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## RESEARCH ARTICLE

## Effect of cigarettes smoking on periodontal tissues and gingivitis in adults

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This paper aims to know the effect of smoking and the disease that can be appear , a survey questionnaire was distributed to a random sample of males and females from clinics of teeth , total of them are 150 aged (20 - 70) years. The results (100 males and 50 females), we mean by cigarettes are cigar and sheesha.

The knowledge about the dangers of cigarettes were the most significant factors affecting smoking behavior and about 86% of smokers have more knowledge about the harm of cigarettes use .

This paper builds on other studies that have found that cigarettes use among adults as a phenomenon ,so the consistent research results showing the effect that in tissue around the teeth and the incidence of gingivitis.

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**Introduction**

Smoking is an important environmental risk factor that negatively affects periodontal tissues .the aim of this study is to confirm the possible relationship between cigarette smoking and clinical periodontal parameters in adults .

Both groups in the sample were matched in age, sex and plaque level . clinical attachment level and tooth mobility were record . probing depth and clinical attachment level were significantly greater in smokers than non- smokers , whereas gingival index and tooth mobility did not show differences .

It can be concluded that cigarette smokers are at increase risk of periodontal destruction .

**Community of study :**

150 volunteers were selected from the board of dental clinics and who meet the following conditions : they are in good health , did not take antibiotics for five months , of average of oral care did not review the clinic for treatment on teeth problems ,women did not pregnant and they at least have 20 teeth in their mouths .

**Study design :**

The volunteers were distributed into two groups .

1 . smoking groups : consist of 75 individuals aged between (20 - 70) years (average 40) considering the smoker consumed 20 cigarettes per day or more since five years at least .

2 . non smokers group : consist of 75 aged between (20 - 70) (average 39) .

They are considered who did not address cigarettes in their life , smokers to similar non – smokers in terms of age , sex and level of dental plaque .

**Data analysis :**

By using the difference between two independent means and in this case we can use z – test if the sample is greater than 30 or t – test if less than 30 .

Here we use the two but we prefer to use t – test after accumulation rates:

The equation that used is

$$(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)$$

t calculated =

$$s_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$$

with degrees of freedom equal 2 where

$\bar{x}_1$  : mean of group 1

$\bar{x}_2$  : mean of group 2

$\mu_1$  : mean of sample 1

$\mu_2$  : mean of sample 2

$s_p$  : pooled standard deviation

Data have been presented as averages and standard deviation and recorded the movement of teeth as percentage .

The results were tested through the significant differences between averages using t – test by the test of hypothesis, differences were considered statistical significant at level of significance  $p < 0.05$ .

A comparison between the two groups were selected so that the symmetry group of smokers in terms of age , gender and level of plaque . According to the averages and standard deviation , was the study of smoking in gingival tissues around dental tissues .

Then the mean value as in the blew table (this why using t - test)

**Table (1)**

	Gingival	Probing depth	Attachment level	Tooth mobility
Smokers	1.12	3.79	4.15	3.25
Non – smokers	1.1	3.13	3.26	3.01

**Table (2)**

**Shows the results of applying t – test to the above data**

Clinical measurement	Smoking	Sample size	Mean	s.d std.	Calculated t	Sig. Value
Gingival index	Smoker	75	1.12	0.3	0.344	0.731
	Non	75	1.1	0.3		
Probing Deph	Smoker	75	3.79	0.6	8.109	0
	Non	75	3.13	0.5		
Clinical Attachment Level	Smoker	75	4.15	0.9	8.137	0
	Non	75	3.26	0.6		
Tooth mobility	Smoker	75	3.25	5.3	0.275	0.784
	Non	75	3.4	5		

According to the above Table the probing depth and attachment level are significant

### Conclusions:

1 . Several studies have considers that smoking is a risk factor for periodontal disease . but results varied between 1.4 up to 11.8 and this can be attributed in part to the wide divergence of definition of periodontal disease in many different studies .

2 . The study showed that the destruction of periodontal tissues are more severe in smokers and thus supports the know – how of many studies in different countries or places of the world reach a similar conclusion .

3. Some times we notice the inflammation of gum in smokers and non – smokers, that means the analysis result may not be accurate and that may leads to gingivitis smokers .

4. By applying the logistic regression to the data we can reach the same result.

### Recommendations :

1. We need more programs to prevent smoking behavior and that needs incorporate strategies that help people to understand the dangers of smoking. Those strategies like type of educational programs developed in western countries, also the intervention programs.

2 .Families must know the importance sources knowledge about advantages and disadvantages of smoking .

3. Need for prevention programs to reduce smoking – related to morbidity and mortality must supported .

4. More researches are needed to the future plans .

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