



The Open Dentistry Journal

Content list available at: <https://opendentistryjournal.com>



LETTER TO THE EDITOR

Musculoskeletal Disorders among Dentists: Working Posture Needs to be Improved

Qais Gasibat^{1*} and Aburwais Aymen²

¹Department of Physiotherapy, College of Medical Technology, Misrata, Libya

²Faculty of Dentistry, Misurata University, Misurata, Libya

Article History

Received: December 10, 2021

Revised: January 12, 2022

Accepted: February 16, 2022

1. INTRODUCTION

Dentists are likely at risk of developing back and neck pain. Difficult working positions, tedious work, and persistent standing can cause damage to joints, muscles, ligaments, bones, nerves, blood vessels, and tendons, which can then result in fatigue, pain, and several Musculoskeletal Disorders (MSDs). The kind of pain differs, from an intense feeling to an emphatic pain. The most regular complaint is Low Back Pain (LBP), and all dentists around the globe have come across it in their careers [1, 2].

Almost all dental professionals use most of their working days in fixed, obstinate situations. To avert mistakes, they are required to hold and sustain stable hands and awkward positions. Tense and uncomfortable positions may result in back pain and tedious activities, and psychosocial pressures may result in neck and shoulder pain. The assumed changing roles while engaging in dental work are identified to result in episodic pain for the dentist [3].

Various preventive measures can be adopted, including prior work stretching, engaging in mid-day break-time, performance strategy with decent body position, and decreasing repetitive movement. However, various other issues may still result in LBP. The literature indicates other related aspects, including the dentist's age, amounts of treated patients per day, and the kind of cases treated [4, 5].

Dentists' repetitive poor position results in MSDs [6], making the dentists decrease their working hours and engage in quick retirement [7]. Additionally, a poor position can cause fatigue and injury increment [8], and consequent back pain can add to a higher suicide rate among dentists [9]. Threat aspects impeding a good position include accuracy of treatment, apparatus location, optical demands, and repetitive responsi-

bilities [5]. It has been observed that MSD frequently starts at university [10] and is an issue faced by 64-93% of dentists and 61-85% of dental students [11].

Traditionally, dentists practiced dentistry in the standing position to treat patients, while, now, more than 78% practice dentistry in the sitting position [7]. As a result, MSD has mounted from the lower back to the shoulders and neck [8]. Modern studies have found that pain is most often occurred in the neck as a result of the extreme neck flexion but is also underreported in the wrist and hand [10, 11].

1.1. Preventive MSDs in Clinical Dentistry

Magnification loupes can improve posture because of maintaining a set focal range and providing a suitable posture while working. Wearing magnifying lenses can decrease forward flexion of the head, and the use of magnifying lenses is related to an improved position. Many options are available in the market to improve visual acuity from simple loupes to surgical microscopes. Each has its own advantages and limitations, but they all help to improve accuracy beyond unaided vision.

The natural curve of the spine is maintained by good posture which includes the position of a relaxed shoulder held a little back and levelled. At the same time, the ears must be in proportion with the shoulders, the chin should be tucked a bit inward while the pelvis is adjusted forward to create room for the hips to be positioned with the ankles.

Sitting close to work and at the same time maintaining the habit of keeping constantly used resources within close range are also helpful preventive measures. Other measures include abstaining from indulging in bending and twisting movements or motions, making use of both hands rather than one to perform any task, switching positions, and stretching to relieve muscles that are stiff. Similarly, dentists can change the task or take a momentary time off. A common cause of neck, back or leg pain is sitting and standing for a long period of time. Pain

* Address correspondence to this author at the Department of Physiotherapy, College of Medical Technology, Misrata, Libya; Tel: 00601121348089; E-mail: drqaiss9@gmail.com

and fatigue are a result of difficult posture which often stresses the spine. To feel better, a moment of stretching or walking can also improve circulation, thereby increasing productivity.

CONCLUSION

The risk of MSDs related to work among dentists and working conditions must be acknowledged and further researched. The physical therapist's role is essential and involves stretching and relaxation exercises during the dentist's work-break schedules.

CONFLICT OF INTEREST

The authors declare no conflicts of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Declared none.

REFERENCES

- [1] Abduljabbar TA. Musculoskeletal disorders among dentists in Saudi Arabia. *PODJ* 2008; 28(1): 135-44.
- [2] Udoye CI, Aguwa EN. Musculoskeletal symptoms: A survey amongst a selected Nigerian dentists. *Int J Dent Sci* 2007; 5: 1-5.
- [3] Valachi B, Valachi K. Preventing musculoskeletal disorders in clinical dentistry: Strategies to address the mechanisms leading to musculoskeletal disorders. *The JADA* 2003; 134(12): 1604-2.
- [4] Dimate-Garcia AE, Rodríguez-Romero DC. Risk factors associated to musculoskeletal disorder perception in college students, Bogota., *Int J Ind Ergon* 2021; 81: 103010.
- [5] Gaowgzeh RA, Chevidikunnan MF, Al Saif A, El-Gendy S, Karrouf G, Al Senany S. Prevalence of and risk factors for low back pain among dentists. *J Phys Ther Sci* 2015; 27(9): 2803-6. [<http://dx.doi.org/10.1589/jpts.27.2803>] [PMID: 26504297]
- [6] Hayes M, Cockrell D, Smith DR. A systematic review of musculoskeletal disorders among dental professionals. *Int J Dent Hyg* 2009; 7(3): 159-65. [<http://dx.doi.org/10.1111/j.1601-5037.2009.00395.x>] [PMID: 19659711]
- [7] Morse T, Bruneau H, Dussetschleger J. Musculoskeletal disorders of the neck and shoulder in the dental professions 2010; 35(4): 419-29. [<http://dx.doi.org/10.3233/WOR-2010-0979>]
- [8] Pejčić N, Jovićić MB, Miljković N, Popović DB, Petrović V. Posture in dentists: Sitting vs. standing positions during dentistry work--An EMG study. *Srp Arh Celok Lek* 2016; 144(3-4): 181-7. [<http://dx.doi.org/10.2298/SARH1604181P>] [PMID: 27483563]
- [9] Sancho FM, Ruiz CN. Risk of suicide amongst dentists: Myth or reality. *Int Dent J* 2010; 60(6): 411-8.
- [10] Ng A, Hayes MJ, Polster A. Musculoskeletal disorders and working posture among dental and oral health students. *Healthcare (Basel)* 2016; 4(1): 13. [<http://dx.doi.org/10.3390/healthcare4010013>] [PMID: 27417601]
- [11] Hayes MJ, Osmotherly PG, Taylor JA, Smith DR, Ho A. The effect of loupes on neck pain and disability among dental hygienists. *Work* 2016; 53(4): 755-62. [<http://dx.doi.org/10.3233/WOR-162253>]