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Review Article

Adolescent's Oral Health - A Review

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ABSTRACT

Adolescence is the period of transition that occurs between childhood and adulthood in years. Oral health is often neglected in adolescent population due to poor nutritional habits, poor self- care dental habits and vulnerability to illicit practices adversely affecting the quality of life. The purpose of this article was to summarize the available information regarding their oral health status, oral health practices, and habits, and to discuss the barriers in delivering oral health care. Data from original scientific papers published in Pub Med, Pub Med Central, and Google Scholar were taken for review. Search was accompanied with the keywords such as adolescents, children, oral health and treatment needs. Articles published in English language only were included. The review found that, oral health status was poor with oral diseases like caries, with increased illicit practices.

Keywords: Adolescents, oral health, oral habits, treatment needs.

INTRODUCTION

Parents gasp and clap with excitement when they see their toddlers' first steps, or hear them babble their first words. Parents beam with pride with their child's first day of school, their first piano recital, and their first soccer game. But however, similar developmental milestones during their children's transition to adulthood are much less welcome. This transitional period, from childhood to adulthood, is defined as "Adolescence" and spans the ages of 12-19 years old. [1] It may be surprising to learn that the concept of adolescence as a separate and distinct period of development is a relatively recent phenomenon.

Globally, the number of adolescent and young people is at an all-time high, [2] but that number might not increase much in upcoming decades if the global fertility continues to decline. The world had 1.6 billion persons aged 12-24, of which 721 million were adolescents aged 12-17 and 850 million were youth aged 18-24 in the 2012. Provided that global fertility and mortality continue to decline, the numbers in both the age groups are projected to remain within narrow ranges during the rest of the century, having 721 million in 2015 with a peak of 762 million in 2030 in case of adolescents, and between 835 million in 2020 and 884 million in 2065 in the case of youth. The world is expected to have 755 million adolescents and 883 million youth in 2040. [2]

Health is defined as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, [3] while oral health is part of total health and essential to quality the of life. Moreover, sometimes poor oral health leads to poor general health and vice-versa because of common risk factors; for

example, tobacco, pan chewing, and alcohol have an effect on oral health. Tooth loss has also been linked with increased risk of or facial trauma and malocclusion. Thus, adolescent people form a distinct group in terms of provision of care.

Many of the adolescent people have ill habits that will have an impact on their oral health. In order to provide good oral health care, dental professionals must understand the complexities inherent to younger people, their special needs and their capacity to undergo and respond to care. Diagnosis and treatment planning for the younger patient must include considerations of the biological, psychological, social and economic status of the patient in addition to the obvious dental problems. So the present review was undertaken to summarize the available information regarding the oral health practices, habits and to discuss the habits in delivering oral health care.

MATERIALS AND METHODS

A thorough literature review was made which engaged most of the articles published in peer review journals relating to Adolescent oral health. The review began with the search of Medical Subject Headings (MeSH) such as Adolescents, oral health and non MeSH terms such as oral health behavior, treatment needs in various search engines including Pub Med, Pub Med Central, and Google Scholar. Articles published in English language only were considered in the review. The spotlight of the present review will be among adolescent population and articles published between the years 2000 to 2015 only were reviewed. The present review also highlights the barriers in delivering oral health care to the adolescent population. Finally of 359 citations, 24 studies met study criteria and were reviewed.

RESULTS

Table 1: Summary of the articles published from 2001-2015 showing oral health diseases and their prevention during adolescence

Authors	Year	Study place	Sample size	Significant findings
Tambelini CA. [4] Ramos DM Poli-Frederoco RC, Tomasetti CS, Barata TJE, Macie SM	2010	Brazil	424	Prevalence of Dental caries-72.9% Average DMFT-2.93
Ingle NA, [5] Dubey HV, Kaur N, Gupta R	2014	Gujarat	1400	Prevalence of Dental caries-53% Average DMFT- 7.61+/-2.86
Rebelo MAB, [6] Lopes MC, Vieira RJM, Parente PRC	2008	Brazil	889	Slight gingival inflammation-78.5% Bleeding on probing-53.3%
Shygali TR, [7] Bhayya DP	2010	Sholapur	1045	Prevalence of gingival disease - 81%
Levin L, [8] Margvelashvili V, Bilder L, Kalandadze M, Tsitsedze N, Machtei EE	2012	Georgia	397	Localized periodontitis-34.2%
Nanaiah KP, [9] Nagarathna DV, Manjunath N	2013	Mangalore	1100	Acute periodontitis-0.36% Chronic periodontitis - 1.5%
Aren G, Sepet E, Erdem PA[10]	2011	Turkey	1296	Trauma due to falls (56%), laceration (30.1%), hematoma (18.6%)
Shiva kumar et al[11]	2009	Davangere	1000	Buccal crossbite, linear open bite

Table 2: Summary of the articles published from 2001-2015 showing adolescence oral habits, consequences and their prevention.

Authors	Year	Study place	Sample size	Significant findings
Cheron-Launey M, Baha M, Mautrait C, Lagrue G, Le Faou AL[12]	2007	France	300	Cigarette smoke atleast once a day-34%, cannabis-38%, alcohol consumption - 73%.
Muttappallymyalil J, Divakaran B et al[13]	2012	Kerala	3000	Prevalence of tobacco users - 5.5%
Rozi S, Akthar S [14]	2007	Pakistan	772	Prevalence of smokeless tobacco (gutka, snuff, niswar) users - 16.1%
Paiva PC, Paiva HN et al [15]	2014	Brazil	588	Alcohol consumption – 45.6%, Binge drinking – 23.1%
Zosel A, Bartelson BB, Bailey E, Lowenstain S, Dart R [16]	2007	US	4000	Opioids - 68%, stimulants - 32%
Levin L, Zadik Y, Becker T [17]	2005	Israel	400	Atleast one type of piercing - 20.3%.

DISCUSSION

Adolescence is the period of transition between childhood and adulthood. It is a different world wherein the adolescents and youth live from that in which their parents grew up. Biological, psychosocial and cognitive changes which begin during puberty and last throughout adolescence have a direct effect on nutritional status and nutrient needs. They also experience significant changes in their ability to assess and comprehend the complex situations and information and in their desire to become independent, unique individuals. [18]

It is urgent to focus on the services that can make major differences in the lives of young people in reducing disparities. Improvements in child health and declining fertility have increased demand for schooling. Ensuring universal primary education and expanding enrolment at the secondary level can yield many dividends, especially with regard to improving skills for productive employment, reducing risky behaviors and developing habits that can influence health for the rest of young people's lives. To reap the greatest benefits from education, both its length and contents are important. The young people need to be taught, and be active in participation in learning and developing the behavioral skills which requires in rapidly changing society. [19]

Dental health programs and dental camps at school and college level are paramount important and they should be conducted at regular intervals. Parents and teachers should be taught and encouraged to inculcate healthy life style habits such as management of dental fear in adolescents. The behavioral child management technique along with preventive dentistry should be a fundamental part of school dental health programs. [19]

There has been a rising trend in alcohol, drug abuse and tobacco use, more in smokeless forms in the world in recent years which show a general tendency towards an increase in substance use by the youth for the past few decades. [21] It is a matter of great public health concern and psychosocial factors have an important role to play in the initiation of this habit. This habit has been picked up by the large amount of adolescents from their family members or the peers. Certain aspects which led to the initiation of this habit to the adolescents were the advertisements of tobacco, alcohol products and promotional campaigns by the manufacturers which also have attracted the attention of health professionals, media and law enforcement agencies. Concerned steps were also taken by the local governments in putting curbs on the sales of alcohol and tobacco products to children, along with regulating tobacco and alcohol advertisements. [21]

There is an urgent need to take effective steps, especially on launching community awareness programs for the school children and college students to educate them about the consequences of substance abuse, and on assessing their effectiveness in curbing the problem. It is in need to keep updated of the policies and conventions of the international agencies like WHO, UNDCP, and other similar agencies on substance abuse, in order to utilize their expertise for curbing their problem. [21]

The goals of preventive health care for adolescents are; promotion of optimal physical and mental health and to support healthy physical, psychological, and social growth and development. Because the most common morbidities and mortalities of adolescence today are preventable health conditions associated with behavioral, environmental, and social causes, preventive services for adolescents should reflect these shifts in etiology. Therefore, visits to a health care provider should reinforce positive health behaviors, such as exercise and nutritious eating, while discouraging health-risk behaviors such as those associated with unsafe sexual behaviors, unsafe driving, and use of tobacco or other drugs. Although the incidence of serious medical problems during adolescence is

low, adolescence is a time during which lifelong health habits are established. Furthermore, numerous issues and concerns may emerge during adolescence that affects overall health and well-being. Therefore, adolescence becomes an ideal period for health professionals to invest time in health promotion and preventive services. [22]

There is a well established link between general health and *socio-economic* status with a body of evidence showing that poor oral health is associated with low socio-economic status or deprivation. A Low *socio-economic* status was significantly associated with increased oral cancer risk, even after adjusting for potential behavioural confounders in both high and lower income countries around the world.

According to Baldani et al, [23] there is a correlation between higher income and education and access to information and dental treatment. Likewise, Frias et al [24] commented that the higher chance of caries in certain groups of adolescents demonstrates their higher vulnerability to the disease and reveals the reduced utilization of oral health care services for both educational/preventative and therapeutic actions.

Evidence of effective interventions and policies to prevent these inequalities is currently limited. Scarce evidence of approaches to reduce socioeconomic inequalities in oral health mainly concentrates on the reduction of inequalities. Still little is known about strategies for oral health promotion in adolescents contributing to closing the gap in oral health between individuals from higher and lowers socioeconomic groups.

Risk assessment tools for the oral disease are already being used by oral health care providers to identify risk factors associated with caries, periodontal disease, and oral cancer. To ensure the provision of quality oral health care for adolescents, oral health care professionals require training in the care of the adolescent population. Oral health care should be organized to ensure adequate early detection, prevention, and treatment of adolescent population. It remains a challenge to the health authorities to establish prevention oriented oral health systems based on primary health care approach and preventive programs.

CONCLUSION

The proportion of adolescent population in the world continues to grow, especially in the developing countries along with an increase in the prevalence of oral disease and non communicable diseases, which significantly challenging the health and social policy planners. The WHO Oral Health Program encourages decision-makers and public health care administrators to design effective and affordable strategies and programs for better oral health and quality of life of the adolescent people, which are integrated into general health programs. Demonstration projects on control of oral diseases, promotion of oral health and improvement of quality of life should be initiated and evaluated systematically.

Suitable preventive measures should be instituted early to avoid deleterious habits which are causing greater public health problems in adolescents in the future world. The dental treatment of the adolescents can provide the practitioner with a challenge to his professionalism, judgment, and ingenuity, as well as a test of his sense of caring for the well being of the community in which they live.

Although the majority of adolescents have good knowledge of the hazards of substance abuse either in the form of tobacco, alcohol and oral piercings on health; the lack of complete knowledge, to some extent, had influenced adolescent experimenting with substance abuse. This situation will continue to be a salient public health issue as the population of adolescent's increases in size, and the demand for oral health services grows. To reduce this crisis in the future, we should ensure that adolescents are informed about the need for oral health care throughout

their lifetime. Ensuring adolescents to have access to oral health care is critical, as oral health services are an essential component of primary health care. Adolescents alike need to understand and manage their need for oral care services through regular dental visits.

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