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REVIEW ARTICLE

ARE DENTISTS PRONE TO SUICIDE ?

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ABSTRACT

According to WHO, 300 million suffer from depression. Suicide accounted for 1.4% of all deaths worldwide, making it the 17th leading cause of death in 2015. Medical training has reported to be very stressful. Global prevalence of depression among medical students was found to be 28%. Even more frightening, 11 per cent of medical students have reported suicidal ideation within the past year. Many of them do not have the requisite intelligence, competence or the aptitude to meet the tough demands of medical studies. Dentists encounter numerous sources of professional stress, beginning in dental school. This stress can have a negative impact on their personal and professional lives. But there is no reliable data portraying suicide among dentists. Is Dentistry ahead of other professions in suicide rate ? This review seeks to bring forth the suicide rates in dentistry and causes for the same.

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INTRODUCTION

Dentistry is a profession that has witnessed tremendous change over the last 20 years. There has been an increase in the production of dentists worldwide. But is the future of dentistry bright? On one hand, we have well established successful dentists which strengthen the dental profession. The other side is the increasing competition in the field, opening of new dental clinics every second, unable to attain a financially lucrative career. Several studies have put forth the stress, depression and burn out among dental professionals (Acharya, 2003; Bhasin *et al.*, 2010; Galán *et al.*, 2014). A number of tools have been devised to measure stress amongst them (Gorter *et al.*, 1999; Al-Sowygh, 2013). All these shed light on the fact that stress is inevitable in dentistry. According to WHO, 300 million suffer from depression in 2015 (WHO 2017). Suicide accounted for 1.4% of all deaths worldwide, making it the 17th leading cause of death in 2015. Suicide has been reported to be invariably the result of inadequately treated depression. Close to 800 000 people die due to suicide every year, which is one person every 40 seconds. Many more attempt suicide. Suicide occurs throughout the lifespan and is the second leading cause of death among 15-29 year olds globally⁶. The suicide rate for males is 12.2 per 100, 000 population and for females is 9.1 per 100, 000 population. In India neuropsychiatric disorders are estimated to contribute to 11.6% of the global burden of disease. Depression is as common in the medical profession as in the general population, affecting an estimated 12% of males and up to 19.5% of females (Lindeman *et al.*, 1996).

Depression is even more common in medical students and residents, with 15-30% of them screening positive for depressive symptoms. Suicide rates for doctors are shockingly high. Doctors are 1.87 times more likely to commit suicide than the average American. Dentists commit suicide at a rate of 1.67 times higher than the American average (Puthran *et al.*, 2016). Being a dentist can be a lucrative, rewarding profession, but it also brings with it long hours, reluctant, if not downright difficult patients, and no guarantee of success or stability. There have also been theories that suggest that because dentists and doctors are trained in medicine, they simply are more adept at actually committing suicide, knowing how to achieve their desired result, and knowing what drugs to administer to do so. While this theory hasn't been proven, it may also be a factor that helps explain the high rate of suicide amongst them. Thus this review tries to bring forth suicide among dentists, various causes for suicide and suggest measures that can be taken to reduce the rate of suicide.

Suicide among Dental students

There are no valid data suggesting dentists are more prone to suicide as usually depicted in media. In a study done by Galan *et al* suicidal ideation was asked to the dental students in Seville with the help of 2 questions. The study revealed prevalence of 10.7% in second year, 10.9% in fourth year and 3.8% in fifth year (Galán *et al.*, 2014). But they have not dealt with reasons for this. The main sources of stress were found to be fear of facing parents after failure, full loaded day, and fear of failing course or year (Ahola and Hakanen, 2007). In a review by Alzahem and colleagues, he categorized stressors into five groups: living accommodation, educational

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environment, and personal, academic and clinical factors. Examinations and grades are frequently reported to be the most stressful factors, along with limited time for relaxation. Additionally, research has found that stressors are not globally equivalent and are influenced by local and cultural factors (Alzahem *et al.*, 2014). In Saudi Arabia, a number of studies have assessed levels of stress among dental students and related stressors, and the most commonly cited stressors are gender, year of study, marital status, first choice of admission, financial problems, living arrangement, examinations and grades, workload, and patients. The most significant and strongest predictors in this study were students' satisfaction with their faculty and peer relationships, followed by their overall experience at the college. Therefore, factors related to human relationships appear to have a greater impact on psychological health than other academic factors. Similarly, Way observed that personal relationships have a greater effect on college students persistence in studying than academic factors (Pouradeli *et al.*, 2016). "Depressed medico ends life", "Medical PG found dead" were the most heartbreaking news in leading newspaper in Kerala in 2017. If a doctor who has studied how to tackle depression, is not able to deal with it, what will be the fate of common man is.

What will be the fate of other non – medical professionals be?

Suicide among practicing dentists

The myth surrounding the suicide rate of dentists can be traced back to studies that lack the correct scientific weighting for demographics. Alexander, in a 2001 article, traces the beginnings of the myth to the 1920's when both the lay public and professional media repeatedly portrayed dentists as being suicide prone. In the 1960's statistical evidence that dentists committed suicide at a higher rate than other health care providers began to appear in the literature (Lange *et al.*, 2012) A study conducted by the American Dental Association showed that data from 31 states did not support the conclusion that dentists committed suicide at higher rates than the general population. Hence proven that there is no consistent statistical evidence available to prove that dentists are suicide prone (Stack, 1996). Stressors in dentistry can include managing a solo practice, missed appointments, patient dissatisfaction with treatment, insurance problems, encroachment and regulations of governmental agencies and the lack of quiet time such as not having breaks from one's work, not financially sound (Hilliard-Lysen and Riemer, 1988). Although some dentists leave the profession by way of suicide or career change at a time when their careers should be the most rewarding, available data on stress and its impact on suicide incidence are inconclusive and flawed.

Suicide among dental teaching faculty

Though there are no reported suicides among dental teaching faculty, there exist cases of students committing suicide in dental institutions in India. Teaching in higher educational institutes is unrelated to the clinical skills and theoretical knowledge of a dentist. Dental teachers are basically clinicians or researchers; they are not specifically trained in the art and science of teaching and are not conversant with the principles of educational methods. In order to modernize dental education and make it more objective and effective, there is a need to train dental teachers and for reputable higher educational

institutes to conduct teachers' training programmes for staff members. Incidences of suicide by young people are horrifying experiences for parents, while teachers facing legal allegations in relation to suicide are also put under extreme stress. Implementation of student interviews and assessment before admission, teacher training programmes and initiation of mentoring would lessen the likelihood of suicide among dental students in India.

Causes of suicide

Depression, chronic pain (lower back pain - neck and shoulders pain), long hours of work, work in private clinics alone and managing that patient's problems and all of these are reasons to make dentists in high risk but not all of them deals with that by suicide (Frank and Dingle, 1999). Some risk factors are general in nature and apply to the total population. Risk factors such as gender (males commit suicide at a rate four times that of females), age (people over age of 65 have suicide rates 50% higher than the normal population), race (whites are twice as likely to commit suicides as non-whites), marital status (married least likely to commit suicide), availability of lethal means, mental health, and adverse life events/major stressor apply to dental profession too (Adityanjee, 1986). A sound family acts as a backbone for a successful career, Personal issues like spouse having extramarital affair, sudden demise of life partner, life threatening diseases, illness of children all can lead to depression and can lead to suicide.

Measures to reduce the rate of suicide

The most recent report from the Centre of Disease Control on professions with the highest suicide rates came out in 2012 and stated that it's actually farmers, fishermen, and forestry workers who are at the highest risk of taking their own lives. Dentists were way down on the list at number 12, lumped in with physicians and other health professional.

Dentists

Strengthening the professional associations, Creating reasonable salary for dentists in clinics as opposed to 5000-10000 are a few measures to reduce the stress among dentists.

Dental Teaching Faculty: Resilience is now taught both to medical students and junior doctors, and mentoring schemes are becoming available across the country (Schernhammer, 2005). There is an urgent need for dentists to have the resources to manage stress. Dental teachers should be a source of emotional support to the students. They should be able to detect depression or other neuropsychological diseases at the earliest stage and should be able to adequately refer them to psychiatrist. For this adequate training at regular intervals should be given to dental faculty. Dental Council should take necessary steps in attaining strong mental health for dental students, teachers being facilitators. Dentists: Practicing Four handed dentistry will reduce the physical agony caused by dentists. Four handed dentistry help in delegating the task to ancillary personnel, thus saving time. Increasing the job opportunities in Public sector will bring down the unemployment issue. Strengthening the Professional associations, by creating reasonable salary for dentists in clinics as opposed to Rs.5000-10000. Nowadays, even Specialists at entry cadre in private colleges are paid very less as compared to Government colleges which are in par with

medical faculty. Why has this not become an alarming issue for the Dental Council of India? Every year 24000 dental graduates and 3500 specialists are produced (Vundavalli, 2014). Is it possible for everyone to hold a government job. Ultimately we are forced to work in private college with minimum salary.

After spending 8-9 years studying in a professional college, spending lakhs of money as fees and ending in a job which offers minimum salary, less than that of other major professions. Isn't it depressing? Opening new clinic is the best option available now to get a stable career. The number of dental clinics has increased tremendously over the years. As a result, numbers of patients visiting the dental clinics are widespread. Thus the profit from dental clinics becomes questionable. Thus regulating the number of dental clinics, same salary for both private and government sector in par with doctors, friendly working atmosphere, training for dental students to tackle stress, maintaining a student friendly relation in dental college can effectively bring down the suicide rate among dental professionals.

Conclusion

This review seeks the attention of stakeholders in taking measures to reduce the stress in dentistry, thereby reducing the suicide rates and in creating mentally sound dental professionals. There exist a number of treatment modalities to reduce oral disease burden among people, but we lack any measures devoted to the health of dentists.

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