**Republic of Iraq**
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# Oral Health Status in Relation to Salivary Profiles among Water Pipe Smokers' of Coffee Shops Workers

A Thesis

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# Abstract

**Background**: Water-pipe has many harmful effects on the general health of humans including the oral health. It's wide spread especially among youth because of misconception of being safer mean of cigarette smoking.

**Aim of the study:** This study was designed to assess dental caries, oral hygiene status, periodontal health status and some salivary physic-chemical properties among coffee shops workers in Najaf city/ Iraq, including both an active and passive water-pipe smokers in comparison with control group.

**Materials and Methods:** The study is case control and the study group is composed of 40 coffee shops workers for at least five years, males only aged between 22-23 years old, half of them were active water-pipe smokers and the remaining were passive smokers. The control group including 20 students with the same age, gender and geographic area of residency, without history of neither active nor passive smoking.

Dental caries was assessed by decayed ($D_{1-4}$), missing (M), Filling (F) surface according to $D_{1-4}$ MFS index of Muhlemann (1976), Plaque index was measured according to Silness and Leö (1964), Calculus index was measured according to Ramfjord (1959), while gingival index was measured according to Löe and Sillness (1963), and attachment loss was recorded according to WHO (1997). Stimulated salivary samples were collected for the measurement of flow rate, pH and viscosity in addition to the estimation of some salivary concentrations including α-amylase, immunoglobulin A, G and phosphate.

All data were analyzed using statistical package for social science (SPSS) version 20.

**Results**: Results recorded the highest mean rank value of caries experience $D_{1-4}MFs$ among an active water-pipe smokers followed by passive water-pipe smokers, the lowest mean rank value was among control group with statistically high significant difference among them ($P< 0.001$). In concerning plaque, gingival and calculus indices, similar results were obtained with higher mean rank among active water-pipe smokers followed by passive smoker and the least values among control group with statistically high significance ($P<0.001$). While there is no attachment loss recorded among three groups.

Salivary pH was lower among active smokers followed by passive smokers and control group, the opposite results obtained in concerning salivary viscosity, it was higher among active smokers than non-smokers with statistically significant difference for both ($P<0.05$).

Concerning some of salivary constituents, salivary immunoglobulin G was lower among active smokers followed by passive then control group with statistically significant difference ($P<0.05$). While inorganic phosphate was higher among active smokers then followed by passive smokers then control group with statistically difference among them ($P<0.01$).

Salivary flow rate was correlated positively with decayed surfaces (Ds) among an active water-pipe smokers with statistically significant difference.

**Conclusion**: The results of current investigation revealed that the water-pipe smoking has a significant deleterious effect on the oral and dental health including caries experience, oral hygiene status and gingival inflammation in addition to disturb normal salivary physical properties as well as altering the normal level of some salivary constituents.