Substance abuse among oral healthcare workers

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SUMMARY

The abuse of both licit and illicit substances by the general population affects at least one in ten people. Research shows that the oral healthcare worker has at least the same prevalence of substance abuse, perhaps even higher. The emergence of prescription drug abuse is one of the most worrying and dangerous aspects for the healthcare worker, due to ease of access to such drugs. According to the United Nations, prescription drug abuse is amongst the top three practices of substance abuse. We have an obligation to incorporate the evidence of substance abuse among oral healthcare professionals in our undergraduate dental curricula in order to combat this phenomenon. As the stress of daily survival in single practitioner practices increase, so will the danger of substance abuse. This may lead to impairment of the healthcare worker and ultimately loss of registration. It will take a combined effort from organised dentistry and academic institutions to establish a national strategy to ensure we address this important issue at undergraduate level and provide support at practitioner level. This paper will deal with substance abuse and the implications of impairment it holds for the oral healthcare worker.

INTRODUCTION

Physician impairment is a very serious complication and is most frequently caused by substance abuse in young adults.[1] According to the World Health Organisation (WHO), substance abuse includes both licit substances such as prescription drugs, alcohol and tobacco, as well as illicit substances. For the purpose of this paper, we will use the all-inclusive term "substance abuse" rather than drug, alcohol or tobacco abuse.

Illicit substances refer to illegal substances such as marijuana, cocaine, ecstasy and other drugs under international control. There are however new illicit substances entering the global market at a steady rate, many not yet under international control.[2]

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ACRONYMS

ADD:	Attention Deficit Disorder
VDP's:	Vocational Dental Practitioners
WHO:	World Health Organisation

Conflicting evidence exists on the prevalence of substance abuse amongst the medical profession. Early research found a prevalence of substance abuse within the medical profession higher than population average, but more recent investigations have not shown the same trends.[3-5] What is accepted is that substance abuse will influence brain function, which may lead to the impaired functioning of the individual abusing the substance.[6,7] For the purpose of this article, we define "Impairment of a healthcare professional" as the inability or impending inability to practice according to accepted standards as a result of substance use, abuse or dependency (addiction). Substance abuse may result in adverse social and professional consequences.[8]

It is estimated that approximately 10-15% of all healthcare professionals will abuse a substance at some time during their career, a rate in fact similar to that of the general population,[8] although there are some indications that the profession could have an even higher prevalence.[9] This is disturbing because healthcare professionals are the caregivers responsible for the health and well-being of the general population.[8] Dentists are an important part of this healthcare team.

The factors underlying substance abuse amongst dentists may be complex and could involve both genetic susceptibility and the stressful work environment in which we function.[6,9,10] According to Curtis (2011), stress of daily practice includes the following;[9]

- most dentists work in isolation in one man practices;
- other dentists are seen as competitors rather than as colleagues;
- the frustration of trying to do pain free dentistry on a daily basis; and
- having a high debt burden.

Genetic susceptibility seems to have the biggest impact during the adolescent years and this may be a particularly stressful time for dental students.[6] The cost of studying at dental schools in South Africa, especially when burdened with student loans, has become a massive problem for many students, introducing stress at a young age when they are at their most vulnerable and leads to their starting practice facing a high debt commitment.

Substance abuse among oral healthcare workers may be divided into licit substances and illicit substances.

LICIT SUBSTANCES

Substances of importance here are;

- alcohol
- tobacco
- prescription drugs

Alcohol

Alcohol may be the most commonly abused substance amongst dentists.[5,11] McAuliffe *et al* (1991), however, could not find any evidence for higher alcohol consumption amongst medical students and physicians, compared with their fellow students in other fields of study.[4] Although one cannot extrapolate data from medical to dental students in all cases, it would make sense that both are exposed to similar social and stress factors during their studies. Curtis (2011), in a more recent study, reported 10-12% of the general population as abusing substances compared with 12-19% of dentists.[9] This is indeed a worrying trend.

According to Underwood and Fox (2000), alcohol and drug use among UK schoolchildren and university students is increasing.[12] The British Dental Health Support Programme, formerly known as the Sick Dentist's Scheme, was founded in 1986. Its aim is to support qualified dentists who labour with alcohol and drug addiction. Over 500 dentists have been helped on this programme, giving cause for concern in the profession in that country. There is also anxiety about emerging trends at student undergraduate level.[12] The danger of alcohol abuse may be that it eventually leads to more serious substance abuse as it tends to be the initiation substance, together with tobacco.[13]

Tobacco

According to the WHO, tobacco is still the leading preventable cause of death worldwide. It is thus worrying that tobacco abuse should still be prevalent amongst dentists. Dentists should be at the forefront of educating the general population about the dangers of smoking, i.e. oral cancer, cardiovascular disease and periodontal disease, with all its associated risks.[14]

Prescription drugs

This should become a high priority for organised dentistry, as well as the dental schools in South Africa. Students and practitioners alike should be educated on the dangers of abuse of not only prescription medicine, but of prescribing outside our scope of practice and especially, self-prescribing. According to the United Nations, this latter practice is one of the top three methods by which abused substances are obtained in 60% of countries worldwide.[2] In the USA, prescription drugs are the most abused substance after alcohol and marijuana.[15] The abuse of prescription drugs is when medication is intentionally used without a prescription; used for purposes other than prescribed or for the pleasurable feeling the drug may induce.[15] Although the non-medical use of prescription drugs is a serious problem affecting millions worldwide,[15] we are concerned here also with self-prescription by dentists for drugs falling outside the scope of practice of the discipline for recreational purposes, or for coping with daily stress.

Dentists are in a privileged position in South Africa because they may prescribe any drug, or so the perception seems to be. Although pharmacists may fill most, if not all prescriptions by dentists, that does not imply that the prescription is legal or within the scope of practice of dentistry (general or specialist). Prescription drugs that are abused in this regard, of which the last two fall outside the dental scope of practice, are:[16,17]

- Opioids
- Depressants of the central nervous system
- Stimulants of the central nervous system

Opioids

Heroin and prescribed opioids are both highly addictive and act on the same receptors in the brain.[15] Opioids are of particular concern as these drugs are at the top of the list of abused prescription medications. Up to 20% of the general population abuse prescribed opioids.[16,17] There is a similar trend amongst healthcare providers.[13] Opioids are abused by using larger than prescribed quantities, in conjunction with other drugs and/or alcohol, to increase the "high" or used with the sole intention of getting high.[17] Abuse of opioids, when used together with alcohol, is extremely dangerous and may lead to death.[15]

Depressants of the nervous system

The most common prescription drugs abused by impaired physicians were found to be either opioids or sedatives. Motivation for the abuse of these drugs varied from pain and emotional stress to pleasure.[13,18] According to a paper by Curtis (2011), 37% of dentists who abuse substances prefer alcohol ,followed closely by 31% who abuse prescription drugs such as benzodiazepines and opioids.[9] Pharmacists should be vigilant when a prescription for these drugs is received from a dental professional, especially if the script seems to be self-prescribed.

Stimulants of the nervous system

Attention Deficit Disorder (ADD) is treated predominately with stimulants such as methylphenidate (MPH), mixed-salts amphetamine and dextro-amphetamine. MPH (Ritalin®) is the most widely used and well known of the stimulants. These drugs have become freely available, due to the increased prescription for the treatment of ADD.[19]

There is a paucity of evidence on the abuse of stimulants amongst dental and medical students. In a study of dental and dental hygiene students, McNiel *et al* (2011), found that almost 75% of students reported being stressed, with 50% studying/working up to 60 hours per week. In their study, only 3% of dental and 5.9% of hygiene students were prescribed stimulants for diagnosed ADD. In contrast, 12.4% of dental and hygiene students reported taking stimulants non-medically. Of those indulging non-medically, 70% reported a purpose of improving concentration and 17% taking the drug for pleasure.[19]

Most of those who used stimulants non-medically, reported that they obtained the substance from friends, with the majority complaining of stress as a factor in their decision.[19] One can only speculate what may happen once these students qualify and are able to prescribe for themselves, as the stress within private practice is as high, if not higher, for factors already mentioned.[9]

To combat the danger of self-prescribing, one has to look at the law in South Africa in order to find a solution to this problem. It is our opinion that the law is not applied effectively by those in a position to do so. There are two South African

Acts of importance to consider, the Health Professions Act 56 of 1974, that explains the concept of impairment and the Medicines and Related Substances Control Act 101 of 1965, which outlines the correct procedures for prescription of scheduled drugs.[20,21] It will take a combined effort from organised dentistry, medicine and pharmacists, to apply the law in a professional manner to protect professionals on the one hand and the general population on the other. It should not be seen as a punitive exercise, but rather an effort by our profession to protect the public against the dangers of an impaired healthcare worker and also to prevent highly trained people from being lost to the profession.

ILLICIT SUBSTANCES

Here the term illicit substance is used to describe substances under international control according to the United Nations and which are produced, trafficked and/or consumed illicitly.[2] Underwood and Fox (2000), surveyed the alcohol and illicit substance use among dental undergraduates at a UK dental school.[12] Nearly half of male students reported having used cannabis more than once or twice and 8% were current regular users (regular= at least once a week). Female students reported a lower usage, 26% having used it once or twice and 6% being regular users. The highest current regular cannabis use of 15% was amongst male 4th and 5th year undergraduates.[12]

After cannabis, the next most commonly used illicit substances among dental undergraduates were amphetamines (16%), amyl nitrate (13%), Ecstasy and magic mushroom (8%), LSD (5.5%), cocaine (4.5%) and inhalants (2.5%).[12]

A study by the same group provides information that can be used to obtain a trend in alcohol and drug use among vocational dental practitioners (VDP's).[22] They reported on alcohol and drug use by VDP's before qualification and approximately five months into their VDP year. Cannabis was still the most popular illicit substance used by VDP's in 2005.[22] Although the prevalence of illicit substance abuse seems to be decreasing, male VDP's still use more illicit substances than female VDP's. A strong association between illicit substance use and those reporting tobacco and alcohol abuse was found.[22] This suggests that targeted advice on harm reduction could be given to those who abuse tobacco and alcohol. Continuation of these deleterious activities after vocational training is likely to have negative effects on personal health, whilst illicit substance abuse may result in criminal prosecution with obvious repercussions for professional status.[9,22] The second most frequently abused substance was[3,4] methylenedioxymethamphetamine (commonly known as "ecstasy") and then cocaine. Ecstasy was used by 4% of male VDP's at least once a month. The proportion of all VDP's who reported being current users of any illicit substance, (including cannabis), was 17.9% for males and 12.6% for females.[22]

Kenna and Wood (2005), reported on the prevalence of alcohol, cigarette and illicit substance abuse among dentists.[5] The level of substance abuse among dentists was also compared to data referring to physicians and the public at large.[5] The street drugs the investigators assessed included marijuana (cannabis), cocaine, hallucinogens and ecstasy. Though not significant, past -year and past- month marijuana use was higher for dentists than for physicians or the general population. Interestingly, 13.3% of dentists and 5.8% of physicians reported a lifetime use of inhalants, (which included nitrous oxide). In another report 5% of dentists in the USA admitted to nitrous oxide abuse.[9] Past-year and past-month illicit substance abuse was reported by about 50% more dentists than physicians. The majority of this use involved marijuana.[5]

Merlo *et al* (2013), found common patterns of substance use initiation by addicted healthcare professionals. It is noteworthy that the vast majority of recovering healthcare professionals in their sample, started experimentation with substances and often regular use of substances before becoming involved in their respective professional schools. The typical order of experimentation with substances resembled the gateway pattern observed in the general population of starting with tobacco and alcohol, then marijuana and finally moving on to "harder" drugs.[13]

The duty of "*first do no harm*" is at the heart of the moral values of our culture and is one of the guiding principles of the healthcare sector. Professionals are trusted in part because patients believe that these values are accepted. If it can be shown that an act or omission on the part of the healthcare provider resulted in an unfavourable outcome for the patient, the practitioner responsible will be held to account. If a practitioner's pattern of behaviour seems consistent with substance abuse, there may be associated negative impacts on patients. As a profession, our first duty is to the patient and this extends beyond a particular patient under immediate care, to patients and potential patients in the wider community. Allowing the situation to continue is potentially problematic for the entire healthcare team and can amount to a conspiracy of silence resulting in positive harm and deny patients their moral and legal rights.

Should a situation as outlined above not be addressed, patients may be exposed to continuing risk. In the first instance it is usually appropriate to discuss one's concern with the specific colleague, with other professional colleagues and perhaps to seek advice from the medical or dental professional bodies. One might actually be helping a professional colleague to come to terms with, or deal with, a problem previously he/she might not have previously acknowledged. Engaging a colleague early on, however awkward it might be at the time, can prevent an escalation into a situation where the stakes (and professional consequences) are much higher.[9,23]

This is an issue which must be dealt with in the utmost confidentiality and professionalism, keeping in mind that the practitioner has rights in this process.

CONCLUSION

Impairment of a practitioner does not refer to mental or physical impairment only, but the definition as published by the Health Professions Council of South Africa (HPCSA). It stipulates that "abuse of, or dependence on chemical substances which has adversely affected a student's or practitioner's competence, attitude, judgement and performance," be classified as impairment.[24] There is a fine line between what is right and wrong here. This is further complicated by self-prescribing by a dentist for drugs such as Schedule 5 stimulants or depressants, which in itself shows lack of judgement and competence. This is clearly defined by South Africa's Medicines and Related Substances Control Act 101 of 1965 (amended 1997), which stipulates that no Schedule 5 drug which is prescribed for anxiolytic, antide-

pressant or tranquilising properties may be prescribed for longer than six months without having consulted a registered psychiatrist. It is clearly problematic for a dentist to admit to self-prescribing these drugs, as it would expose the practitioner to impairment proceedings.

A similar rule applies to Schedule 5 pain killers which may not be prescribed for more than six months without consulting another medical practitioner.

It is clear from the above that dentists are not allowed to prescribe stimulants or depressants, for this falls far outside our scope of practice as defined by the HPCSA and is therefore against the law (Health Professions Act 56 of 1974).[20]

We recommend that knowledge regarding the dangers of non-medical use of prescription drugs are included in dental curricula, together with education on illicit drugs, alcohol and tobacco abuse.[18,19,25] If this is not done during these formative years, it may well be too late for some by the time they enter practice. Pharmacists have an important role to play in this regard and should refuse to fill such prescriptions from dentists, even more so if there is evidence of self-prescribing. It may prevent the serious sequel of the practitioner being disciplined by the HPCSA, or possible loss of registration.

Reporting a colleague to the HPCSA can lead to the breakdown in the relationship between professional colleagues. These situations must be handled by scrupulous adherence to basic ethical principles. Where such conflicts do arise, every effort should be made to contain them in a way which:

- avoids placing patients at risk
- maintains the continuity of patient care and safeguards the rights and the quality of the medical care they receive
- avoids bringing the profession into disrepute
- maintains public confidence in the profession
- treats professional colleagues as we would wish to be treated ourselves.[23]

It is our belief that the duty of professional associations should be to create support structures for their respective professions, in order to help prevent substance abuse and once it occurs, to have the necessary support structures for rehabilitation. The HPCSA recommends in its report *"A national strategy for managing impairment in students and practitioners registered with council*," that professional bodies become actively involved in all aspects of prevention of impairment.[24] A national strategy between professional bodies and academic institutions in this regard is perhaps overdue and should be attended to as a matter of urgency.

As Curtis (2011) quotes: "*Depending on the drug, the risks of addiction include loss of license, malpractice lawsuits, cardiac arrest, infection, financial ruin, increased depression, divorce, loss of family and social connections, increased despair and the possibility of death*".[9]

Surely none of us would want to expose ourselves to such dire possibilities?

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