



# SPECTROPHOTOMETRIC ANALYSIS OF NATURAL TEETH COLOR IN PATIENTS WITH DIFFERENT ORAL HYGIENE HABITS

Julija Zarkova Atanasova, Katerina Zlatanovska, Cena Dimova,  
Sanja Naskova, Lidija Popovska

University of Goce Delcev - Shtip, Faculty of Medical Sciences - Dental Medicine

## Objective

The key to keeping a bright, *healthy* smile and good oral health is to practice proper *oral hygiene*. The aim of our study was to see the difference between teeth color in patients who have different habits of oral hygiene.

## Material and method

Gathering information about **oral hygiene habits**. Questionnaire was filled by randomly selected patients (N = 235).

The **color of their central incisors**, was measured with intraoral spectrophotometer ShadePilot TM and interpreted with shade tabs from three shade guides Vita Classic, Ivoclar Chromascope and Vita 3D Master.



Measuring tooth color with spectrophotometer

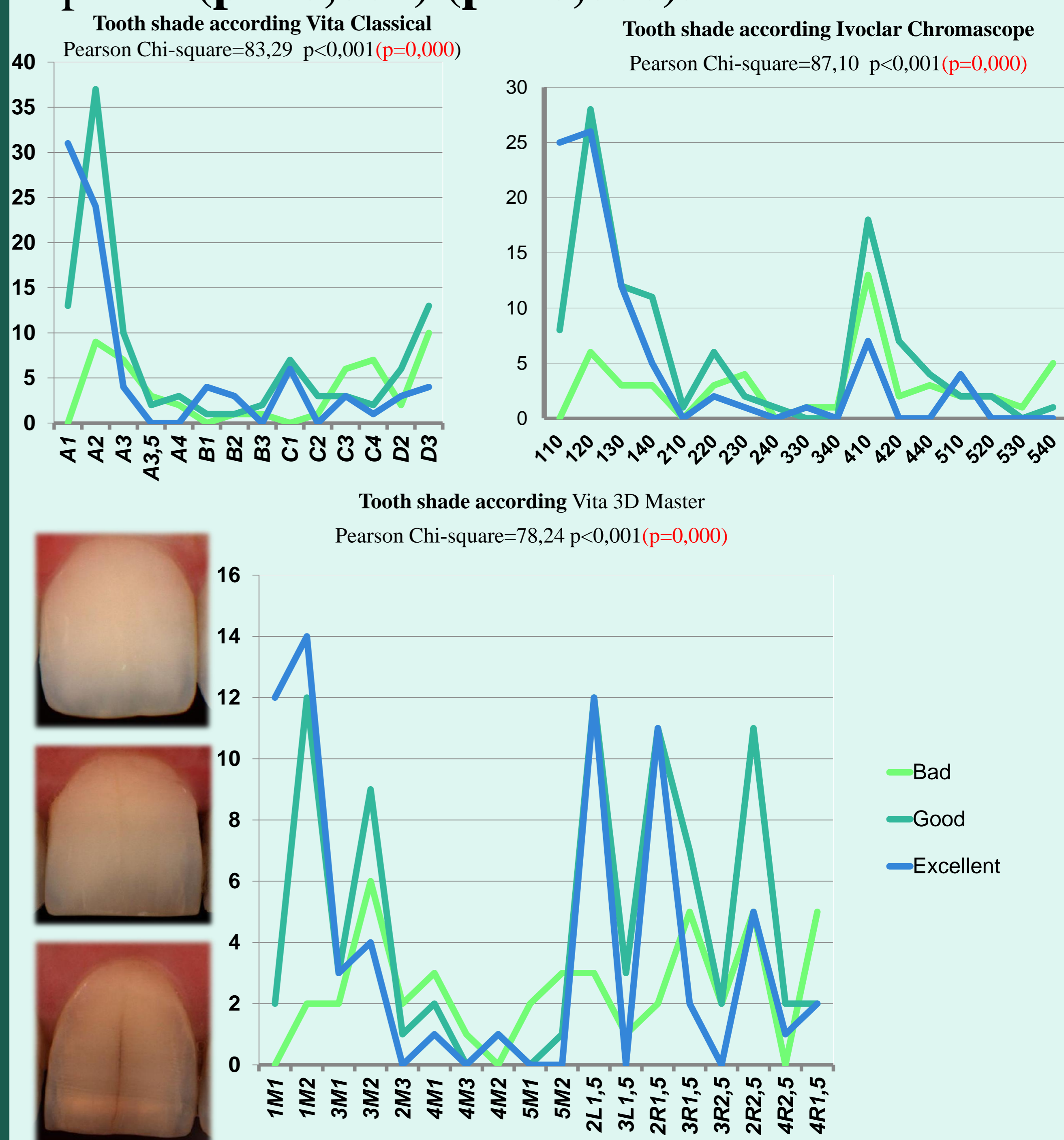
Patients were grouped into **three groups** with different habits in maintaining oral hygiene.

1. patients with **excellent habits**
2. patients with **good habits**
3. patients with **bad hygiene habits**.

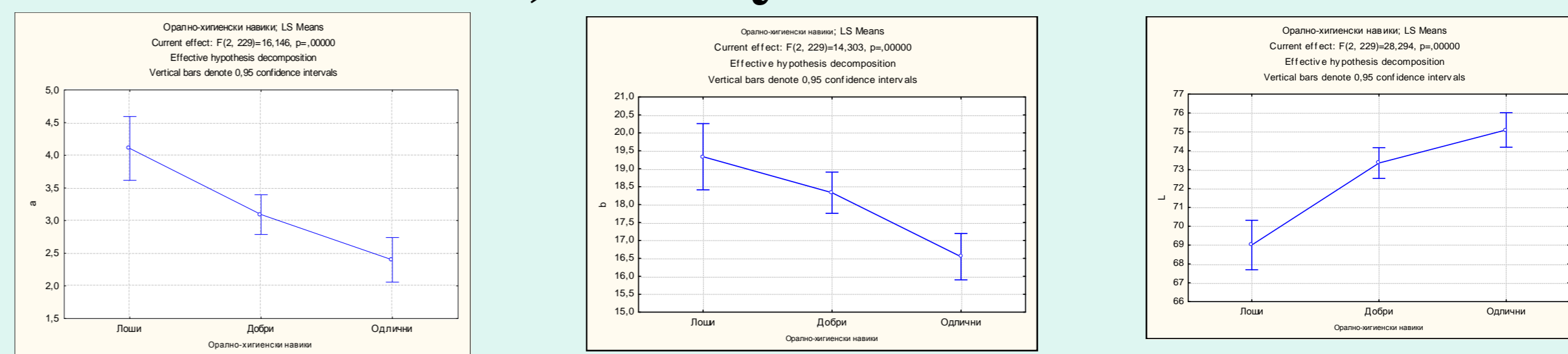
Pearson's chi-squared test ( $\chi^2$ ) was used for analysing the difference between groups and ANOVA/MANOVA Factorial Anova(F), for parameters a\*,b\* and L\*

## Results

Different habits of oral hygiene are an **important factor** from which the teeth shade depends ( $p < 0,001$ ) ( $p = 0,000$ ).



Statistically different values in the parameters a\*,b\* and L\* showed that patients with bad oral hygiene habits have **darker, more yellow and red incisors**.



## Conclusions

The reason for darker shades in the patient with bad oral hygiene is the accumulated dental plaque in which pigments are trapped and gives the teeth more yellowish and matte appearance. Practicing an excellent and good oral hygiene like brushing properly and regularly, using mouthwashes, flossing can give whiter and healthier looking teeth.