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YOGA- A Holistic Approach For Stress Management In Dentistry - “Part And Parcel Of Life”

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ABSTRACT: -

Dentistry is a very challenging and demanding profession. It is always related with some occupational menaces like physical stress i.e. musculoskeletal problems and stress-related problems. The numerous occupation hazards, the dentist encounters are the spinal complications like cervical spondylosis, tendonitis, thoracic kyphosis, arthritis, etc. Also chances of stress related issues are more as they deal with long list of patients, and complicated treatment of procedures leads to different posture problems and leads to continuous strain on the body Hence, there is a dire need for implementation of yogic practices as an anxiolytic agent to lead a healthy and pain free lifestyle. The practice of yoga has been proven to be efficacious in management of quite a lot of stress and lifestyle disorders. It strengthens one physically, mentally, and emotionally. Yoga emphasizes on physical body, mind and breathing. *Asanas* (physical postures), *Pranayama* (breathing techniques) and meditation accomplish the motive behind the need of yoga in dentist's lifestyle. Yoga averts the diminishing of cellular immunity that is evident in mental and physical stress. Yoga is mandatory, enjoyable, convenient, versatile, and highly beneficial and a great way for dentists and their patients to fight off stress and anxiety and to lessen the occupation related musculoskeletal problems. The aim and objective of this review is to bring in to light, the anxiolytic effect of yoga and its efficiency in decreasing the stress levels in dentist's life.

Keywords- *Asanas* , dentistry , musculoskeleton problems, *Pranayams* , stress, yoga



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INTRODUCTION

Dentistry as a profession is an extremely specialized and demanding occupation due to its temperament of work, like, closed working space, unconventional working timings and situations, unswerving attentiveness and dire need of perfection, and hence forth leads to many troublesomeness and complaint over some session to the dental specialist. ¹ To obtain entrance and better permeability of the oral cavity dentists will in general gain skeletal stances which might be unfavorable to their great wellbeing particularly musculoskeletal tissues. ² Along with this long span of dental methodology, a serious extent of focus and steady working stances stimulates wellbeing risks among the dental specialists. The most affected painful body regions among dentists are the neck, shoulder, and back regions, it is important to strengthen the muscles in those areas. And thus yoga plays a important role. The yoga asanas strengthen muscles that tend to become weak and deconditioned in patients that have chronic neck pain, including the rhomboids and lower trapezius, both are crucial muscles in spine and scapular stabilization. ³

The "asanas" (postures) and *pranayama* (breathing exercises) harmonize the physiological system and initiate a relaxation response in the nervous and endocrinal system. Meditation and pranayama, along with relaxing asanas, can aid individuals deal with the emotional aspects as well like chronic pain, reduce anxiety and depression by improving the quality of life perceived.⁴ Practicing yoga decreases metabolism, quite breathing, stabilizes blood pressure, reduced muscle tension, lowers heart rate and slows brain wave pattern. The function of visceral organs improves with the sense of

relaxation with deeper sleep by diminishing fatigue.

AIM & OBJECTIVE

To evaluate the beneficial effect of Yoga on dental health on human being.

MATERIAL AND METHODS

The index, non-index medical journals has also referred to collect information of relevant topic.

Musculoskeletal disorders

Injuries of muscles, ligaments, tendons, nerves, blood vessels, bones, and joints, which can result in pain in the neck, shoulder, arm, wrist, hands, upper and lower back hips, knees, and feet.⁵

- Carpal tunnel syndrome.
- Tendinitis.
- Rotator cuff injuries (affects the shoulder)
- Epicondylitis (affects the elbow)
- Trigger finger.
- Muscle strains and low back injuries.
- Dental profession is well-thought-out to be a high-risk profession in terms of acquiring musculoskeletal disorder due to ergonomic factors such as uncomfortable and static position with tedious movements of arms and hands in combination with postural loads of upper back and head, wrong positioning of the body, and limited body movement while executing the dental procedures for a long duration of time.⁶ Moreover, dental professionals tend to bend their backs, over flex and twist their neck, and raise their arms

and shoulders in order to gain added visibility and accessibility that can result in overstressing of muscles and ligaments and pressurize the nerve roots, thus resulting in pain.⁷ This might decline the quality and efficiency of one's practice.

- Many studies have proved the incidence of musculoskeletal disorders among dentists. Hayes et al. reported a prevalence of general musculoskeletal pain ranging between 64% and 93% among dentists, dental hygienists, and dental students in which back and neck pain was the most common for dentist professionals, while hand and wrist pain was more prevailing among dental hygienists.⁸
- According to Shams Hossaini et al.⁹, the prevalence of musculoskeletal pain ranged between 0.5 and 70%.⁹ In a scenario like this yoga can come to the rescue.



How Yoga Aid Dentists

- ✓ Relax your body-mind complex

- ✓ Slow down your breath making
- ✓ Calm down your mind and focus it
- ✓ Improve the flow of healing 'Pranic life energy'
- ✓ Fortify yourself against omnipresent stressors
- ✓ Increase self-reliance and self confidence
- ✓ Facilitate natural emanation of wastes
- ✓ Taking responsibility for our own health

Yoga Steps Which Can Be Used By Dentists To Avoid Musculoskeletal Disorder

1. **Sit erect with your palms on your thighs.** Raise right hand and shake it slowly with attentiveness of the movements at the wrist joint. Gradually increase the speed of the movement slightly and then erstwhile start shaking your hand as fast as possible. Continue this fast shaking for a few minutes. After some minutes, stop shaking the hand, and place it on the thigh. Breathe deeply and enjoy the fresh flow of blood rushing into your hand as a result of this vigorous shaking.
2. **Lift your left hand and start to shake it slowly.** Be attentive of the movements of the wrist joint. Gradually upsurge the speed of the movement however keeping your hand as sloppy as possible. After some time start to shake your hand as fast as you can for a few minutes. When you feel ready, stop shaking your hand and bring it back to your thigh. Enjoy the fresh flow of blood rushing into your hand as a result of this vigorous shaking.
3. **Lift both your hands and start to shake them slowly.** Be conscious of the movements of wrist joints. Relax your elbows so that this shaking is transmitted throughout your forearms. Upsurge the speed of the shaking movement slowly and then shake your hands as fast as u can. Continue this for a few minutes. When ready, stop shaking your hands and bring them back to your thighs. Take deep Breaths, while enjoying the fresh flow of blood with the revitalizing *Pranic* energy entering into your hands. This *Jathi* washes away all accumulated toxins and

negative stressful radicals from your joints and releases pent-up tensions from the musculoskeletal system.

4. **Walk around your office space**, kicking your legs one after the other. Be cautious of this movement. This will remove tensions from feet and lessen sluggish blood circulation in the lower limb.
5. **Slowly lift your chin up** as if attempting to look at the sky and breathe in for six counts. Breathe out and make the palatal sound EEE while bringing your head back to the central position. Finally, lower your head bringing your chin to the chest while breathing in for six counts. Breathe out making the labial sound MMM and bring the head back to the central position.
6. **Perform alternative nostril breathing** to reduce anxiety and stress for this you have to sit in a comfortable position. Repeat this practice at least three times and then enjoy the complete relaxation that ensures. Be conscious of how all your muscles are relaxing during this practice as the relaxation is deepened when it is compared with tension.

ASANAS-

For dentists, it is required to improve the posture and condition of the body to prevent the injuries.¹⁰

Bhujangasan is one of the main asanas that helps in making the spine flexible and revitalizes and rejuvenates the spinal cord. After practicing this asana, person feels relief of the backache. It also treats cervical spondylosis.

Padmasana also work marvels for the spinal cord by keeping it erect, healthy and flexible. It keeps the lungs filled with oxygenated air and by keeping the diaphragm in proper position and also strengthening the legs by pulling the nerves, muscles and bones taut and thereby thorough massaging

Sirshasana can help both diseased and normal eyes by increasing blood circulation in the organ. It also prevents the development of short and long

sightedness. It also helps in toning the muscles around the eye and give them a new sparkle.

Vajrasana helps in many cases of varicose veins. This asana helps in reducing the blood flow to the lower limbs. Skin diseases occur due to allergy or poor resistance. The cure lies in strengthening the vital organs like the thyroid and pituitary glands.¹⁰

Oral Health Conditions Related To Stress

- i. **Stress-related oral health conditions** - Literary evidence suggests that stressed individuals report poorer oral health¹¹ Shankardass hypothesized two pathways via which chronic stress could result in long-term oral disease development.¹² First, stressed individuals tend to cope in unhealthy ways such as substance abuse and poor diet which can nurture oral diseases. Second, chronic stress could result in dysfunctional physiological systems which in turn would affect the underlying mechanism of disease progression.¹² Various stress-related conditions can affect the oral cavity including aphthous ulcers, myofascial pain dysfunction syndrome (MPDS), oral lichen planus, xerostomia, burning mouth syndrome, and bruxism.¹³ Moreover, irregular eating habits could result in gastric refluxes which ultimately would result in dental erosion.¹⁴ Xerostomia would culminate in halitosis, dental caries, and periodontal diseases, all of which affect the quality of life.
- ii. **Orofacial development-** Myofunctional therapy, an adjunct used in interceptive orthodontics includes facial and tongue exercises to promote proper tongue position, improved breathing, chewing, and swallowing. These, when used in early formative years, can help in lowering the severity of the malocclusion.¹⁴
- iii. **Others-** Yoga can also be helpful in the management of substance abuse such as tobacco

and alcohol which can result in morbidity and mortality. Meditation and Breathing exercises help in relaxing and relieving the person from stress, and hence help in control the urges.

Yoga for stress-related oral health conditions

Pranayam- *Pranayama* (breathing exercises) harmonize the physiological system and initiate a relaxation response in the nervous and endocrinal system. Meditation and pranayama, along with relaxing asanas, can help individuals deal with the emotional aspects as well like chronic pain, reduce anxiety and depression by improving the quality of life perceived. Yoga reduces metabolism, quite breathing, reduced muscle tension, stabilizes blood pressure, reducing heart rate and slows brain wave pattern. The functional capacity of visceral organs improves with the sense of relaxation with deeper sleep and reducing fatigue.¹⁵ The literature proves a affirmative relationship between oral health problems and psychological condition. Stress-related oral conditions include dental caries/erosion, gingivitis/periodontitis, bruxism and clenching of the jaw, MPDS myofascial pain dysfunction syndrome, aphthous ulcers, oral lichen planus, and burning mouth syndrome (Bhushan, Sandhu, Sandhu, 2014).¹⁶ There is significant evidence supporting the use of yoga as a complementary or combination therapy for the management of stress, anxiety, and depression (Butterfield, Schultz, Rasmussen, & Proeve, 2017).¹⁷ Eliminating stress with yoga prevents pain and oral health problems. When stress level decreases, muscles relax, teeth clenching decreases, and there are lesser dental caries and oral diseases. Yoga intervention in patients with cervical myofascial pain syndrome resulted in significant improvement in the quality of health, physical capacity (strength), cervical range of motion, decrease in the disability, and pain in a study (Sharan, Manjula, Urmi, & Ajeesh, 2014).¹⁸ The consciousness in mindfulness, meditation, relaxation, and yoga can help to relief the stress areas in the body and soothing these muscles can prevent from stark complications which require

complicated dental treatment. Stress leads to dry mouth, due to reduction in saliva production. Dry mouth causes halitosis (bad breath) and can ultimately develop into dental caries and periodontal disease. A few yoga postures such as forward bends, twists, and inverted poses are believed to increase saliva production. The *khechari mudra* (the tip of the tongue is placed along the roof of the mouth, then towards the back of the nostrils and holding it for 2-4 minutes) is an operative way to activate salivary glands. It is proposed that yoga helps in managing the case of lichen planus, a premalignant oral condition that is a psychosomatic disorder results due to modern lifestyle (Vijender, Saurabh, & Raju, 2016)¹⁹

Yoga And Oral Health Relation In Children

Children performing yoga asanas like shitali and sheetkari pranayama that helps in correcting the alignment of teeth and avoiding their irregular development. Yoga also helps in the prevention and cure of lichen planus, a premalignant oral Condition, that is prevalent in today's daily lifestyle due to increased incidence of psychosomatic disorders.

Yoga And Overall Health Relation

- I. It is good for patients who are allergic to local anesthesia, antibiotics and analgesics, and other modern drugs.
- II. Hypertensive and patients with high blood sugar levels can undergo extraction without any complications.
- III. Very Minimal Bleeding, Less injury to the healthy tissues, and hence fast healing of the Gums.
- IV. Procedure will be very brisk and effective.
- V. Post extraction complications like severe swelling delayed wound healing and secondary hemorrhage is not found.
- VI. Even the stumps, molar tooth, and milk tooth can be extracted successfully by this method.

Adverse Effects-

Some yoga asanas are too complex and demand

practice, and are not to be tried by neophytes, or would cause injuries. Also, yoga can cause pain if not done in right way. So, adequate precautions and measures should always be taken, Cramer *et al.* conducted a systemic review of adverse events associated with yoga and reported injuries, fractures, ligament tears, joint injuries, lumbar disc annular tears, fibrocartilagenous injuries, and myositis ossificans to be the most common associations. Moreover, glaucoma, orbital varices, peripheral neuropathy, transient headache, stroke, and pneumothorax were the lesser reported adversities.²⁰ Meshramkar *et al.* presented a case of dental erosion, wherein the patient vomited on an empty stomach to clean his gastrointestinal tract as a part of yoga for over 12 years.²¹ Such practices should be dodged as it will have an adverse effect on the patient.

CONCLUSION

Yoga is an effective substitute to fight the various occupational problems related with the dentistry and it has also been proven to be advantageous for a many of dental health-associated conditions. Also, it has a helpful effect on combating psychological stress. An added benefit of practicing yoga is the fact that it is not duteous and painstaking and can be easily done in small sessions. Hence, practicing yoga daily for a small period of time would undo the damage caused by the tireless lifestyle, rejuvenate an individual, and, therefore, provide a holistic approach to life.

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REFERENCES

1. Bhushan K, Sandhu PK, Sandhu S. Psychological stress related oral health problems- Dental perspective. *Int J Res Dent.* 2014;4:43-7.
2. Fasunloro A, Owolade J. Occupational Hazards Amongst the clinical Dental Staff. *The Journal of the contemporary dental practice* 2004 May 15, 5:2,1-9.
3. Kapoor V. Yoga: A boon for the dental professionals. *Indian journal of dentistry* 2015; Jul;6(3):115.
4. Abduljabbar TA. Musculoskeletal disorders among dentists in Saudi Arabia. *Pakistan Oral & Dental Journal* 2008;28(1):135-44.
5. Alghadir A, Zafar H, Iqbal ZA. Work-related musculoskeletal disorders among dental professionals in Saudi Arabia. *J Phy Ther Sci.* 2015;27:1107-12
6. Kumar VK, Kumar SP, Baliga MR. Prevalence of work-related musculoskeletal complaints among dentists in India: A national cross-sectional survey. *Indian J Den Res.* 2013;24:428-38.
7. Bhushan P, Gautam A, Bhushan P, Kumar K. Musculo-skeletal disorders among dentist and yoga pose. *J Med Dent Sci Res.* 2016;3:25-31.
8. Hayes M, Cockreil D, Smith DR. A systemic review of musculoskeletal disorders among dental professionals. *Int J Dent Hyg.* 2009;7:159-65.
9. Shams-Hossaini NS, Vahdati T, Mohammadzadeh Z, Yeganeh A, Davoodi S. Prevalence of musculoskeletal disorders among dentists in Iran: A systemic review. *Mater Sociomed.* 2017;29:257-62.
10. Ruth McCaffrey, Juyoung Park. The Benefits of Yoga for Musculoskeletal Disorders: A Systematic Review of the Literature. *J Yoga Phys Ther,* 2012; 2 (5): 100-122
11. Vasiliou A, Shankardass K, Nisenbaum R, Quinonez C. Current stress and poor oral health. *BMC Oral Health* 2016;16:1-8.
12. Shankardass K. Place-based stress and chronic disease: A systems view of environmental determinants. In: O'Campo P, Dunn JR, editors. *Rethinking Social Epidemiology: Towards a Science of Change.* New York: Springer Publishing Company; 2012. p. 117-8.

13. Kaur D, Behl AB, Isher PP. Oral manifestations of stress-related disorders in the general population of Ludhiana. *J Indian Acad Oral Med Radiol* 2016;28:262-9
14. Abduljabbar TA. Musculoskeletal disorders among dentists in Saudi Arabia. *Pakistan Oral & Dental Journal* 2008;28(1):135-44.
15. Alghadir A, Zafar H, Iqbal ZA. Work-related musculoskeletal disorders among dental professionals in Saudi Arabia. *J Phy Ther Sci*. 2015;27:1107–12
16. Kumar VK, Kumar SP, Baliga MR. Prevalence of work-related musculoskeletal complaints among dentists in India: A national cross-sectional survey. *Indian J Den Res*. 2013;24:428–38.
17. Bhushan P, Gautam A, Bhushan P, Kumar K. Musculo-skeletal disorders among dentist and yoga pose. *J Med Dent Sci Res*. 2016;3:25–31
18. Hayes M, Cockreil D, Smith DR. A systemic review of musculoskeletal disorders among dental professionals. *Int J Dent Hyg*. 2009;7:159–65.
19. Shams-Hossaini NS, Vahdati T, Mohammadzadeh Z, Yeganeh A, Davoodi S. Prevalence of musculoskeletal disorders among dentists in Iran: A systemic review. *Mater Sociomed*. 2017;29:257–62.
20. Ruth McCaffrey, Juyoung Park. The Benefits of Yoga for Musculoskeletal Disorders: A Systematic Review of the Literature. *J Yoga Phys Ther*, 2012; 2 (5): 100-122
21. Kumar, D. S., V. Raole, D. V., Bagul, D. A., & Patel, D. J. (2020). The Beneficial Effect Of Yoga On Mental, Physical As Well As Spiritual Health On Human Being: A Brief Review. *International Research Journal of Ayurveda & Yoga*, 3(10), 149-155.