

Substance Abuse and Oral Health of Adolescence

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ABSTRACT

Substance abuse is a rising health trend that affects countries worldwide. It is associated with financial, social, medical, oral and economic effects that can affect the user, community and the society. Some substances have been used in the history of mankind for religious, cultural, recreational and medicinal purposes. Substance abuse among adolescents is increasing with possible associated factors like peer influence, availability and affordability of substances, favourable parental attitude to substance use, parental substance use problems, parental approval of substance use in early adolescence, family structure, locality of residence, social bonding, boredom, type of school, and adventurous personality. Oral health conditions among substance abusers may be attributed to the direct impact of the chemical qualities and nature of the illicit substances on oral tissues, decreased saliva production, concentration, personal preference, the frequency and amount of consumption of the abused substance and the substance abuser associated oral health risk behaviours.

Keywords: Abuse, adolescents, substance abuse, oral conditions, oral health.

INTRODUCTION

Substance abuse is a growing health trend that affects high income, middle income and low-income countries worldwide and is associated with financial, social, oral, medical, and economic effects that can affect the user, community and the society.¹ Some substances have been used in the history of mankind for religious, cultural, recreational and medicinal purposes. It is a common practice in some traditional African settings to use alcohol as culturally acceptable substance during some cultural ceremonies and activities.² It is consumed by drinking and can affect the oral cavity, oral mucosa and teeth of the consumer. The effects of alcohol on oral tissues depend on the nature and contents of the drink, its concentration, frequency and the amount of consumption.³ The reason for uncontrolled or unregulated access to alcohol by adolescents has been suggested to be due to young people

been sent on errand by adults or parents to buy alcohols that are sold in various sachets, bottle or container without restrictions.²

SUBSTANCE ABUSE AMONG ADOLESCENTS

The adolescence stage of life involves physical, biological, psychological and social changes. It is a period when young people develop their adult identity, form lifetime habits and become increasingly independent.⁴ Adolescents tend to explore and task themselves to grow into independent adults with adventure-seeking, curiosity which sometimes involves risk taking behaviours. It is an important time during which biological, physiological, neurological, behavioural and social transitions takes place towards adulthood. This period of transition is characterised by high impulsivity, increased sensation-seeking behaviour, high risk-taking behaviours relating to substance use and abuse, an increased sense of self-awareness, higher importance of social relationships involving partners and peers rather than parents and older siblings. The emotional and mental pressure of going through adolescence, coupled with major hormonal, physiological, identity development and peer pressure to fit in with dominant peer norms can result in enormous stress levels.⁴ The abuse of substances is becoming common among adolescents who in some cases might not be aware about the various dangers of substance abuse on their general health and oral health, exposing

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them to mental, social, oral, medical and psychological consequences.⁵

Young people are usually introduced to substances through entry drugs such as alcohol, cigarettes, kolanut, coffee and marijuana and progress on to substances such as tramadol, cocaine, heroin, and codeine.^{5,6} The increasing use of substances among young people has been linked to easy accessibility to substances in the environment and financial power to buy available substances of interest.¹ Substance abuse among adolescents is increasing with possible associated factors like: peer influence, parental-adolescent conflict, availability and affordability of substances or drugs, favourable parental attitude to substance use, parental substance use problems, parental or guardian approval of substance use in childhood or early adolescence, delinquency, substance sensation seeking, family structure, locality of residence, social bonding, boredom, escaping or coping with reality, type of school, and adventurous personality.^{1,6} Any substance use, whether natural or synthetic, carries risks which vary according to age, sex, nature, concentration, personal preference, frequency and amount of use. There are different methods of consumption or use of substances, the methods used to abuse these substances could be by smoking, inhaling, injecting, chewing, sniffing, swallowing, and mixing with food or beverages or combination of two or more methods.⁵

Protective factors for substance abuse among adolescents include family attachment, peers views on substance abuse, parental harmony, religious beliefs on substance abuse, family unit or structure, parental monitoring and supervision, good communication and frequency of participation in religious activities.¹ An increasing trend in the use and abuse of substance among adolescents in high-income country is similar to an increasing trend in smoking and substance abuse in adolescents and young adults in other low-income countries.⁴ Tobacco and alcohol use often starts and is established during adolescence.⁴ The American Academy of Paediatric Dentistry (AAPD) recognizes that substance abuse in adolescents is a significant health, social, physical and familial issue in the United States.⁷ Commonly used abusive substances are narcotics (including poppy, opium, morphine, codeine, heroin, opioids, meperidine, pethidine, and methadone), alcohol, cigarettes, kolanut,

coffee, tramadol, cannabis (marijuana, hashish, and dried parts of cannabis plant), stimulants (amphetamines, cocaine), hallucinogens (lysergic acid diethylamide-LSD, phencyclidine, mescaline, and psilocybin), depressants (barbiturates and benzodiazepines), and miscellaneous substances.⁵⁻⁷ Adolescents who use various abusive substances are susceptible to a variety of oral diseases such as dental caries, periodontal disease like gingivitis, candidiasis, xerostomia, altered taste sensation, bruxism and halitosis.⁴ According to The American Academy of Paediatric Dentistry (AAPD), clinical presentations of substance use and abuse may include odour of alcohol on breath, odour of marijuana on clothing.⁷ The increasing prevalence of substance abuse among adolescents compels dental professionals to identify behaviours characteristic of active use, recognize clinical signs and symptoms of active use or withdrawal, modify dental treatment accordingly, and facilitate referral to medical providers or behavioural addiction specialists where necessary.⁷

ORAL CONDITIONS ASSOCIATED WITH SUBSTANCE ABUSE

Adolescents have susceptible teeth erupting at a time they are establishing their independence from parental influence, including independence from parental oversight of home's oral health care practices such as tooth brushing and flossing. This increases the risk for poor oral hygiene practices.⁴ Substance abuse can lead to periodontal diseases, dental caries, pathologic lesions, issues in teeth mobility, mucosal ulceration, tooth wear, meth mouth (rampant dental caries), xerostomia, muscle pain, loss of sensation, grinding of teeth or bruxism. Meth mouth is an irreversible loss of tooth structure that causes loss of teeth, xerostomia, bruxism, and other oral complications that are clinical features of the prolonged use of the substance methamphetamine.⁸ The consequence of the long-term use of methamphetamine on oral and dental health is the development of tooth decay, in which the teeth of the substance abuser appears to be dark and in the process of decaying. The oral and dental health problems accompanied by hallucinogenic drug abuse include xerostomia, poor oral hygiene, bad taste in mouth, extensive caries particularly in the buccal surface and inter-proximal surfaces, contraction and tenderness of masticator muscles leading to bruxism and dental erosions, periodontal diseases and temporomandibular

joint disorders.⁹ Tobacco use and abuse can result in high incidence of stained teeth, taste disturbance, periodontal diseases, poor wound healing, oral mucosal lesions such as hairy tongue, smoker's melanosis, oral cancer etc.⁹ Life-course of oral health diseases clearly shows that many adult oral disease problems started in childhood and adolescence.⁴

Oral health conditions or complications are common health concerns associated with substance abuse and dependence. The mechanism of development of these oral health conditions include direct effects of the chemical qualities and nature of the harmful substances on oral tissues (mucosa, gingiva and teeth), decreased saliva production, nature, concentration, personal preference, the frequency and amount of consumption of the abused substance and the substance abuser associated oral health

risk behaviours.¹⁰ The oral conditions can be managed by; education and counselling, patient motivation, medical history, documenting past with current history, adjacent needs with previous treatments brief interventions for encouragement, support and positive reinforcement, clinical assessment, scaling and polishing and treatment according to clinical features with follow-up.⁷

CONCLUSION

Substance abuse among adolescents is increasing in both resource rich and resource poor countries. There is a need for more awareness and counselling on the various effects of substance abuse among adolescents.

Conflicts of interest: None.

INAPD

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