Original Article

PREVALENCE OF SMOKING IN INSTITUTIONALISED ADOLESCENT ORPHANS OF PATNA, BIHAR

Dr. Minti Kumari[1], Priya Bharti[2], Sahana Shivakumar[3]

[1] Professor and Head, Public Health Dentistry, Patna Dental College and Hospital, Patna , Bihar
[2] Private Practitioner, Patna
[3] Peoples College of Dental Sciences and Research centre, Peoples University,Bhopal

Abstract:

Background: Smoking is a significant public health concern with detrimental effects on overall well-being. Vulnerable populations, such as institutionalized adolescent orphans, may face unique challenges that contribute to higher rates of smoking initiation and maintenance. This study aimed to investigate the prevalence of smoking among institutionalized adolescent orphans in Patna, Bihar, and identify associated factors.

Methods: A cross-sectional study was conducted among institutionalized adolescent orphans aged 13-18 years in Patna, Bihar. A structured questionnaire was administered to collect data on smoking behavior, demographics, initiation age, frequency of smoking, duration, reasons for smoking, exposure to tobacco advertising, knowledge about the harmful effects of smoking, and previous attempts to quit. Data were analyzed using descriptive statistics and subgroup analyses.

Results: A total of 250 institutionalized adolescent orphans participated in the study. The overall prevalence of smoking was found to be 17%. Male participants exhibited a higher prevalence of smoking (22%) compared to females (11%). The prevalence increased with age, with the highest rates observed among the 17-18 years age group. Exposure to tobacco advertising and peer pressure were identified as influential factors associated with smoking initiation. A considerable proportion of smokers reported a lack of awareness about the harmful effects of smoking. Previous attempts to quit smoking were reported by 25% of smokers.

Conclusion: The study highlights a significant prevalence of smoking among institutionalized adolescent orphans in Patna, Bihar. Gender, age, exposure to tobacco advertising, peer pressure, and lack of awareness were identified as important factors associated with smoking behavior in this population. The findings emphasize the need for targeted interventions and policies addressing these factors to reduce smoking rates and improve the overall well-being of institutionalized adolescent orphans. Further research is needed to evaluate the effectiveness of specific interventions and to explore additional factors influencing smoking behavior in this context.

Key-words: *Smoking, Adolescents, Orphans, Oral Health, Prevention*

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Introduction:

Smoking remains a global public health concern, contributing to a significant burden of disease and mortality worldwide. While smoking prevalence among different populations has been extensively studied, specific attention must be given to vulnerable groups, such as institutionalized adolescent orphans. (1,2) This unique population faces a multitude of challenges, including limited support systems, adverse environments, and potential barriers to healthcare and education. Understanding the prevalence of smoking among institutionalized adolescent orphans is crucial for developing targeted interventions and policies to promote their health and well-being.(3)

Institutionalized adolescent orphans, who have lost parental care and reside in specialized facilities or orphanages, represent a particularly susceptible group due to their distinct

circumstances. (4) The transition from familial support to an institutional setting can be emotionally and psychologically challenging for these adolescents, potentially leading to higher rates of risky behaviors, including smoking initiation. Furthermore, the absence of parental guidance and the lack of positive role models in their lives may contribute to increased susceptibility to tobacco use.(5,6)

Understanding the prevalence of smoking among institutionalized adolescent orphans can inform evidence-based interventions and policy development to effectively address tobacco use in this population. By identifying risk factors and potential protective factors, policymakers, healthcare professionals, and child welfare organizations can design targeted prevention and cessation programs tailored to the unique needs and circumstances of these adolescents.(7) This study aims to provide a comprehensive assessment of the prevalence of smoking among institutionalized adolescent orphans, shedding light on the magnitude of the issue and identifying potential factors associated with smoking initiation and maintenance. By examining the prevalence rates across different regions, cultural contexts, and orphanage environments, this study seeks to contribute valuable insights into the specific challenges faced by this vulnerable population.

Materials and methods:

A cross-sectional study design was employed to assess the prevalence of smoking among institutionalized adolescent orphans in Patna, Bihar. This design allows for the collection of data at a specific point in time to determine the prevalence of smoking within the target population.

The study targeted institutionalized adolescent orphans aged between 13 and 18 years residing in various orphanages in Patna, Bihar. A multistage sampling technique was utilized to select the study participants. All orphanages within Patna, Bihar was listed, and a random sample of orphanages was then selected. In the next stage, within each selected orphanage, all eligible adolescent orphans were included in the study. A structured questionnaire was developed to collect data regarding smoking behavior, demographics, initiation age, frequency of smoking, duration, reasons for smoking, exposure to tobacco advertising, knowledge about the harmful effects of smoking, and previous attempts to quit.

Two trained researchers conducted face-to-face interviews with the participants, ensuring privacy and confidentiality. In cases where participants are unable to read or write, interviewers administered the questionnaire orally while recording the responses. The questionnaire was pilot-tested on 20 participants to assess its clarity, relevance, and appropriateness for the study population, who were not a part of the study.

Descriptive analysis was performed to calculate the prevalence rates of smoking among institutionalized adolescent orphans in Patna, Bihar. Data analysis was done using Statistical Software for Social Sciences 27.0 version (SPSS).

Results:

A total of 250 institutionalized adolescent orphans participated in the study, with an age range of 13 to 18 years. The sample consisted of 130 males (52%) and 120 females (48%). The majority of participants belonged to the age group of 15-17 years (65%), followed by 13-14 years (30%) and 18 years (5%).

Prevalence of Smoking:

Among the institutionalized adolescent orphans in Patna, Bihar, the overall prevalence of smoking was found to be 17%. Male participants exhibited a higher prevalence of smoking (22%) compared to females (11%). The prevalence of smoking increased with age, with the highest prevalence observed among the 17-18 years age group (25%). Among the smokers, 60% reported smoking daily, while 40% reported smoking occasionally or on weekends.

Smoking Initiation and Duration:

The mean age of smoking initiation among the adolescent orphans was 14.5 years, with a standard deviation of 1.8 years. The duration of smoking varied among the participants, with an average duration of 2.3 years. Approximately 40% of smokers had been smoking for more than two years.

Factors Associated with Smoking:

Exposure to tobacco advertising was reported by 70% of smokers as a factor that influenced their smoking behaviour. Peer pressure was identified as a contributing factor by 55% of smokers. Lack of awareness about the harmful effects of smoking was reported by 30% of smokers.

Previous Attempts to Quit:

Among the smokers, 25% reported having made at least one attempt to quit smoking, with varying degrees of success. Support from friends and family members was cited as the most helpful factor in quit attempts by 60% of participants.

Discussion:

The present study aimed to investigate the prevalence of smoking among institutionalized adolescent orphans in Patna, Bihar. The findings shed light on the smoking behavior within this vulnerable population and provide insights into potential factors associated with smoking initiation and maintenance.

Smoking can have significant adverse effects on the oral health of adolescents. Smoking tobacco products can cause significant discoloration and staining of teeth. Over time, the nicotine and tar present in cigarettes can penetrate tooth enamel, leading to yellow or brown stains on teeth. This staining can be difficult to remove and may require professional teeth whitening treatments. Smoking is a major risk factor for gingivitis and subsequent periodontitis. The chemicals in tobacco smoke can irritate and inflame the gums, causing them to become red, swollen, and prone to bleeding. It can also impair the body's ability to heal after oral surgery, such as tooth extraction or periodontal treatment. Nicotine and other chemicals in tobacco smoke restrict blood flow, reducing the delivery of oxygen and nutrients to the surgical site. This can result in delayed healing, increased risk of infection, and complications following oral procedures. Tobacco habit is a well-established risk factor for oral cancer. The harmful substances in tobacco smoke can damage the cells in the mouth and throat, leading to the development of cancerous lesions. Adolescents who smoke have a higher risk of developing oral cancer later in life compared to non-smokers. It is important to note that these effects are not exclusive to adolescents but apply to individuals of all age groups. Encouraging adolescents to refrain from smoking and providing education on the potential oral health consequences can play a vital role in promoting good oral hygiene practices and preventing the detrimental effects of smoking on oral health.(8,9,10)

The study revealed an overall prevalence of smoking among institutionalized adolescent orphans in Patna, Bihar, of 17%. This finding highlights the significance of addressing tobacco use within this population. The prevalence rates varied based on gender and age, with males exhibiting a higher prevalence of smoking compared to females, consistent with existing literature on gender disparities in smoking. (11.12) The higher prevalence among males may be attributed to various factors, including social norms, peer influence, and targeted tobacco advertising. The probable reason as quoted by Chinwong et al for a higher prevalence of male smokers was the “social acceptability”. Thai women in their study perceived smoking as undesirable. Similar results were noted in the study of Mandil et al (13).

Age was found to be a significant factor associated with smoking prevalence among institutionalized adolescent orphans. The prevalence increased with age, with the highest rates observed among the 17-18 years age group. The study of Jayasoorya et al (14) showed initiation of tobacco at 14.0±2.2 years. This is similar to our study’s age of onset of tobacco use. This finding suggests that prevention efforts should focus on early adolescence to mitigate the risk of smoking initiation. Implementing targeted interventions that address risk factors specific to each age group could prove beneficial in reducing smoking rates among institutionalized adolescent orphans. (15)

The study identified exposure to tobacco advertising and peer pressure as influential factors in smoking behavior among the participants. The high proportion of participants reporting

exposure to tobacco advertising highlights the need for strict regulations and enforcement to limit the marketing strategies used by tobacco companies. (16) Additionally, peer pressure emerged as a significant factor contributing to smoking initiation. Developing peer education programs that promote healthy behaviours and resistance to peer pressure could prove effective in reducing smoking rates within this population.

Interestingly, a considerable proportion of smokers in the study reported a lack of awareness about the harmful effects of smoking. This finding emphasizes the importance of implementing comprehensive educational campaigns to enhance knowledge about the detrimental health consequences associated with smoking. Incorporating educational components within institutional settings could serve as a platform for disseminating information and empowering institutionalized adolescent orphans to make informed decisions about their health. Previous attempts to quit smoking were reported by a quarter of the smokers in the study. This indicates a willingness to quit among a subset of the population and highlights the need for accessible and effective smoking cessation support services. Establishing counselling programs and providing resources for smoking cessation within the orphanages could prove instrumental in assisting those who desire to quit smoking.

Certain limitations of this study needs be acknowledged. Firstly, the findings are based on self-reported data, which might be subject to recall bias or social desirability bias. Secondly, the study focused on a specific geographical area and may not be representative of the broader population of institutionalized adolescent orphans in other regions. Therefore, caution should be exercised when generalizing the findings to other settings.

Conclusion:

In conclusion, this study provides valuable insights into the prevalence of smoking among institutionalized adolescent orphans in Patna, Bihar. The findings underscore the need for targeted interventions and policies aimed at reducing smoking rates within this vulnerable population. Comprehensive efforts should focus on early prevention, awareness campaigns, peer education, and smoking cessation support to promote healthier behaviors and improve the overall well-being of institutionalized adolescent orphans. Further research is warranted to explore additional factors influencing smoking behavior and to evaluate the effectiveness of specific interventions in this context.

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