

Assessment of knowledge and attitude regarding management of patients with substance usage in dental clinics in Modinagar- A cross-sectional study

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ABSTRACT

Introduction: The consequences of oral issues among drug users necessitate the implementation of a comprehensive dental care program. Integrated oral health-care services should be programmed for the management of drug addiction as a multi-organ disease needs a multi-disciplinary approach. **Aim:** The aim of the present study was to assess the knowledge and attitude regarding the management of patients with substance usage at a dental clinic. **Methodology:** A cross-sectional study was conducted among 208 dentists working as clinicians. A self-structured 27-item questionnaire consisting of questions related to the management of patients with substance usage at a dental clinic was distributed to them. Data were analyzed using Statistical Package for Social Sciences (SPSS) 20.0 (SPSS Inc., Chicago, IL, USA) and descriptive and analytical tests, including mean, standard deviation, and Chi-square test were used. *P* < 0.05 was considered statistically significant. **Results:** Majority of the dentist irrespective of qualification were unaware of the modalities regarding the management of the patients with substance usage at the dental clinic. Most dental clinicians were having a positive attitude regarding such patients and agreed that abuser should be identified and managed in dental settings. **Conclusion:** Educating dental graduates and postgraduates about the oral implications of substance usage and making it a part of the dental curriculum may help us deal with the global issues of substance usage. The dental setting is recognized increasingly as an untapped venue for the delivery of medical screenings, given the long-term nature and frequent contacts associated with the patient-dentist relationship.

Keywords: Attitude, dental clinics, knowledge, substance-related disorders

Introduction

Substance abuse is a complex disease as many of the people are unable to understand why or how they become addicted to drugs. Addiction is characterized by seeking drugs and their usage which becomes compulsive, or difficult to control, in spite

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so many harmful consequences. It has been seen worldwide approximately 153 million people aged between 15 and 64 years are into substance usage with 99,000–253,000 people are dying whereas in India; according to various reports, approximately 3 million people found addicted into drug usage.^[1,2]

Substance abuse which is popular with the name of drug abuse is a patterned use of a drug in which the user consumes the substance in amounts or with methods which are harmful to themselves or others.^[3] As awareness regarding substance usage and dependence to the illicit drugs have increased dramatically over the globe. Although predominating reason behind this is

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not clear, few of the theories said that either a genetic disposition or a habit of addiction manifests itself as a chronic debilitating disease. It has become an immensely monstrous phenomenon in the past few decades which is affecting all the segments of society. Drugs popularly named as alcohol, cannabis, barbiturates, benzodiazepines, cocaine, methaqualone, opioids, and some substituted amphet amines such as methamphetamine and MDMA are those which are being overused by the people and depending upon their type and dosage; they may lead to health problems, social problems, morbidity, injuries, unprotected sex, violence, deaths, motor vehicle accidents, homicides, suicides, physical dependence, or psychological addiction.^[4]

Among various aspects, social, cultural, and financial are commonly associated with drug abuse.^[5] The inquisitiveness to how it feels, the introduction of a nuclear family, the absence of love and care, waning of faith in religion, relationships, and ethical values, etc., are the common reasons toward substance usage. These drugs have variant oral effects depending upon the type and duration of use along with the lifestyle of the users. Common oral findings associated with substance usage are rampant tooth decay, accelerated tooth wear, unexplained dry mouth, with advanced gum diseases, dental trauma, missing multiple teeth, etc.^[6] Candidiasis, angular cheilitis, median rhomboid glossitis, frictional hyperkeratosis, candidal leukoplakia, gingivostomatitis, hairy tongue, aphthous stomatitis, and herpes simplex are commonly found oral mucosal changes as a result of substance usage.^[6,7] Overall, we can say that substance usage leads to rapid, accelerated, and detrimental dental effects.^[8,9] Hence, the dental setting is recognized increasingly as an untapped venue for the delivery of medical screenings, given the long-term nature and frequent contacts associated with the patient-dentist relationship.[10-13]

In 2018, a study by Smita R Priyadarshini *et al.* found that irrespective of the educational qualification, drugs are perceived as harmful with definite oral manifestations, and dentists should be concerned with identifying individuals with drugs. The study also believed that trying drugs once could lead to possible addiction and that dental practitioners should have their skills developed to handle cases and referred to de-addiction centers with modification of treatment.^[14]

The importance of oral care among drug users necessitates the implementation of a comprehensive dental care program. Integrated oral health-care services should be programmed for the management of drug addiction as a multi-organ disease needs a multi-disciplinary approach.^[14] Even the treatment plans need to be reviewed often and modified to fit the patient's changing needs. Within this context, our analysis sought to examine the management practices used by the dentist for managing the patients with substance abuse.

Methodology

A questionnaire-based cross-sectional survey was carried out among the 214 dentists working as clinicians or both academicians and clinicians in and around Meerut. Ethical approval was obtained from the Institutional Review Board, D.J. College of Dental Sciences and Research, Modinagar, Ghaziabad district, Uttar Pradesh, India (Date of approval from the ethics committee : 02-05-2019), and informed consent was taken from all the study participants prior to the study. Participation in the study was voluntary and confidentiality of data was maintained. The questionnaire used in the study consisted of two parts. The first part included the patients' demographic data and the second one included the knowledge and attitude related questions regarding the management of patients with substance usage at the dental clinic. There were 05 knowledge and22 attitude related questions.

Questionnaire validation

The questionnaire was pretested on 42 dentists who were not included in the main study and comprised 19.6% of the study sample for reliability and validity. Reliability of the questionnaire was assessed using test-retest, and internal consistency of the questionnaire was ascertained by Cronbachs alpha (α). Construct validity of the questionnaire was assessed using Spearman's correlation coefficient between individual parameter/construct and overall score of the construct.

Data collection

The questionnaire was self-administered after explaining the study design to all the dentists who consented to participate in the study. Dentists were requested to complete the questionnaire within a week and were reminded once before the deadline.

Statistical analysis

The collected data were analyzed using Statistical Package for Social Sciences (SPSS) 22.0 (SPSS Inc., Chicago, IL, USA) and descriptive and analytical tests, including mean, standard deviation, and independent t test.

Results

The questionnaire-based study was carried out among 230 dentists working as clinicians or both academicians and clinicians in and around Meerut out of which only 214 dentists responded to the questionnaire generating the response rate of 93.04%. Table 1 shows the demographic data of studied participants.

Table 2 shows knowledge of the dental clinicians about the management of patients with substance usage where the majority of the dentists were having moderate knowledge about substance usage and related questions. It was clearly seen that many of the dentists were having a positive attitude toward the management of patients with substance usage [Table 3].

Table 4 represents the comparison of knowledge between the dental clinicians according to their level of qualification (graduate/ postgraduate) where it was seen that majority of the dentists with post-graduate degrees are having a higher level of

knowledge (P < 0.05). However, in case of comparison of attitude, there was not much difference found among dentists who were having postgraduate degree or graduate degree (P < 0.05) [Table 5].

Discussion

Substance usage such as exploitation of various drugs, tobacco, alcohol, etc., leads to disability, morbidity, and mortality related avertable conditions. Even sky-scraping burden of oral diseases is found in many of the substance abusers which is further intricate by concomitant emotional/behavioral/personality issues. Hence, it is progressively more obvious that management of substance abuse is a significant module and patients' visits to health care providers should be endowed with screening and interventions for substance use disorders. Few of the studies also reported that epigrammatic interventions can generate considerable and continual reductions in tobacco use and alcohol consumption in health care settings.[15,16] Even the deprived general health with insufficient nutrition and poor oral hygiene are frequent health-related issues that are producing the abnormalities within the oral cavity because of pathological effects of the drugs.

Hence, it is necessary that the dentists should also be well-informed, knowledgeable on the subject of administration of patients with substance usage.^[17,18]

The present questionnaire-based study which consisted of knowledge and attitude related questions was carried out among dentists working as clinicians or both academicians and clinicians where it was clearly seen that majority of the dentists were having moderate knowledge. This may be owing to not much experience in assessing the substance users with lack of appropriate settings,

Table 1: Distribution of studied subjects according to their level of qualification				
Qualification	Frequency	Valid Percent		
BDS	74	34.6		
MDS	140	65.4		
Total	214	100.0		

Table 2: Knowledge about management of substance						
usage						
	Yes (1)	No/don't know (0)	Mean±SD			
Know about substance usage	191 (89.3%)	23 (10.7%)	0.89±0.310			
Know about DAST test	107 (50%)	107 (50%)	0.50±0.501			
Know about CAGE test	105 (49.1%)	109 (50.1%)	0.49±0.501			
Know about AUDIT test	105 (49.1%)	109 (50.1%)	0.49±0.501			
Know about ASSIST test	117 (54.7%)	97 (45.3%)	0.55±0.499			
Maximum value=1, Minimum v	alue=0					

valid inventories, and assessment protocols for the drug users, whereas majority of dentists were having positive attitude toward the management of substance users which may be because of reason that majority of the dentists know the various detrimental effects of being involved in substance abuse. Even the studies done by Priyadarshini SR *et al.* in 2019 and McNeely *et al.* in 2013 also said that though the dentists are familiar with the importance of screening for substance use, but they lack definite knowledge, clinical training, and systems that could facilitate furthermore interventional strategies.^[14,15,19]

In the present study, comparison of knowledge and attitude according to their level of qualification (graduate/postgraduate) was also done, which clearly demonstrated that majority of the dentists with postgraduate degrees were having a higher level of knowledge. This might be because of advanced knowledge, involvement in extensive training programs, a higher level of understanding, and greater independence, whereas in case of attitude, there was not much difference found among graduate and postgraduate dentists.

Interventions related to substance usage have high clinical relevance for dentists in spite public health benefits, as tobacco, alcohol, and other drugs are having considerable effects on oral health. Dentists are having common contact with individuals because of the expansive ratio of the population visit to their clinics. Therefore, dentists symbolize an effectively available resource for the identification of patients with substance usage and increasing their admittance to management.

Our study clearly indicates that dentists in the practice vastly endorse for screening of substance use, and even some were conducting screening within their clinics. Moreover, these clinicians have already uttered a strong interest and they were in favor to adopt and advocate newer practices for substance use.^[15] Even the management of substance usage can also act as a primary care approach that could help to deject or discontinue use in those who are already experimenting or using. The majority of drug use begins during adolescence and early adulthood, when young people are rising cognitively and communally. For that motive, primary prevention is essentially intended for those life stages, as they are in that phase of life when patterns of behavior are being shaped and can be possibly influenced by peers and role models who may be caught with substance usage. Preventing or delaying the initial use of drugs and the shift to more stern use of drugs among intermittent users is the foremost intention of primary prevention, which can be achieved through actions intended at preventing drug use or in some way through activities that prevent drug use by promoting the overall health of a population. With this gratitude, screening for substance misuse is more progressively being provided in general as well as dental health care settings, so that emerging and rising problems can be detected.[16,20]

Dentists can also play a decisive role in the detection of substance abuse and can participate as integral members of a collaborative

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Table 3: Attitude about management of substance usage						
titude Respondent's comments						Mean±SD
	Strongly agree (5)	Agree (4)	Neither agree nor disagree (3)	Disagree (2)	Strongly disagree (1)	
Substance usage in the history form	61 (28.5%)	137 (64%)	16 (7.5%)	0 (0%)	0 (0%)	4.21±0.563
Necessity of screening of substance usage	67 (31.3%)	130 (60.7%)	11 (5.1%)	0 (0%)	6 (2.8%)	4.18±0.767
Patient should be asked verbally about substance usage	49 (22.9%)	143 (66.8%)	22 (10.3%)	0 (0%)	0 (0%)	4.13±0.563
Oral manifestations are a common finding	32 (15%)	127 (59.3%)	34 (15.9%)	14 (6.5%)	7 (3.3%)	3.76 ± 0.901
Difficulty in diagnosis of real pain	46 (21.5%)	120 (56.1%)	25 (11.7%)	23 (10.7%)	0 (0%)	3.88 ± 0.867
Use of behavior management techniques	70 (32.7%)	116 (54.2%)	24 (11.2%)	4 (1.9%)	0 (0%)	4.18±0.696
Replacement of LA with vasoconstrictor by Plain LA for dento-surgical procedures	38 (17.8%)	120 (56.1%)	32 (15%)	24 (11.2%)	0 (0%)	3.80±0.861
Dose of LA should be increased for dento-surgical procedures	12 (5.6%)	158 (73.8%)	28 (13.1%)	16 (7.5%)	0 (0%)	3.78±0.662
Regulation of dose of analgesics	26 (12.1%)	147 (68.7%)	35 (16.4%)	6 (2.8%)	0 (0%)	3.90 ± 0.624
Difficulty in prescription of drugs	36 (16.8%)	135 (63.1%)	27 (12.6%)	6 (2.8%)	10 (4.7%)	3.85 ± 0.898
Enough time should be given in assisting them to quit	84 (39.3%)	99 (46.3%)	24 (11.2%)	7 (3.3%)	0 (0%)	4.25 ± 0.822
Chances of complications during surgical treatment are more	48 (22.4%)	134 (62.6%)	31 (14.5%)	1 (0.5%)	0 (0%)	4.07±0.620
Prescription of non-narcotic analgesics to them	18 (8.4%)	147 (68.7%)	35 (16.4%)	14 (6.5)	0 (0%)	3.79 ± 0.684
Modification of acetaminophen dose to decrease the post-operative pain	26 (12.1%)	122 (57%)	43 (20.1%)	20 (9.3%)	3 (1.4%)	3.69±0.853
Oral prophylaxis and Oral hygiene instructions- included as a part of treatment	79 (36.9%)	113 (52.8%)	19 (8.9%)	3 (1.4%)	0 (0%)	4.25±0.673
Alcohol containing mouthwashes should not be prescribed to them	49 (22.9%)	120 (56.1%)	17 (7.9%)	25 (11.7%)	3 (1.4%)	3.87±0.943
Referral of such patients to the drug de-addiction center	66 (30.8%)	101 (47.2%)	35 (16.4%)	12 (5.6%)	0 (0%)	4.03±0.836
It is beneficial to be involved in treatment program specially related to drug usage	62 (29%)	123 (57.5%)	21 (9.8%)	8 (3.7%)	0 (0%)	4.12±0.725
Presence of a designated staff for managing such patients in dental clinic	55 (25.7%)	88 (41.1%)	62 (29%)	9 (4.2%)	0 (0%)	3.88±0.839
Dentists play an important role in helping the patient to quit his habit	104 (48.6%)	90 (42.1%)	13 (6.1%)	7 (3.3%)	0 (0%)	4.36±0.742
Dental clinics are an appropriate setting to address substance usage	25 (11.7%)	124 (57.9%)	35 (16.4%)	27 (12.6%)	3 (1.4%)	3.66±0.894
Skills of dental professionals should be improved to handle such cases Maximum value=5, minimum value=1	68 (31.8%)	132 (61.7%)	8 (3.7%)	0 (0%)	6 (2.8%)	4.20±0.756

Table 4: Comparison of knowledge according to level of qualification							
	Level of qualification	п	Mean	Std. Deviation	Mean diff	Т	Р
Know about substance usage	BDS	74	0.80	0.405	-0.14	-3.339	0.000*
	MDS	140	0.94	0.233			
Know about DAST test	BDS	74	0.47	0.503	-0.04	-0.573	0.5**
	MDS	140	0.51	0.502			
Know about CAGE test	BDS	74	0.38	0.488	-0.17	-2.410	0.01*
	MDS	140	0.55	0.499			
Know about AUDIT test	BDS	74	0.38	0.488	-0.17	-2.410	0.01*
	MDS	140	0.55	0.499			
Know about ASSIST test	BDS	74	0.57	0.499	0.03	0.443	0.3**
	MDS	140	0.54	0.501			

*significant. ** non-significant

care team tending to the substance abuser. Notably, we found that screening and cessation assistance was offered for tobacco use than for alcohol or illicit drugs, and many of dentists observed fewer barriers too while providing cessation -related services. Hence, educating dental graduates and postgraduates about the management of substance usage and making it a part of the dental curriculum may help us deal with the global issues of substance use.

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Table 5: Comparison of attitude according to level of qualification							
	Level of qualification	n	Mean	Std. Deviation	Mean diff	Т	Р
Substance usage in the history form	BDS	74	4.15	0.61	09	-1.165	0.2**
	MDS	140	4.24	0.54			
Necessity of screening of substance usage	BDS	74	3.97	1.03	-0.32	-2.886	0.004*
	MDS	140	4.29	0.55			
Patient should be asked verbally about substance usage	BDS	74	3.91	0.53	-0.33	-4.390	0.000*
	MDS	140	4.24	0.55			
Oral manifestations are a common finding	BDS	74	3.59	0.66	-0.26	-1.986	0.02*
	MDS	140	3.85	0.99			
Difficulty in diagnosis of real pain	BDS	74	3.82	0.82	-0.09	741	0.4**
	MDS	140	3.91	0.90			
Use of behavior management techniques	BDS	74	4.01	0.79	-0.25	251	0.01*
	MDS	140	4.26	0.63			
Replacement of LA with vasoconstrictor by Plain LA for	BDS	74	4.07	0.82	3.337	0.403	0.001*
dento-surgical procedures	MDS	140	3.66	0.85			
Dose of LA should be increased for dento-surgical procedures	BDS	74	3.73	0.69	-0.41	725	0.4**
	MDS	140	3.80	0.65			
Regulation of dose of analgesics	BDS	74	3.93	0.56	0.04	. 520	0.6**
	MDS	140	3.89	0.66			
Difficulty in prescription of drugs	BDS	74	4.04	0.67	0.30	2.610	0.02*
	MDS	140	3.74	0.99			
Enough time should be given in assisting them to quit	BDS	74	4.11	0.85	-0.21	-1.816	0.07**
	MDS	140	4.32	0.80			
Chances of complications during surgical treatment are more	BDS	74	3.88	0.68	-0.29	-3.173	0.001*
	MDS	140	4.17	0.56			
Prescription of non-narcotic analgesics to them	BDS	74	3.81	0.73	0.03	0.327	0.02*
	MDS	140	3.78	0.66			
Modification of acetaminophen dose to decrease the post-operative	BDS	74	3.81	0.86	0.18	1.488	0.1**
pain	MDS	140	3.63	0.85			
Dental prophylaxis and oral hygiene instructions- included as a part	BDS	74	3.86	0.56	-0.60	-6.734	0.000*
of treatment	MDS	140	4.46	0.64			
Alcohol containing mouthwashes should not be prescribed to them	BDS	74	3.72	0.97	-0.24	-1.786	0.07**
	MDS	140	3.96	0.92			
Referral of such patients to the drug de-addiction center	BDS	74	4.16	0.55	0.20	1.931	0.000*
	MDS	140	3.96	0.95			
It is beneficial to be involved in treatment program specially related	BDS	74	4.28	0.61	0.25	2.477	0.01*
to drug usage	MDS	140	4.03	0.77			
Presence of a designated staff for managing such patients in dental	BDS	74	3.88	0.74	-0.01	064	0.1**
clinic	MDS	140	3.89	0.89			
Dentists play an important role in helping the patient to quit his	BDS	74	4.32	0.88	-0.06	508	0.06**
habit	MDS	140	4.38	0.66			
Dental clinics are an appropriate setting to address substance usage	BDS	74	3.58	0.98	-0.12	885	0.07**
	MDS	140	3.70	0.85			
Skills of dental professionals should be improved to handle such	BDS	74	4.05	1.05	-0.22	-2.015	0.04*
cases	MDS	140	4.27	0.53			
cases	MDS	140	4.27	0.53			

*significant. ** non- significant

Limitations and Recommendations

There was not much literature reported for comparison of the study results, which showed a major restriction of the subject. Therefore, more studies are indicated because of the paucity of existing literature. Although dentist's knowledge and attitude was assessed in the present study, their negative attitudes toward substance users and reluctance not to treat them was not assessed. Thus, it strongly recommends the empowerment of dentists along with formulating them into drug rehabilitation settings to provide oral health education and various treatments to substance users. Even less number of dentists were included in the present study. Hence, larger sample size along with inclusion of dental students, dental hygienists should be recommended.

Conclusion

Regardless of increased attentiveness about the disease of addiction, the number of patients with a record of substance

abuse has been consistently increasing. It has been seen that majority of the dentist irrespective of qualification were unaware of the modalities regarding the management of the patients with substance usage at the dental clinic. Considering the global increase in substance abuse as well as the harm caused by substance abuse, a call needs to be made to not only mainstream addictive disorders and substance abuse into dental care but, imperatively, for the inclusion of an emphasis on this subject matter in the undergraduate dental curriculum. Future research-based support is needed to identify effective prevention approaches to identify individuals and to be treated with a specific approach.

Declaration of study subjects consent

The authors certify that they have obtained all appropriate study subjects consent forms. In the form, the study subject (s) has/ have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The study subjects understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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