

# AWARENESS ABOUT LOW BACK PAIN AMONG DENTISTS

**Nithyanandham Masilamani<sup>1</sup>, Dhanraj Ganapathy<sup>2</sup>**

## **Abstract**

*Musculoskeletal disorders have increased progressively due to various etiological factors . Several occupational factors have been accepted as causatives to these disorders. In dentists, constrained and inconvenient spinal position for back pain, repetitive posture for neck and shoulder pain, and stress are considered as the common causative factors for back, cervical and shoulder complaints . Lower back pain(LBP) is a serious occupational hazard affecting the dentists.This survey was performed with purpose of assessing the awareness of lower back pain and their remedial meaures among dentists.A cross sectional survey was done with a self-administered questionnaire with 10 questions circulated among 100 middle aged dentists aged between 35-50 years. The questionnaire involved information on lower back pain.The responses were recorded and analyzed.89% of the respondents were aware of the dangerous effects of lower back pain .60 % said lower back pain is because of excessive bending,6% said because of wrong sitting posture and 34% said because of wrong standing posture during treatment .84 % feel four handed dentistry can reduce the incidence of lower back pain .65% of the respondents have some kind of low back pain.45% said analgesics as treatment for lower back pain ,30% said physiotherapy and 25% said excercise as the management for lower back pain .There is adequate amount of awareness among dentists regarding low back pain. Many are suffering from it, increased therapeutic programs should be undertaken to treat this problem.*

**Keywords:** Awareness, low back pain, dentists

## **Introduction**

Musculoskeletal disarranges have expanded logically because of different etiological variables (Herrin et al., 1986). A few occupational related elements have been acknowledged as causatives to these clutters. In dental specialists, compelled and strenuous spinal stances for back pain, monotonous stance for cervical and shoulder pain, and stress are considered as the basic causative components for back, neck and shoulder protests (Marras et al., 1993). Lower back pain(LBP) is a genuine word related risk influencing the dental specialists..

---

<sup>1</sup> Tutor, Department of Prosthodontics, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Chennai,India .

<sup>2</sup> Corresponding Author: Professor &Head of Department, Department of Prosthodontics, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Chennai, India,  
Email: [dhanrajmganapathy@yahoo.co.in](mailto:dhanrajmganapathy@yahoo.co.in)

Physical stacking on the low back , specifically high pinnacle powers and unfriendly trunk stances and movements, have been introduced as supporters of the detailing of low back pain (LBP) in diligence.(Punnett et al., 1991). Total physical stacking of spine is frequently additionally thought to be a hazard factor identified with word related LBP, and some in vitro mechanical proof in regards to unfavorable impacts of exorbitant total stacking on tissues is accessible (Punnett et al., 2000).Proportions of physical requests of employments have not been unanimously recognized as hazard factors for the announcing of LBP .(Dutta, 2014; Kumar, 1990)The dental specialists are exceptionally inclined for business related lower back pain because of the iatrogenic interest of treatment..Hence this study was done with an aim to assess the awareness of lower back pain and their remedial measures among dentists.

### **Materials and method**

A cross sectional investigation was finished with a self-managed poll with 10 inquiries flowed among 100 moderately aged dental specialists matured between 35-50 years. The survey included data on the respondent's activity history, singular attributes, physical and psychosocial chance variables at work, general wellbeing status, and the event of musculoskeletal objections and lower back pain. Inquiries on physical outstanding burden concerned tedious developments, clumsy working stances in which the back is bowed or turned, delayed sitting or standing, and difficult arm positions like working with hands in over the top fixing or arm abduction and raised arms, and utilization of vibrating instruments.The responses were recorded and analysed.

### **Results**

89% of the respondents were aware of the dangerous effects of lower back pain ( Fig.1).60 % said lower back pain is because of excessive bending,6% said because of wrong sitting posture and 34% said because of wrong standing posture during treatment ( Fig.2).84 % feel four handed dentistry can reduce the incidence of lower back pain ( Fig.3).65% of the respondents have some kind of low back pain ( Fig.4).45% said analgesics as treatment for lower back pain ,30% said physiotherapy and 25% said exercise as the treatment for lower back pain ( Fig.5).

Fig 1: Awareness of dangerous effects of lower back pain

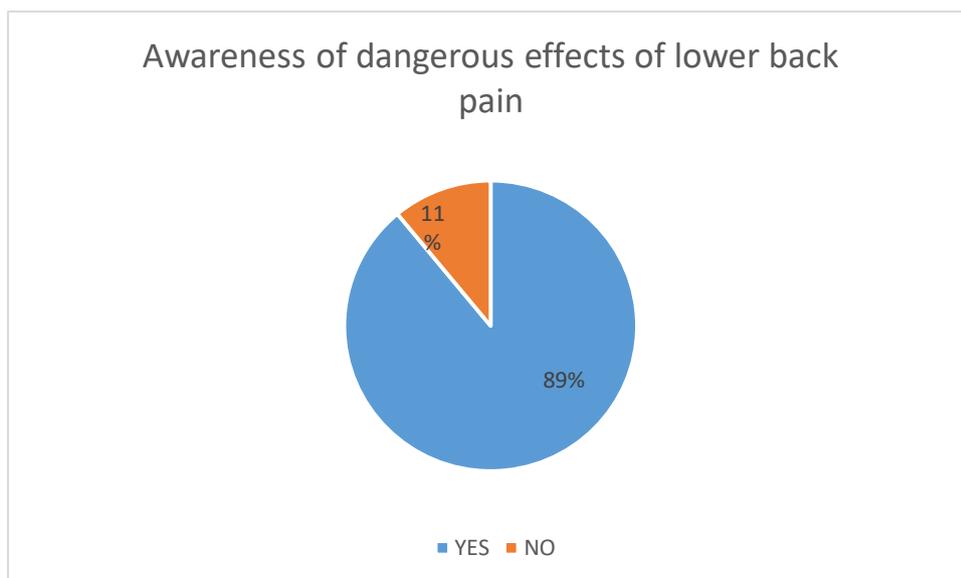


Fig 2: Reasons for lower back pain

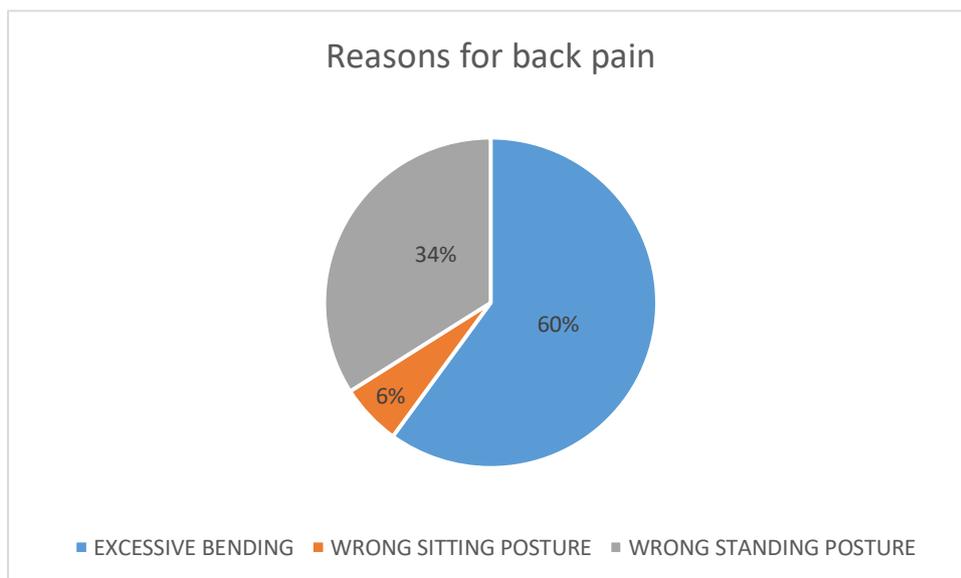


Fig 3: Four handed dentistry in reducing low back pain

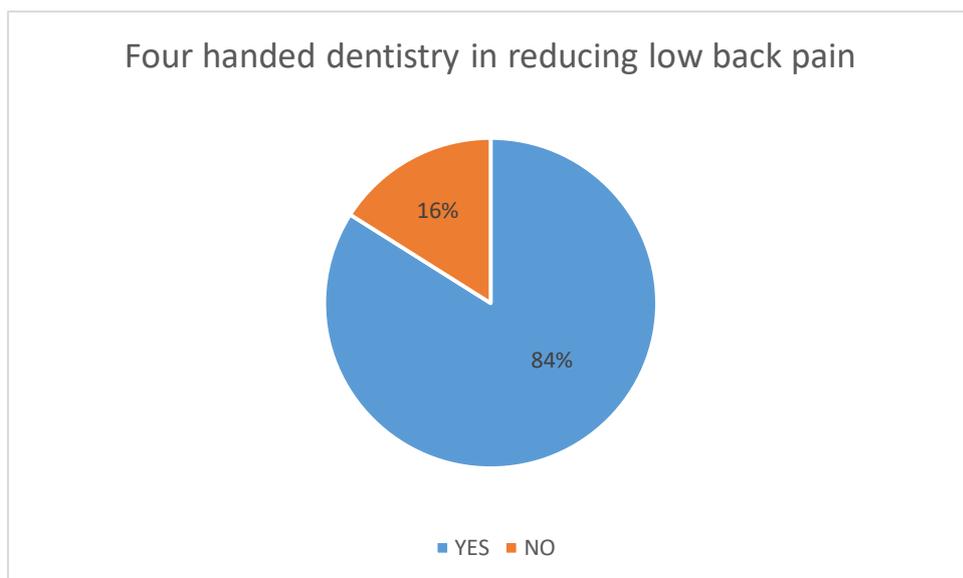


Fig 4: Presence of low back pain

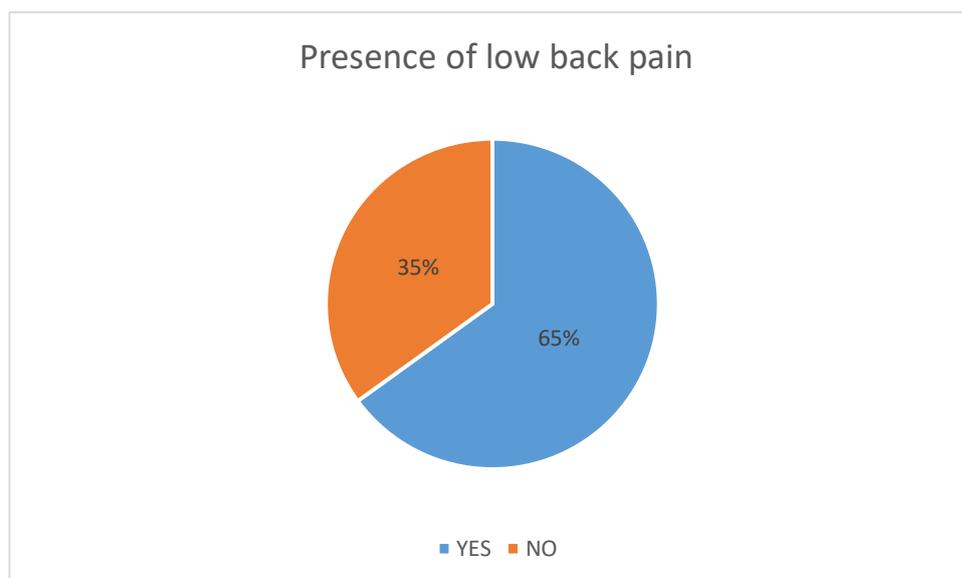
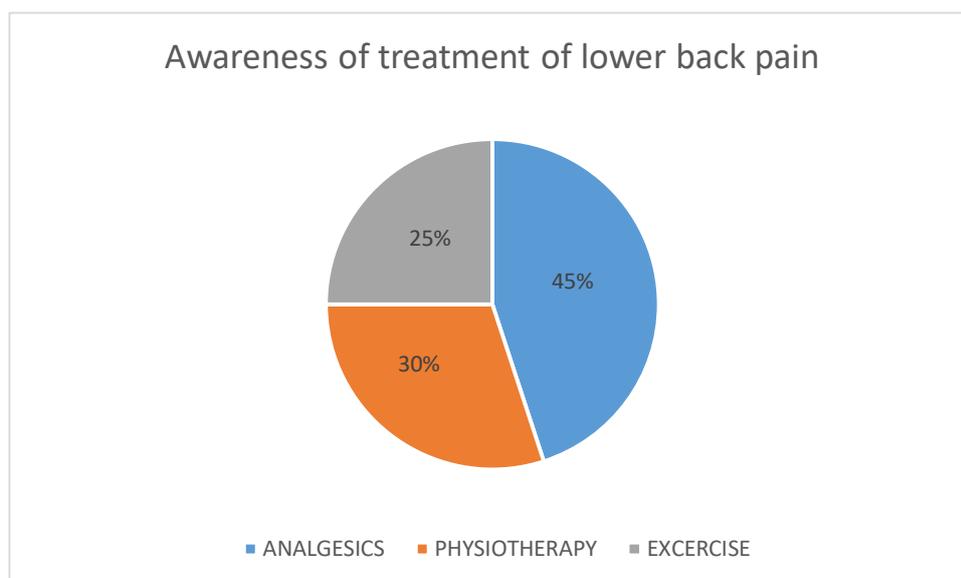


Fig 5: Awareness of treatment of lower back pain



### Discussion

A few sorts of biomechanical factors identified with low back difficulties have been accounted for. These include external burden for the hands ([Jäger et al., 1991](#)) kinematic factors, and dynamic factors, for example, lumbar snapshots of power and gauges of powers on lumbar spinal structures from biomechanical spinal models. To evaluate work chance, biomechanists analyze spinal burdens like lumbar compression assessed from biomechanical models, to extreme compressive quality of cadavar lumbar movement units ([Ratzon et al., 2000](#)). For individuals who abstain work in view of pain, one may expect that biomechanical factors that estimated powers on tissues would be preferable presentation gauges over 'substitutes' of tissue stacking.

Spinal compression, shear and the extensor snapshot of power in the lumbar spine, delivered principally by muscle and tendon, are instances of tissue stacking factors. Obviously, if spine model yields are just mixes of hand power and kinematic inputs and uncover no more data about tissue stacking than the individual sources of info themselves, proper measurable treatment ought to dispose of at least one individuals from exceptionally corresponded blends of these factors. In the event that factors from the yields of a biomechanical spine model are, undoubtedly, wiped out from multivariable measurable models of hazard factors, the proceeded with utilization of spine models to evaluate word related LBP hazard could be addressed due to absence of epidemiological proof to counterbalance contention encompassing suspicions in various models and issues in their immediate approval ([Levanon et al., 2016](#)).

This examination uncovered there is a lot of lower back pain issues with practicing dentists. Vocational back pain among dental specialists had been accounted for among 37% and over 55%. For other sites, information on commonness of musculoskeletal grievances are scanty. Milerad and Ekewan discovered marginally higher prevalence than in our examination, with 44% for neck and 51% for shoulder discomfort. However, in different

reports like our own, prevalences for neck, cervical and shoulder pain have been conferred (Feng et al., 2015; Finsen et al., 1998; Rosecrance et al., 1996).

The observed relations in this investigation give proof for additional exploration and strategy making. Further exploration ventures to break down top to bottom psychosocial factors and adapting methodologies engaged with the event and determination of musculoskeletal objections ought to be attempted to reveal more insight in this issue.

### **Conclusion**

There is an adequate amount of awareness among dentists regarding low back pain. Many are suffering from it, increased therapeutic programs should be undertaken to treat this problem.

### **Funding Support:**

The authors declare that they have no funding support for this study.

### **Conflict of Interest:**

The authors declare that they have no conflict of interest.

### **References**

1. Dutta, T. (2014). Spine shrinkage and cumulative load for determining risk of back injury in caregivers. In *Theoretical Issues in Ergonomics Science* (Vol. 15, Issue 6, pp. 636–646). <https://doi.org/10.1080/1463922x.2013.828800>
2. Feng, B., Wang, Y., Liang, Q., Andersen, L. L., & Szeto, G. (2015). Prevalence of work-related musculoskeletal symptoms of neck and upper limb among dentists in China. In *Physiotherapy* (Vol. 101, p. e379). <https://doi.org/10.1016/j.physio.2015.03.598>
3. Finsen, L., Christensen, H., & Bakke, M. (1998). Musculoskeletal disorders among dentists and variation in dental work. In *Applied Ergonomics* (Vol. 29, Issue 2, pp. 119–125). [https://doi.org/10.1016/s0003-6870\(97\)00017-3](https://doi.org/10.1016/s0003-6870(97)00017-3)
4. Herrin, G. D., Jaraiedi, M., & Anderson, C. K. (1986). Prediction of Overexertion Injuries Using Biomechanical and Psychophysical Models. In *American Industrial Hygiene Association Journal* (Vol. 47, Issue 6, pp. 322–330). <https://doi.org/10.1080/15298668691389829>
5. Jäger, M., Luttmann, A., & Laurig, W. (1991). Lumbar load during one-handed bricklaying. In *International Journal of Industrial Ergonomics* (Vol. 8, Issue 3, pp. 261–277). [https://doi.org/10.1016/0169-8141\(91\)90037-m](https://doi.org/10.1016/0169-8141(91)90037-m)
6. Kumar, S. (1990). Cumulative load as a risk factor for back pain. *Spine*, 15(12), 1311–1316.

7. Levanon, Y., Gefen, A., Lerman, Y., Portnoy, S., & Ratzon, N. Z. (2016). Key Strike Forces and Their Relation to High Level of Musculoskeletal Symptoms. In *Safety and Health at Work* (Vol. 7, Issue 4, pp. 347–353). <https://doi.org/10.1016/j.shaw.2016.04.008>
8. Marras, W. S., Lavender, S. A., Leurgans, S. E., Rajulu, S. L., Gary Allread, W., Fathallah, F. A., & Ferguson, S. A. (1993). The Role of Dynamic Three-Dimensional Trunk Motion in Occupationally-Related Low Back Disorders. In *Spine* (Vol. 18, Issue 5, pp. 617–628). <https://doi.org/10.1097/00007632-199304000-00015>
9. Punnett, L., Fine, L. J., Keyserling, W. M., Herrin, G. D., & Chaffin, D. B. (1991). Back disorders and nonneutral trunk postures of automobile assembly workers. In *Scandinavian Journal of Work, Environment & Health* (Vol. 17, Issue 5, pp. 337–346). <https://doi.org/10.5271/sjweh.1700>
10. Punnett, L., Fine, L. J., Keyserling, W. M., Herrin, G. D., & Chaffin, D. B. (2000). Shoulder disorders and postural stress in automobile assembly work. In *Scandinavian Journal of Work, Environment & Health* (Vol. 26, Issue 4, pp. 283–291). <https://doi.org/10.5271/sjweh.544>
11. Ratzon, N. Z., Yaros, T., Mizlik, A., & Kanner, T. (2000). Musculoskeletal symptoms among dentists in relation to work posture. *Work*, 15(3), 153–158.
12. Rosecrance, J. C., Cook, T. M., & Zimmermann, C. L. (1996). Corrigendum to “Work-related musculoskeletal symptoms among construction workers in the pipe trades” [Work 7 (1996) 13–20]. In *Work* (Vol. 7, Issue 2, pp. 141–142). <https://doi.org/10.3233/wor-1996-7210>