

Prevalence and Pattern of Tobacco-Use Among Children in India: A Review of Literature

Paridhi Shah*

*Department of Pediatric and Preventive Dentistry, K M Shah, Dental College and Hospital, Sumandeep Vidyapeeth (Deemed to be University), Vadodara, Gujarat, India.

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ABSTRACT

Tobacco use among children in India is believed to be increasing exponentially. The most common reasons cited for this are peer pressure, parental tobacco habits, and pocket money given to them. The early age of initiation underscores the urgent need to intervene in order to protect this vulnerable group from falling prey to this addiction. Hence, this review elaborates on this special group of population who can carve out a niche in their future in terms of healthy lifestyle habits.

Keywords: Gujarat, School-going children, Tobacco use, Environmental tobacco smoke exposure, Cessation of tobacco

Abbreviations: WHO: World Health Organization; GATS: Global Adult Tobacco Survey; ETS: Environmental Tobacco Smoke; EPA: Environmental Protection Agency; IARC: International Agency for Research on Cancer

INTRODUCTION

Tobacco use is the leading cause of premature death worldwide, more so in developing countries. India is the second largest consumer and third largest producer of tobacco [1]. According to survey by the World Health Organization (WHO), currently about 5 million people die prematurely every year in the world due to the use of tobacco and by 2030, it would double to 10 million deaths every year, with about 7 million of the deaths taking place in developing countries [2].

In India, approximately one in every 10 children between age range of 10 to 15 year have smoked cigarettes, and almost half of these children have initiated tobacco use before the age of 10 years [3]. According to the recent Global Adult Tobacco Survey (GATS, 2009-2010), one-third of Indian population ≥ 15 years of age use either form of tobacco [4].

The tobacco situation in India is unique because of availability of vast spectrum of tobacco products. Due to the enormous psychosocial as well as health effects of tobacco on youth, it is pertinent to understand its burden for formulating effective tobacco control measures targeting them.

The Indian government is alarmed about the age at the first use of tobacco and has been reduced considerably. This paper will help to understand various factors that influence

and encourage young teenagers to start smoking or to use other products.

PREVALENCE OF TOBACCO USE

Various studies have been conducted to determine the prevalence of tobacco use among children and adolescents. The overall prevalence of tobacco use among school children in different States of India has been reported to vary from 1.9% (Delhi) to 75.3% (Mizoram) [3]. A door-to-door survey was conducted in a village of Wardha district of India on the adolescent group, in which 46.83% of the adolescents were tobacco users [5]. In a study conducted in Gujarat, an overall prevalence of tobacco usage was reported to be 53.2% among children aged 9-13 years [6]. The prevalence reported in this study was much higher as compared to other studies. In North Kerala, Jaya kumary et al. reported 5.5% prevalence among 3000 adolescents. Habit of tobacco use

Corresponding author: Paridhi Shah, Department of Pediatric and Preventive Dentistry, K M Shah, Dental College and Hospital, Sumandeep Vidyapeeth (Deemed to be University), 1, Navneet park soc., outside panigate, Vadodara, Gujarat-390019, India, Tel: +91 7698222287; E-mail: paridhishah3@gmail.com

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initiates during adolescent period as reported in majority of studies.

GENDER PREDILECTION FOR TOBACCO USE

The use of smokeless tobacco products is found to be more common in government school boys in comparison to private school boys, whereas this pattern is reverse amongst girls. As explained by Mathur [8], low socio-economic status of government school students can be a potential reason. As it is relatively inexpensive and readily available, these children often see tobacco as an alternative to food [8,9]. Also chewing tobacco products is considered less harmful than smoking. Despite the male predominance observed in majority of surveys, it was found that all the females, who used tobacco, consumed it on a daily basis and found no difficulty in procuring the same [6]. This observation was against the usual social norms of an Indian society.

AGE OF ONSET OF TOBACCO USE

The mean age at initiation of 'exclusive smoking' was significantly lower in girls as compared to boys. Among most Indian studies, the mean age of initiation of tobacco use has been found to vary from 8 to 15 years [10]. Majority of the tobacco users worldwide have reportedly first tried tobacco prior to 18 years of age, while some starting as young as 10 years [10]. However, a study by Narain [3] reports a recent downward shift in age at uptake of tobacco habit among children. The age of initiation of tobacco-related habits is important because the earlier the children initiate its usage; more likely they are to continue the habit and become addicts.

PATTERN OF TOBACCO USE

Wide range of factors contribute to the initiation, experimentation and regular use of tobacco among children and adolescents. Exposure to parental/sibling/peer smoking, peer pressure, easy access to smoking and non-smoking forms of tobacco, aggressive promotion and advertising, low cost is few of the most common determinants [10]. Thus, the pattern of tobacco usage among children more likely depends on the underlying determinants for the habit.

TYPE OF TOBACCO CONSUMED

As joint family smoking is a taboo in Indian families, primarily smoking of tobacco was restricted to only the dominant male members of the family. Smoking tobacco was less accepted, smokeless forms of tobacco were widely accepted [10]. As stated by Gupta [11] another major reason that encourages children/caregivers to use smokeless form of tobacco are its ease of purchase or production, and the widely held misconception that it has medicinal value for curing toothache, headache and stomach ache.

Smokeless tobacco products differ significantly in nicotine content, pH and levels of various carcinogens [12]. As

nicotine is absorbed through the buccal mucosa, its uptake is affected by the pH of the tobacco product as well as the pH of the mouth. The rate of absorption and action for nicotine from smokeless tobacco is thus slower than that from smoking tobacco. This delayed effect makes smokeless tobacco products less addictive than smoking type [12]. Also, chewing tobacco decreases the hunger pangs in children, and thus the burden of feeding the child is reduced considerably.

ENVIRONMENTAL TOBACCO SMOKE EXPOSURE IN CHILDREN

Second-hand smoke (complex mixture of gases generated during the burning and smoking of tobacco products) and third-hand smoke (residual tobacco smoke that adsorbs to indoor surfaces and remains after the majority of the airborne components of the smoke have cleared.) form the two components of constitute Environmental Tobacco Smoke (ETS) [13]. ETS has been classified as a class A carcinogen by Environmental Protection Agency (EPA Health, 1993), as carcinogenic to humans by International Agency for Research on Cancer (IARC) (2002) and by the National Toxicology Program of the US National Institutes of Health (Report on Carcinogens, 2002) [14].

Around the Globe, approximately 40% of children are exposed regularly to second-hand smoke [13]. Children exposed to ETS are at higher risk of developing conditions like sudden infant death syndrome, acute respiratory infections, ear infections, and severe asthma [13]. Parents' smoking behavior and determination of cotinine (a biomarker of ETS exposure) in organic fluids of children (viz. blood, urine, hair, serum), when combined in epidemiologic studies, helps to assess ETS exposure among children. Awareness among the parent/s and children about second hand smoking and its adverse effects on the child's overall health is of utmost importance.

CESSATION OF TOBACCO USE

Despite the law against selling tobacco products to minors, children in India face no problem in procuring tobacco from local vendors. The present menace of tobacco use among children and adolescence should be addressed at a larger level emphasizing on interventions to curb the hazardous habit. Need for school-based tobacco prevention programs and educative programs for children is required as it will help to prevent the initiation of the habit and later trying to curb the habit, thus emphasizing the role of primary prevention. Healthcare systems should facilitate the identification of tobacco-exposed and tobacco dependent children and adolescents and further allow for rapid, accessible identification of previously documented tobacco smoke exposure and interventions [15].

CONCLUSION

This article beckons the need to target anti-tobacco messages and awareness among family members and society as well as among children.

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