Knowledge, attitudes and perception of dental patients on oral health risks associated with cigarette smoking
Gichohi A1, Ober-Oluoch J2, Dimba EAO3, Macigo FG3

1 Sagana Consolata Dispensary, Ministry of Medical Services, Afya House, Cathedral Rd., P.O. Box 30016 - 00100 Nairobi.
2 Lady Northey Clinic, Ministry of Medical Services, Afya House, Cathedral Rd., P.O. Box 30016 - 00100 Nairobi.
3 Dept. of Oral and Maxillofacial Surgery - Oral Pathology and Oral Medicine, School of Dental Sciences, University of Nairobi, P.O. Box 19676 – 00202, Nairobi, Kenya.

Address correspondence and reprint requests to:
Dr. Annabelle Wangeci Gichohi, PO.Box 102602-00101, Nairobi, Kenya. E-post: agichohi@yahoo.com Tel: +254-722 567 456.

Abstract

Introduction: The tobacco industry is a thriving international business, despite the adverse health effects related to tobacco use.

Objectives: The objective of the study was to assess the knowledge, attitudes and perceptions of cigarette smokers and non-smokers on the health risks associated with cigarette smoking.

Methodology: A descriptive cross-sectional study was conducted to assess 200 dental patients visiting the University of Nairobi Dental Hospital. An interviewer administered questionnaire was administered to patients awaiting treatment at the oral diagnosis clinic.

Results: Seventy-five of the respondents were current smokers, 25 ex-smokers and 100 were non-smokers. All were male, aged between 20 and 79 with the largest group falling within the 20-39 age bracket for both the current smokers and non-smokers. However, the mode age group for the ex-smokers was 40-49. The respondents exhibited some knowledge on the general as well as oral health risks associated with smoking with majority (smokers, ex-smokers and non-smokers respectively) relating the habit to lung cancer (15.8%, 31% and 13%), cancer of the mouth (13%, 21% and 14.8%) and chronic cough (13%, 16.7% and 10.8%) for the general health risks. Staining of teeth (28.1%, 34.3% and 27.2%), bad smell, cavities (23.5%, 22.9% and 24.6%) and gum disease (17.8%, 22.9% and 19.8%) was recorded on oral health risks.

Conclusions: There was satisfactory knowledge on the health risks of smoking. However there was a poor attitude of smokers towards cessation of the habit as a majority of them strongly believed in reduced health risk products. Aggressive anti-tobacco campaigns should be implemented especially to the youth to enlighten them on oral and general health risks associated with smoking.

Key Words: tobacco use, health risks, knowledge.

Introduction

Studies have shown that more than 50% of Kenyan adult males use tobacco in at least one of its various forms1. Efforts to educate the public on the hazardous effects of tobacco use have largely been frustrated by aggressive marketing campaigns mounted by tobacco companies. Strategies for expansion of tobacco markets include aggressive marketing to the youth and women and the introduction of modified tobacco products claiming to reduce the risk of smoking (potential reduced exposure products, PREPs) such as ‘low tar’ or light cigarettes which encourage the perception of ‘safer tobacco’2.

Tobacco is smoked in numerous ways including cigarettes, cigars, pipes, water pipes (shish or hookah) and ‘bidi’ (Tobacco wrapped in tambourine leaf). Reverse smoking, which is smoking with the burning end of the cigarette in the mouth, is a common practice in rural Africa and India. Smokeless tobacco is found in the form of chewing tobacco and snuff provides an alternate mode of consumption. In Kenya the forms of traditional tobacco used include “Kiraiku”, which is a raw, hand rolled tobacco as well various formulations of snuff 3.

The harmful effects of tobacco use on systemic and
oral health are well documented. Smoking has been shown to affect health related quality of life scores (HRQL) with significant differences being observed between those who have never smoked and ex-smokers in population surveys. Tobacco use results in development of lung and or pharyngeal cancers, chronic respiratory diseases, coronary heart diseases and peptic ulcers. In pregnant mothers, it has been associated with foetal prematurity and low birth weights.

Cigarette smoking has been shown to have a synergistic effect with alcohol as a risk factor for the development of oral cancers. Other mucosal lesions caused by tobacco use include smokers keratosis, leukoplakia, periodontal disease, caries and dental staining. Smoking also impairs wound healing and compromises oral hygiene due to the accumulation of plaque and calculus.

The deleterious effects of tobacco are associated with the presence of nicotine, carbon dioxide, hydrocyanide and tobacco specific nitrosamines (TSN's). TSNs have been shown to have cytotoxic, genotoxic and mutagenic effects in vitro, as well as in the studies conducted on experimental animals. Traditional tobacco products with high levels of TSNs such as toombak (Sudanese snuff) have been associated with high incidence of oral squamous cell carcinoma.

Tobacco consumption practices are known to vary from region to region, in accordance with prevailing cultural beliefs. Majority of the developing countries have no tobacco control legislation and therefore tobacco products marketed often exceeds tar and nicotine levels that are permitted in developed countries. In countries where there are sustained public health campaigns against tobacco use with the implementation of tough legal measures, the prevalence of smoking has decreased as well as tobacco associated diseases. A typical example is the adoption of the Framework Convention on Tobacco control by many world governments which is continuing to raise global commitment to control the tobacco epidemic.

In Kenya, effectiveness of control measures is severely limited by lack of instruments for situation analysis and implementation. The objective of this study was to describe the knowledge, attitudes and perceptions on oral and general health risks associated with cigarette smoking among patients visiting the University of Nairobi Dental Hospital.

Materials and methods

This was a hospital based cross-sectional study obtained based on a convenience sample of adult patients attending the Oral Diagnosis clinic at the University of Nairobi Dental Hospital. The study targeted adult patients who were either current or ex-smokers versus a control group of non-smoking patients. Patients recruited were all males as female patients generally would not admit to being smokers due to cultural stigmas. Ethical clearance to conduct the study was obtained from Kenyatta National Hospital Ethics and Research Committee and all respondents were recruited on the basis of informed consent. Data was analysed using the Statistical Package for Social Sciences (SPSS) version 12.0 and graphs were prepared using GraphPad Prism version 4.00 for Windows, (GraphPad Software, San Diego California USA).

Results

The total number of study respondents was 200 male patients. They were classified as being smokers (100 respondents, of which 25 were ex-smokers) and non-smokers (100), and further categorized by age in brackets of 10 years. The youngest respondent was 20 years and the eldest 79. The rural and urban population of the two sample groups was (25%) and (65%) respectively. Majority of the respondents were urban residents owing to the location of the study centre, which is in the country's capital city. However, a number of the respondents were rural as the university hospital serves as the only dental referral hospital in the country. Figure 1 shows the age distribution of smokers, ex-smokers and non-smokers from the population sampled. Majority of the respondents were in the 20-29 and 30-39 age bracket but the mode age bracket for the ex-smokers was between 40-49 years.

![Figure 1: Age (yrs) Distribution of Smokers, Ex-smokers and Non-smokers](image)