

Knowledge, Attitude And Practice Of Yoga As An Alternative Therapy For Treatment Of Occupational Hazards Among Dentist In Chennai

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ABSTRACT

Background: The therapeutic potential of yoga is considered complementary to varied sorts of practice. Only a few studies have evaluated the consequences of yoga within the treatment of occupational hazards among dentists. Hence this cross-sectional study evaluates that yoga acts as an alternative therapy in treatment of physical pain and psychological stress among dentists in Chennai city, India. The aim of this study is to assess knowledge, attitude and practice of yoga as an alternative therapy for occupational hazards among dental practitioners in chennai city.

Materials and methods: A questionnaire was circulated to 150 dentists from private institutions in Chennai, India and we received 102 questionnaires. This questionnaire is documented in data by using Excel sheet and analysed using SPSS software version 23. Descriptive and inferential statistics were performed to present the responses obtained.

Result: Among the participants 21.57% had musculoskeletal pain and 23.53% had stress and 54.90% had both musculoskeletal pain and stress. Only 20.59% dentists have acquired yoga as an alternate therapy for these occupational hazards and others prefer exercise 18.6%, walking 29.41%, listening to music 18.6% and none of these solutions 12.75%. There was no significant difference in the knowledge, attitude and practice of yoga as an alternative therapy to dental occupational hazards among male and female dental participants ($p>0.05$).

Conclusion: Walking, listening to music, exercise and yoga were the alternative therapy for the occupational hazards for musculoskeletal pain and stress, occurring mainly due to increasing clinical hours among dentists. However the practice of yoga needs to be inculcated during dental education to reduce stress and musculoskeletal pain.

Keywords: occupational hazards, stress, musculoskeletal pain, dentists, yoga, green energy green synthesis

INTRODUCTION

Yoga, the traditional science of mind-body coordination is widely practiced and researched widely. Therapeutic yoga is defined because of the application of yoga practice to the treatment of varied health

conditions including occupational hazards like musculoskeletal pain and stress (1). A soothing sort of exercise that was first developed in India and involves assuming and postures that stretch the muscles and limbs(2). Injuries from sharp instruments are the foremost common hazards among dentists followed by musculoskeletal pain and stress(3). Occupational hazards refer to the risky nature or working conditions of a particular job. Occupational hazards are common nowadays(4). Hence these occupational hazards can be eradicated by practicing yoga, which can act as an efficient tool(5). Yoga has been divided into 4 components : breathing exercises, meditation, relaxation and physical postures and regular yoga practice helps to control body and mind.yoga helps to establish greater health with beneficial effect(6,7).

Musculoskeletal issues happening outside the work environment can either compound with work troublesome. Different structures of the human body can affect muscles, tendons, ligaments, joints and some other supporting structures like intervertebral circles. It has been detailed that youthful and less experienced dentists involve more musculos(8). Occupational hazards generally occur among dentists due to sitting and standing positions that are often adopted and twisting of the spine and incorrect posture will cause pain in the neck, back, and shoulder. Mainly in the dentistry field, high risk of pain and stress were common due to increasing clinical working hours which they take treatment in expensive hospitals but among them, according to literature yoga acts as alternative therapy and cost-effective with no side effects (9). Our team has extensive knowledge and research experience that has translated into high quality publications (10–29). The aim of this study is to create an awareness on yoga as an alternative therapy for occupational hazards among dental practitioners in Chennai city.

MATERIALS AND METHODS

A cross-sectional study was conducted employing a self administered questionnaire to the dentist in private colleges in Chennai. Prior ethical approval to conduct the study was obtained from the Institutional Review board of the Author's university. Non-probability convenience sampling was employed. A pre-validated closed-ended questionnaire containing Part 1-demographic data, Part 2- personal health, hazard and habits, Part 3-treatment modality were distributed to collect data among the participants. the primary a part of the questionnaire was about age, sex, experience, and hours practicing per day. The experienced groups were taken as <10 years,10-20 years and >20 years. The hours practicing per day were taken as < 4 hours and >4 hours. The second part of the questionnaire was to assess the status of occupational hazards including musculoskeletal pain (back pain, cervical spondylitis), depression and stress. The ultimate part of the questionnaire focused on the treatment modality adopted. Yoga in any form such as asana, surya namaskar, pranayama etc. Exercise, massage, walking, and listening to music were other options. This questionnaire is documented in data collected statistically using Excel sheet and SPSS software version 23. A pre-validated and reliable questionnaire containing questions both in English and vernacular language had been distributed to the patient's consistency of the questions using growth that alpha was found to be 0.71 (Annexure). Statistical analysis was performed using the Statistical Package for the Social Science (SPSS) software version 23.0 (IBM,Chicago, USA). Descriptive statistics were performed to present the frequency distribution of the options of the question items.

RESULTS

A questionnaire was circulated to 150 dentists from private institutions in Chennai, India and we received 102 questionnaires from which we consisted of 41.18% males and 58.82% females. About 77.45% of dentists were experienced <10years, in between 10-20 years 15.69% and only 6.86% of experience <20 years. 58.82% of dentists work for >4 hours per day and <4 hours are 41.18%. Among dentists who suffer from occupational hazards like musculoskeletal pain 21.57% and stress 23.53%and both 54.90% [Figure 1]. Only 27.47% of them often-weekly once, 34.31%of them rarely-monthly once, 28.43% regularly and never 9.80% get these musculoskeletal pain and stress [Figure 2]. Only 20.59% of dentists prefer to do yoga and the majority of the participants 37.25% prefer exercise, massage, listening music, 29.41% prefer walking and jogging and none of these 12.7% [Figure 3]. The reason for not doing yoga, 58.82% have no time to do, 24.51% have no access to learning, 16.67% of dentists have no belief that yoga could be helped to overcome pain and stress [Figure 4]. 90.20% of dentists who believe yoga is an important therapy for occupational hazards and the remaining 9.80% of them are opposed to it [Figure 5]. The dentists who prefer to do yoga, in that they prefer to do some kind of asanas like surya namaskar 33.33%, pranayama 22.55%, savasana 17.65%, veerasana 9.8%, tadasana 8.82%, both breathing asanas and padmasana 3.92% [Figure:6].

About 5.88% males and 15.69% females had musculoskeletal pain as occupational hazard, about 5.88% male and 17.65% females had stress as their occupational hazard, about 29.41% of male and 25.49% of female had both musculoskeletal pain and stress[Figure :7]. About 11.76% males and 15.69% females had stress often-weekly once , about 17.65% males and 16.67% females had stress rare-monthly once , about 8.82% males and 19.61% females had stress regularly , about 2.94% males and 6.86% females had no stress [Figure 8]. About 7.84% males and 12.75% females practiced yoga, about 14.71% male and 22.55% females practiced exercise, massage and music , about 16.67% males and 12.75% female practiced walking and jogging, about 1.96% males and 10.78% females practiced none to prevent occupational hazards [Figure 9]. There was no significant difference in the knowledge, attitude and practice of yoga as an alternative therapy to dental occupational hazards among male and female dental participants ($p>0.05$).

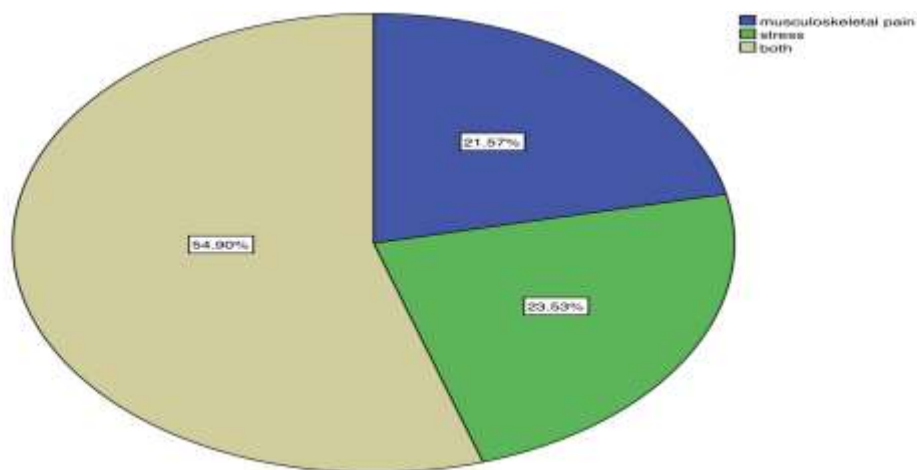


Figure 1: Pie chart represents comparison of occupational hazards of your dental profession as a clinician. Blue represents musculoskeletal pain (21.5%), green represents stress (23.53%) and beige represents both the hazards (54.90%).

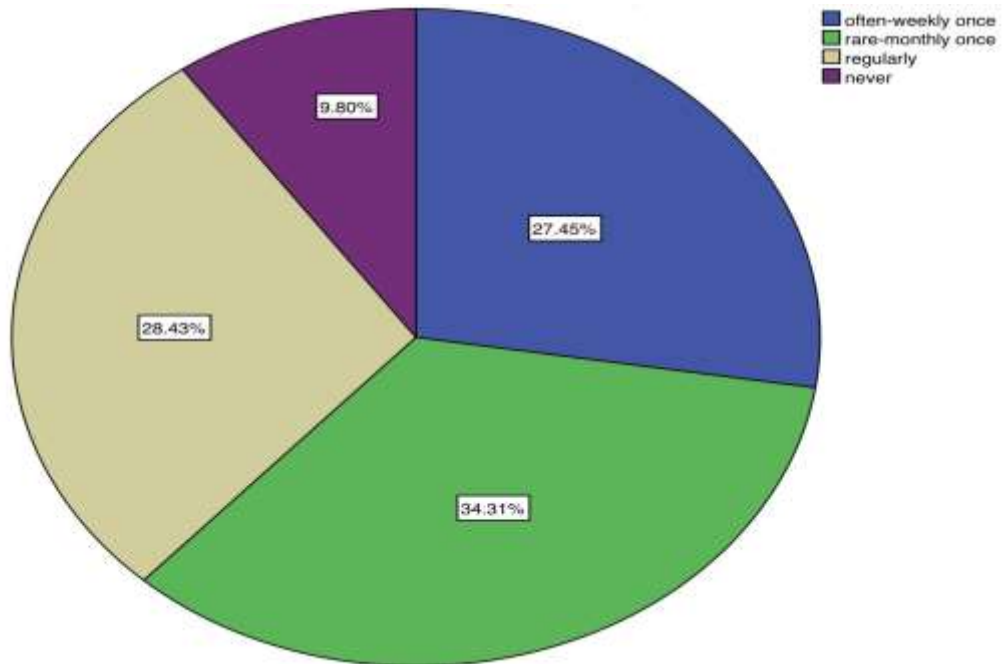


Figure 2: Pie chart represents comparison of these stress levels in occupational hazards. Blue represents stress level often weekly once (27.45%), green represents stress level rarely once in month (34.31%) and beige represents regular stress level (28.43%) and violet represents no stress level (9.80%)

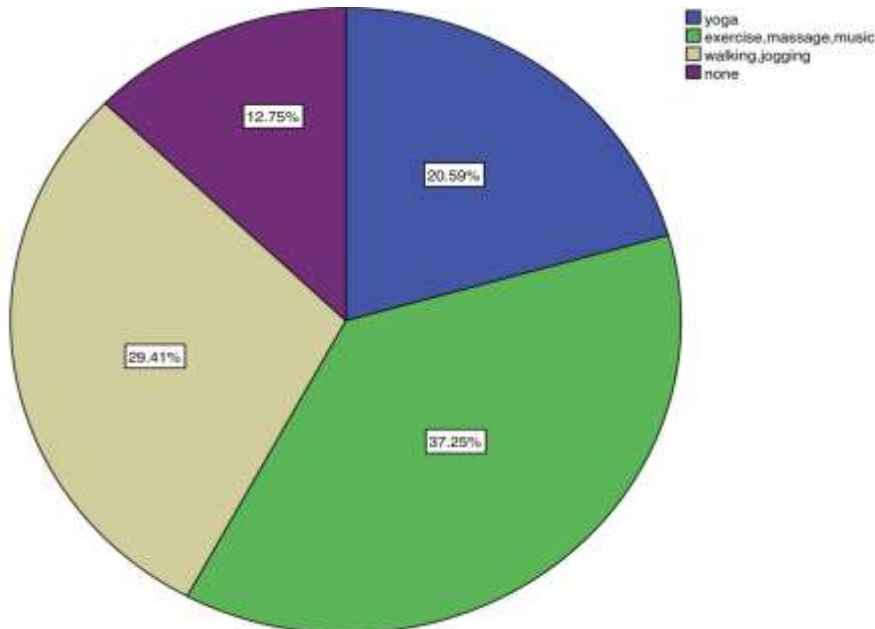


Figure 3: The pie chart represents the preventional activities done for occupational hazards. Blue represents yoga (20.59%), green represents exercise, massage, music, beige (37.25%) represents walking, jogging (29.41%) and violet represents none of them practice (12.75%).

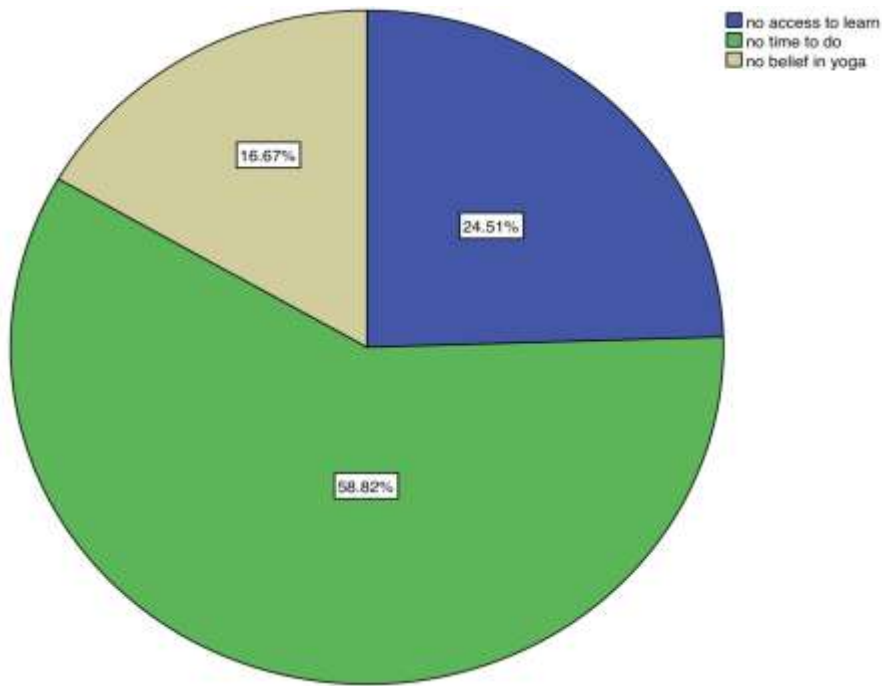


Figure 4: The pie chart represents the reasons for not practicing yoga . Blue represents there is no access to learn yoga (24.15%), green represents there is no time to practice yoga(58.82%) and beige represents no belief in yoga practice (16.67%).

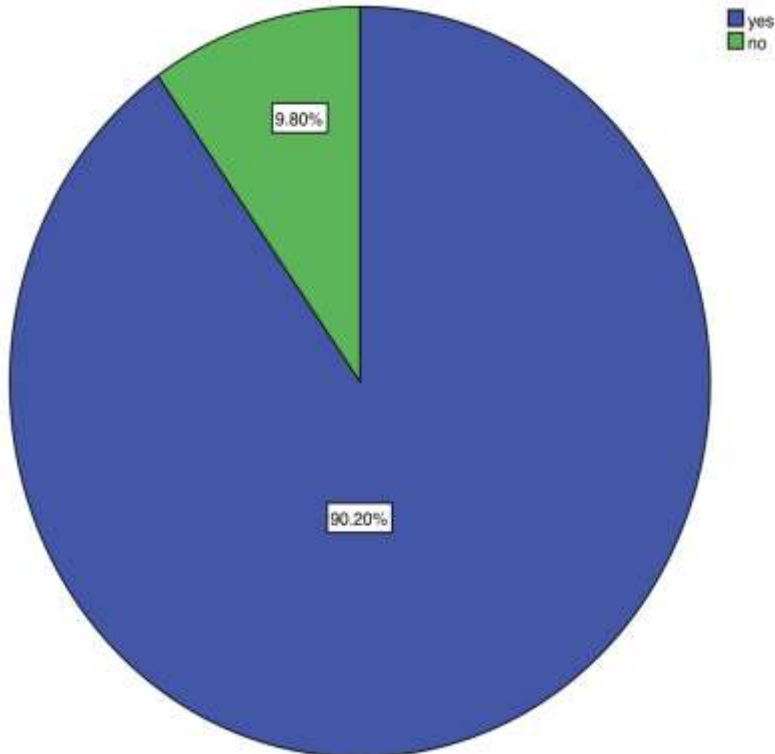


Figure 5: The pie chart represents opinion on the importance of yoga for occupational hazards . Blue colour represents yes (90.20%) and green colour represents No (9.80%)

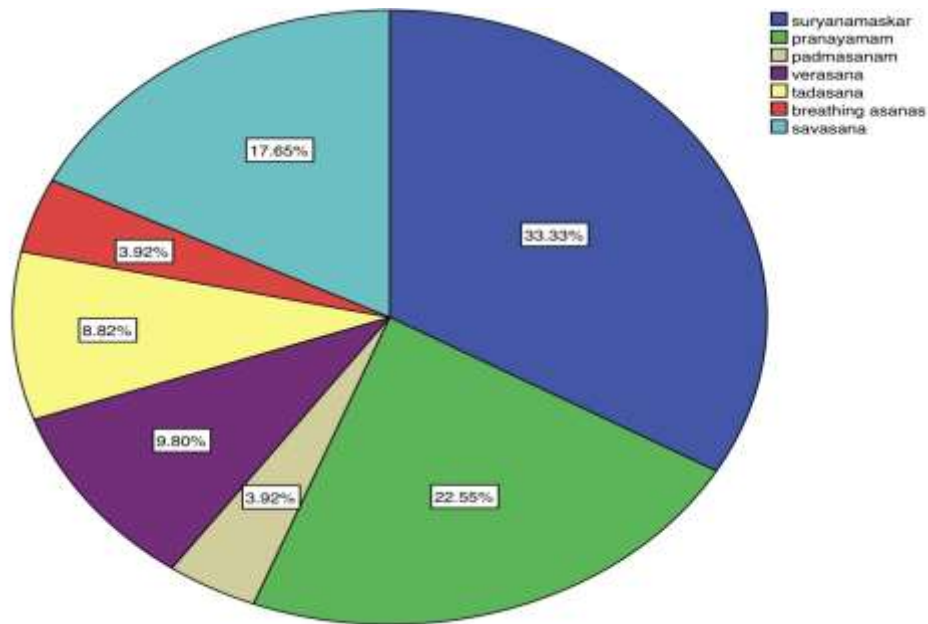


Figure 6: The pie chart represents the preference of the different kinds of asanas in yoga practice. Blue colour represents surya namaskar (33.33%), green colour represents pranayama (22.55%) beige colour represents padmasana (3.92%), violet colour represents virasana (9.80%), yellow colour represents tadasana (8.82%), red colour represents breathing (3.92%), light blue colour represents savasana (17.65%).

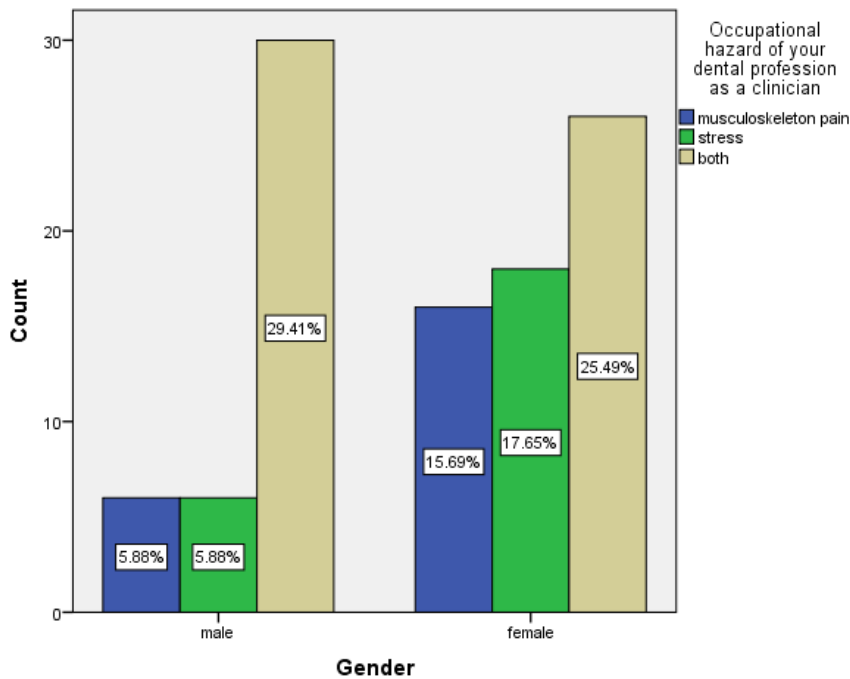


Figure 7: The bar graph depicts association between the gender and occupational hazards of the dental

profession as a clinician. X-axis represents the gender and the Y-axis represents the number of participants. Blue represents musculoskeletal pain, green represents stress and beige represents both the hazards. Majority of male and female clinicians had both musculoskeletal pain and stress as their occupational hazard. This difference was not significant (chi-square;p value = 0.19 - not significant)

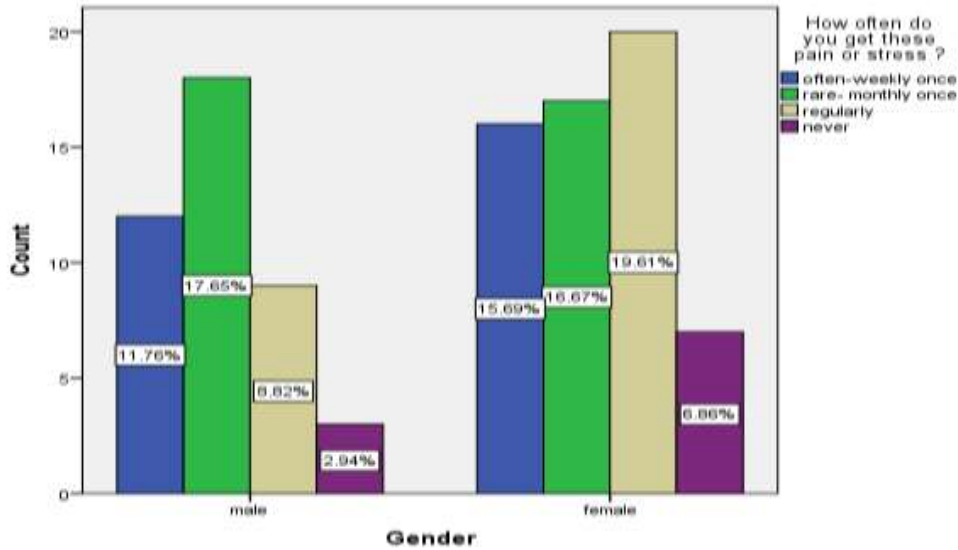


Figure 8: The bar graph depicts association between the gender and their stress levels in occupational hazards. X-axis represents the gender and the Y-axis represents the number of participants. Blue represents stress levels often weekly once, green represents stress level rarely once in a month and beige represents regular stress level and violet represents no stress level. Majority of female clinicians have stress regularly whereas the majority of male clinicians have stressed rare-monthly once. This difference was not significant (chi-square;p value = 0.34 - not significant)

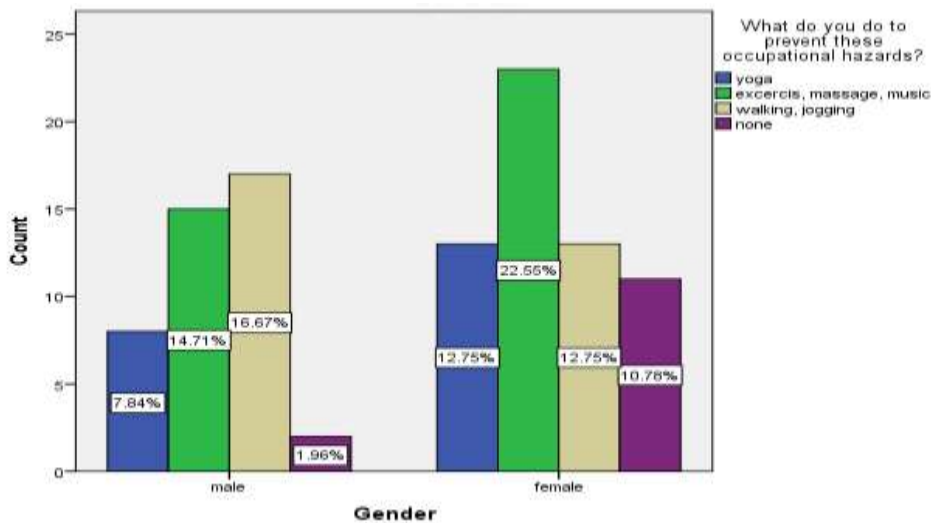


Figure 9: The bar graph depicts association between the gender and their prevention activities done for occupational hazards. The X-axis represents the gender and the Y-axis represents the number of participants. Blue represents yoga, green represents exercise , massage, music, beige represents walking, jogging, and purple represents none.

jogging and violet represents none of them practice. Majority of female clinicians practice exercise, massage, and music whereas the majority of male practice walking, jogging. This difference was not significant (chi-square;p value = 0.08 - not significant)

DISCUSSION

All professional activities have occupational hazards like stress and pain. The current study describes the therapeutic potential of yoga and acts as an alternate therapy for the treatment of occupational hazards among dentists (30,31). All previous studies considered yoga as an effective practice by dentists to overcome occupational hazards like pain, stress, depression(30). In previous research done by sharma as yoga which demonstrated from pretest to posttest improvement in mindfulness, perceived stress, cardiorespiratory endurance, flexibility, and balance ($P < .01$). But without having an impact group the findings can only be interpreted with caution. Yoga professes a complete physical, mental, and social health.

In previous research according to Manoj sharma, they proved that yoga can be a complementary and alternative therapeutic approach and it is essential for increasing blood flow, reducing low back pain and helps to overcome respiratory problems like wheezing, shortness of breath etc. Yoga Asanas like surya namaskar, savasana are common asanas which help to reduce pain and stress (32). The ultimate question of yoga practitioners, referred to as yogis (male) or yoginis (female), claim they were drawn to yoga for acclaimed aesthetic reasons, like health promotion, health maintenance, or weight loss. This current study explains that yoga therapy provides preference among mind, body and spirit(33,34). In the previous study, to get treatment from occupational hazards like musculoskeletal pain and stress they took a 3 months therapy period. During this period, dentists perform yoga more than compared to other extracurricular activities that give benefits and cure pain and stress(35).

According to sathya jeeva, yoga is an alternative therapy to treat pain and stress. Yoga may be a holistic approach to enhance quality of life with a way of psychological, emotional and spiritual well-being but other than yoga dentists also prefer to do walking, jogging and listening music like extracurricular activities to maintain their mind and body in peaceful condition (30,31,36,37)

CONCLUSION

Occupational hazards like musculoskeletal pain, stress are regular among dentists. Mainly medical professionals are not well aware of the benefits of yoga to treat stress and pain. Practicing yoga daily can relieve musculoskeletal pain related problems. Social media can be used to propagate the benefits of yoga and these can be useful for people. Yoga is cost effective and does not cause any side effects and it is natural compared to man made allopathic treatments.

AUTHOR CONTRIBUTIONS

Author 1: G.V.Venkatakarthikeswari, carried out the study by collecting data and drafted the manuscript after performing the necessary statistical analysis and in the preparation of the manuscript.

Author 2: Arthi Balasubramaniam, aided in conception of the topic, designing the study and supervision of the study, correction and final approval of the manuscript.

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CONFLICTS OF INTEREST

All the authors declare that there was no conflict of interest in the present study.

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Annexure

QUESTIONNAIRE

1.Name

2.Age

3.Gender

a.Male

b.Female

c.Others

4.Experience

a.<10years

b.10-20 years

c.>20years

5.Home of clinical practice working hours per day?

a.<4 hours

b.> 4hours

6.Occupational hazard of your dental profession as a clinician

a.Musculoskeletal pain

b.Stress

C.Both

7.How often do you get these musculoskeletal pain or stress ?

a.Often-weekly once

b.Rare-monthly once

c.Regularly

d.Never

8.What do you do to prevent these occupational hazards?

a.Yoga

b.Exercise, massage, music

c.Walking,jogging

d.None

9.If you are not practicing yoga,why?

a.No access to learn

b.No time To do

c.No belief in yoga

10.Do you think yoga is an important therapy for occupational hazards in dentistry ? If yes / no give a reason?

11.If you are practicing yoga what kind of asana do you prefer?

a.Surya Namaskar

b.Breathing exercises

c.Pranayama

d.Others