

Original Research

Assessment and Effect of Smoking on Periodontal Health Status: A Descriptive Study.

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ABSTRACT

BACKGROUND – For the last few decades, dentists and dental researches have become more aware of the critical role of smoking on the incidence and severity of periodontal disease and smoking is now considered a risk factor in periodontal disease.^[2] Often times, the life expectancy of people who smoke (for a certain length of time) is decreased by 14 years. Smoking not only alters the body's immune response and causes bad breath, but it increases the risk of gum disease (periodontal disease) by two to seven-fold.

AIM AND OBJECTIVES – To assess the Periodontal status among 25-34 and 35-44 year old smoking & non smoking patients attending OPD of Swami Devi Dyal Hospital & Dental College, Barwala, Panchkula, Haryana using CPI Index and to Compare the effect of smoking on Periodontal Conditions between these two groups.

MATERIAL & METHODS – All the subjects present at the OPD of Swami Devi Dyal Hospital & Dental College, Barwala, Panchkula, Haryana who were smokers & who did

not smoke ever aged above 25 years were included. n=174 (25-34 = 90, 35-44 = 84). Data was recorded in modified WHO proforma.

RESULTS – 77.2% of Non-Smokers brushed their teeth more than once as compared to 54.9% in Smokers. 75% of Non-Smokers used Tooth Paste and Tooth Brush as compared to 55.4% in Smokers. 65% of the Smokers were visiting dentist for the first time as compared to 17% of the Non-Smokers 5.5% of Smokers had Healthy Periodontium compared to 44.2% among Non-Smokers. The difference between these two groups is found to be statistically significant.

CONCLUSION – Smoking can cause a number of changes within the periodontium which can predispose an individual to the progression of periodontal disease. Dentists have an important role in creating awareness among the public of the detrimental effects that smoking has on the periodontal and oral tissues and health in general. The smoking habits of all patients should be enquired during an oral examination and

the patient should be strongly advised to stop smoking by pointing out the risks involved and the positive benefits gained from the breaking of this habit. It is essential then that the dentist is supportive in this role in an attempt to improve the oral and general health status of the individual.

Key Words: Smoking, Periodontitis, Periodontal Health, Immune Response, Periodontal disease.

INTRODUCTION

Periodontal disease contributes significantly to the global burden of oral disease. Meanwhile, for various reasons, somewhat limited attention has been given to periodontal disease in most countries by the population at large, providers of oral health care, and public health administrators.^[1] For the last few decades, dentists and dental researches have become more aware of the critical role of smoking on the incidence and severity of periodontal disease and smoking is now considered a risk factor in periodontal disease.^[2] Often times, the life expectancy of people who smoke (for a certain length of time) is decreased by 14 years. Smoking not only alters the body's immune response and causes bad breath, but it increases the risk of gum disease (periodontal disease) by two to seven-fold. Of course, the effects that smoking tobacco has on the periodontal tissues depends on how many cigarettes smoked daily and how long the person has the habits.^[3] Therefore, the aim of this study is to compare the effect of smoking versus non-smoking on periodontal tissue among adult subjects attend the OPD of Swami Devi Dyal Hospital and Dental College, Barwala, Panchkula, Haryana

AIMS AND OBJECTIVES

- To assess the Periodontal status among 25-34 and 35-44 year old smoking & non smoking patients attending OPD of Swami Devi Dyal Hospital & Dental College, Barwala, Panchkula, Haryana using CPI Index.
- To compare the effect of smoking on Periodontal

Conditions between these two groups.

- To suggest remedial measures for improving the oral health of Police personnel.

MATERIALS AND METHODS

STUDY POPULATION / SOURCE OF DATA

Study was conducted at Swami Devi Dyal Hospital & Dental College, Barwala, Panchkula, Haryana among 174 adult male patients aged above 25 years were included (25-34 = 90, 35-44 = 84). All the subjects present on the day of examination were included.

STUDY AREA / CLINICAL ASSESSMENT

The Examination was carried out by one examiner at Dept. of Public Health Dentistry with the subject seated on a chair with proper illumination. The examination was carried out by using a Mouth Mirror, Shepherd's Crook Explorer No.23 and CPI probe. The data was recorded by using a modified WHO Proforma. Periodontal status was recorded using CPITN.

INCLUSION CRITERIA

All the subjects present at the OPD of Swami Devi Dyal Hospital & Dental College, Barwala, Panchkula, Haryana who were smokers & who did not smoke ever aged above 25 years were included.

ETHICAL CLEARANCE

Before starting the study, ethical clearance was obtained from the ethical committee of Swami Devi Dyal Hospital & Dental College, Barwala, Panchkula, Haryana.

RESULTS AND DISCUSSION

(Tables 1&2; Graphs 1-5)

The present study was attempted to assess the effect of smoking on Periodontal condition among 174 smokers and non smokers aged between 25-44 years attending the OPD of Swami Devi Dyal Hospital & Dental College, Barwala, Panchkula, Haryana. Tobacco smoking is a habit that is

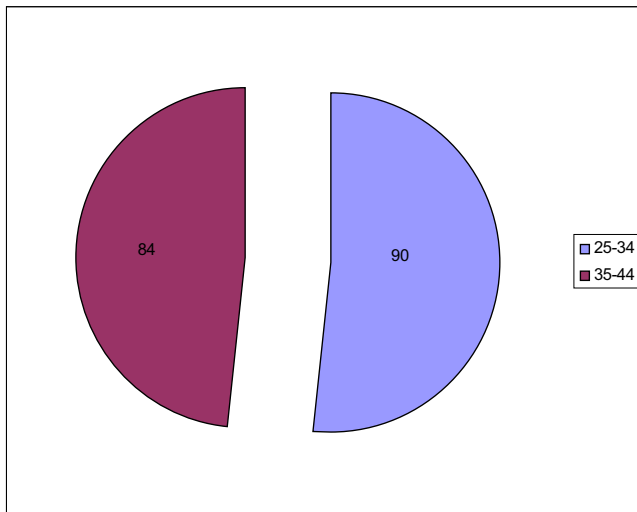
easily acquired and difficult to give up. More than 6000 billion of-cigarettes are smoked annually. There is around 1100 million smokers ail over the world, about 800 million are mostly male in the developing countries (WHO, 1995).^[4] In our study it was found that 77.2% of Non-Smokers brushed their teeth more than once as compared to 54.9% in Smokers. This is in agreement with the studies done by Koyama Y et al (2006),^[5] Yazdani R et al (2008).^[6] Present study shows 75% of Non-Smokers used Tooth Paste and Tooth Brush as compared to 55.4% in Smokers the findings of this study are similar to the study done by Macigo

FG et al (2006),^[7] Al-Shammari KF (2007),^[8] Tanwir F et al (2008).^[9]

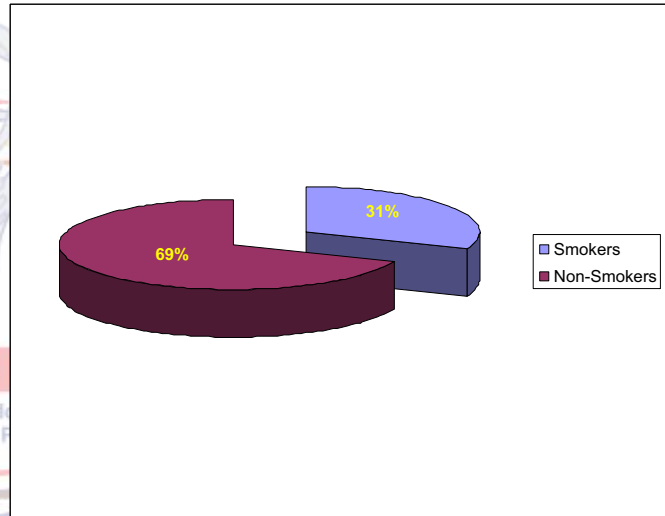
The present study shows 65% of the Smokers were visiting dentist for the first time as compared to 17% of the Non-Smokers. This is in agreement with Freddo SL et al (2008),^[10] Hellqvist L et al (2009),^[11] Ide R et al (2009).^[12]

In our study it was found that 5.5% of Smokers had Healthy Periodontium compared to 44.2% among Non-Smokers and the difference is statistically significant (P<0.001) this is in agreement with studies done by Kelbauskas E et al (2005),^[13] Ojima M et al (2007),^[14] Gomes SC et al (2007),^[15] Hanioka T et al (2007),^[16] Miki Ojima et al (2007).^[17]

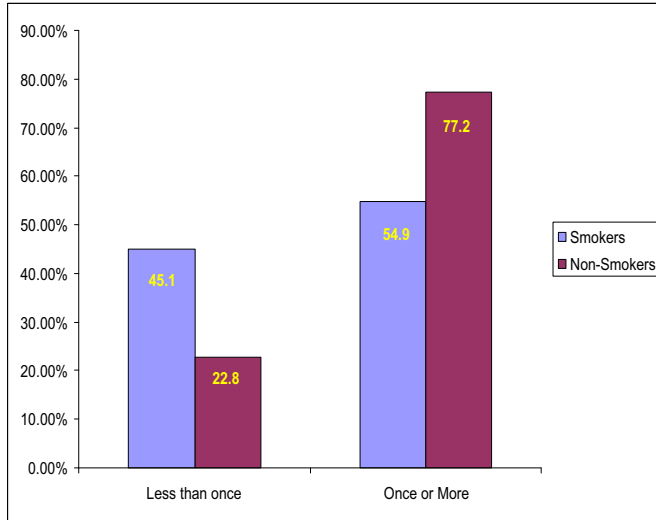
Graph1: Age wise distribution of subjects



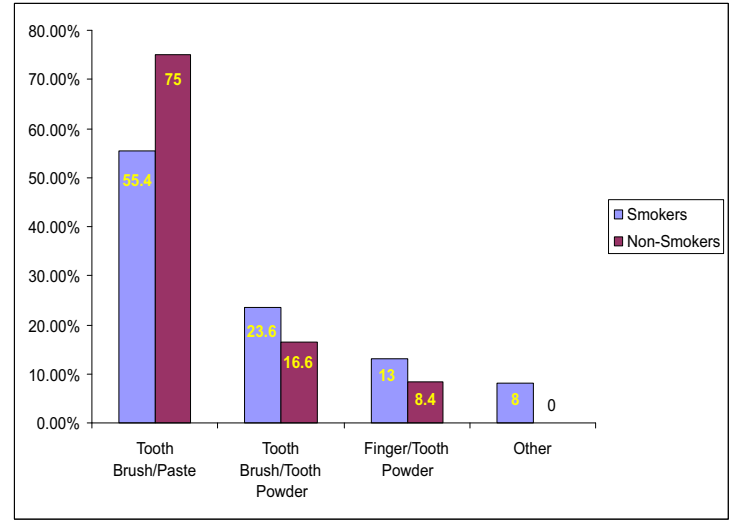
Graph 2: Percentage of Smokers and Non-Smokers



Graph 3: Frequency of brushing among subjects



Graph 4: Aids used for cleaning among subjects



Graph 5: Visit to a Dentist by the Subjects

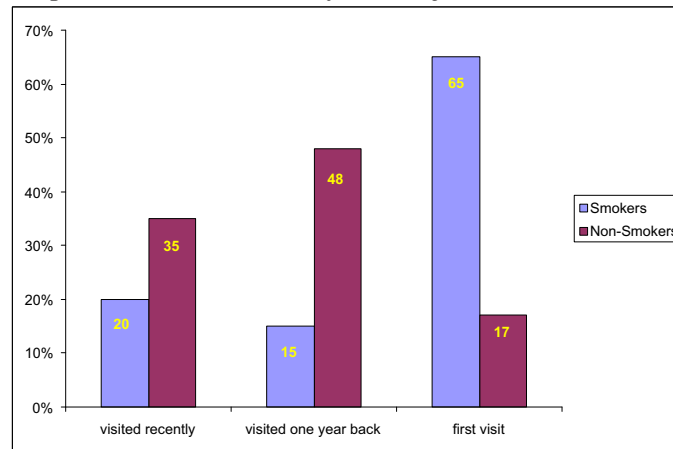


Table 1: Shows the distribution of sample according to Age, Smokers & Non-Smokers

Age Group	25-34	35-44	Total
Smokers	45	9	54
Non-smokers	45	75	120
Total	90	84	174

Table 2: Shows the Periodontal Condition as measured by CPI

	Healthy	Bleeding	Calculus	Pocket 4-5mm	Pockets 6mm	Total
Smokers (%)	3 (5.5)	5 (9.3)	11(20.4)	15 (27.8)	20 (37)	54 (100)
Non-Smokers (%)	53 (44.2)	20 (16.7)	16 (13.3)	18 (15)	13 (10.8)	120 (100)

CONCLUSION

Smoking can cause a number of changes within the periodontium which can predispose an individual to the progression of periodontal disease. The periodontal condition of the smokers was very poor compared with that of non-smokers and this difference was statistically significant. Dentists have an important role in creating awareness among the public of the detrimental effects that smoking has on the periodontal and oral tissues and health in general. The smoking habits of all patients should be enquired during an oral examination and the patient should be strongly advised to stop smoking by pointing out the risks involved and the positive benefits gained from the breaking of this habit. It is essential then that the dentist is supportive in this role in an attempt to improve the oral and general health status of the individual.

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