* 2003;134:1604-12.
17. Waling K, Jaörholm B, Sundelin G. Effect soft raining on female trapezius myalgia: An intervention study with a 3-year follow-up period. *Spine* 2002;27:789-96.

Source of support: Nil; Conflict of interest: None Declared