

## Prevalence of missing teeth and the treatment need in adult population from Iasi, Romania

Language: English

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### Introduction

Epidemiological studies related to oral status are scarce in Romania. The few studies that can be found in a review of a dental literature relate only to children and to some regions. The planning of a new and performing public oral health system requires a complete image of dental status and treatment needs.

### Objective

The aim of this study is to evaluate the dental prosthetic status in Iasi county and to correlate the prevalence of missing teeth and treatment need with socio-demographic variables.

### Material and Methods

A cross-sectional study was conducted in dental clinics in rural and urban areas of Iasi in 2006-2008 and a sample of 928 people (age 35-44 years old) was examined by 3 calibrated dentists according to the World Health Organization's index criteria.

This index can determine both oral status and treatment needs.

We assessed their income level, as high, medium or low, and tobacco status using a brief questionnaire (table 1). The data was analyzed using the SPSS statistical program package. The following statistical tests were used: Chi-square and Logistic regression. The study was approved by the Department of the Trust who gave ethical approval.

Variables	Nr	%
Female	454	48.92
Male	474	51.08
Urban area	491	53.33
Rural area	437	46.66
Income Level		
Low (< 150 €)	180	19.5
Medium (150-500 €)	437	47
High (> 500 €)	311	43.5

Tab. 1: Socio-demographic characteristics of the sample population

### Results

#### Prevalence of missing teeth

The prevalence of the partial edentulous of adults in Iasi was 66.5%. The rate of tooth loss is higher in the rural area: 71.3%, than in urban: 61.5%. More missing teeth was found in male population, prevalence: 68.1 % than in female: 64.9%. Adults with low income had more missing teeth than subjects with high income, prevalence: 76% versus 57%. All these differences are statistically significant, Chi-square test,  $p < 0.05$  (table 2).

Socio-demographic variables	Prevalence (%)	Chi-square coefficient	p value for 95% Confidence Interval
Rural area	71.3	38.1	0.001
Urban area	61.5		
Male	68.1	29.3	0.02
Female	64.9		
Low income	76		

Medium income	71	48.5	0.001
High income	57		

Tab. 2: Prevalence of partial edentulous of the adult population in Iasi county

#### Treatment needs

Prosthetic crown restorations were necessary for 363 subjects (39.1%) and the removable dentures for 39 adults (4.2%). To determine factors associated with partial denture needs, a logistic regression was used (table 3). We found that people with low family income had more risk: OR=7.9, CI= [2.34-26.41] of needing partial denture than people with high economic level. Smokers had also a higher risk : OR=3.2, CI=[1.55-6.73] than non-smokers.

<b>Variables</b>	<b>p value</b>	<b>Odds ratio (OR)</b>	<b>Confidence Interval 95%</b>
Male	0.30	0.705	0.360-1.382
Female			
Urban	0.013	0.398	0.193-0.828
Rural			
<u>Low income</u>	0.001	<u>7.9</u>	2.34-26.41
High income			
<u>Smoker</u>	0.001	<u>3.2</u>	1.55-6.73
Non-smoker			

Tab. 3: Logistic regression: factors associated with partial dentures needs

## Conclusions

The prevalence of missing teeth and prosthetic treatment needs were highly related to: low income, rural area, male gender and smoking status.

## Literature

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## Abbreviations

WHO = World Health Organization  
OR = Odds Ratio  
CI = Confidence Interval

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**Prevalence of missing teeth and treatment needs in the adult population of Iasi, Romania**

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**INTRODUCTION**

Epidemiological studies related to oral status are scarce in Romania. The few studies that can be found in a review of a dental literature relate only to children and to some regions. The planning of a new and performing public oral health system requires a complete image of dental status and treatment needs.

**AIM**

Is to evaluate the dental prosthetic status in Iasi county and to correlate the prevalence of missing teeth and treatment needs with socio-demographic factors, like: geographic area, gender and income level.

**METHODS**

- > A cross-sectional study was conducted in dental clinics in rural and urban areas of Iasi in 2006-2008 and a sample of 928 people (age 35-44 years old) was examined by 3 calibrated dentists according to the World Health Organization's index criteria.
- > This index can determine both oral status and treatment needs.
- > We assessed their income level, as high, medium or low, and tobacco status using a brief questionnaire (table 1).
- > The data was analyzed using the SPSS statistical program package. The following statistical tests were used: Chi-square and Logistic regression.
- > The study was approved by the Department of the Trust who gave ethical approval.

Table 1- Socio-demographic characteristics of the sample population

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**RESULTS**

**Prevalence of missing teeth**

- > The prevalence of the partial edentulous of adults in Iasi was 66.5%.
- > The rate of tooth loss is higher in the rural area: 71.3%, than in urban: 61.5%.
- > More missing teeth was found in male population, prevalence: 68.1 % than in female: 64.9%.
- > Adults with low income had more missing teeth than subjects with high income, prevalence: 76% versus 57%.
- > All these differences are statistically significant, Chi-square test, p <0.05 (table 2).

Table 2- Prevalence of partial edentulous of the adult population in Iasi county

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**Treatment needs**

- > Prosthetic crown restorations were necessary for 363 subjects (39.1%) and the removable dentures for 39 adults (4.2%).
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- > We found that people with low family income had more risk: OR=7.9, CI= [2.34-26.41] of needing partial denture than people with high economic level.
- > Smokers had also a higher risk : OR=3.2, CI=[1.55-6.73] than non-smokers.

**CONCLUSIONS**

The prevalence of missing teeth and treatment needs were highly related to: low income, rural area, male gender and smoking status.

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