

## Investigation of Doctors' Awareness of Preventive And Non-Invasive Treatment of Caries

\*Dr. Dobrinka Damyanova Phd<sup>1</sup>, Dr. Sirma Angelova Phd<sup>1</sup>,

Dr. Teodora Targova-Dimitrova Phd<sup>2</sup>,

Assoc. Prof. Dr. Katerina Ivanova C.M.Sc.<sup>3</sup>

<sup>1</sup>Assistant Professor, Medical University-Varna, Bulgaria, Faculty Of Dental Medicine, Department Of Pediatric Dental Medicine

<sup>2</sup>Senior Resident, Medical University-Varna, Bulgaria, Faculty Of Dental Medicine, Department Of Periodontology And Dental Implantology

<sup>3</sup>Associate Professor, Medical University-Varna, Bulgaria, Faculty Of Dental Medicine, Department Of Pediatric Dental Medicine

Corresponding author: \*Dr. Dobrinka Damyanova Phd

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**Background:** There have been created contemporary methods for non-operative and operative preventive treatment requiring changes of the caries treatment protocol in deciduous teeth.

**Purpose:** Exploring the awareness of dentists about up-to-date diagnostic methods and devices for non-invasive preventive procedures concerning caries process.

**Methods:** Subjects of the survey are 100 dentists who perform treatment of deciduous teeth from the city of Varna. The individual - addressed anonymous survey was fulfilled during educational, clinical and organization meetings at the Faculty of Dental Medicine – Varna and on the territory of the city of Varna.

**Results:** The statistical measurer applied for the aims of the survey is a non-parametric theory for evaluation of statistical hypotheses by comparing the relative values of two samples.

Results of question № 1 "Are you familiar with the new preventive and non-operative caries treatment approaches in children?" compared to results of Question № 2 "What is your speciality?", at  $p = 0.05$  at  $K = 3$ , the critical value is 5.35 and empirical value of  $X^2 = 2.08$ . Therefore, the speciality of respondents is not an essential factor about their awareness of contemporary treatment methods of children.

Regarding Question № 1 "Are you familiar with the new preventive and non-operative caries treatment approaches in children?" compared to Question № 3 "For how long have you been practicing?", we obtained these results:  $p = 0.05$  at  $K = 3$ , critical value is 7.82 and the empirical value of  $X^2 = 0.89$ . The results ( $0.89 < 7.82$ ) confirm that the respondents' practical experience is not a significant factor about their awareness of the contemporary treatment approaches of children. Better informed are dentists with practical experience not longer than 5 years.

### Conclusions:

1. Dentists involved in the survey rely mainly on their theoretical and practical experience and routine clinical methods for non-surgical treatment of initial dental caries.

2. The age, practical experience and speciality of dentists are not a significant factor about their awareness of new treatment approaches.

**Keywords:** non-invasive, caries treatment, fluoride varnish, awareness

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## I. Introduction

There have been created contemporary methods for non-operative and operative preventive treatment requiring changes of the caries treatment protocol in deciduous teeth [1,2,3,4].

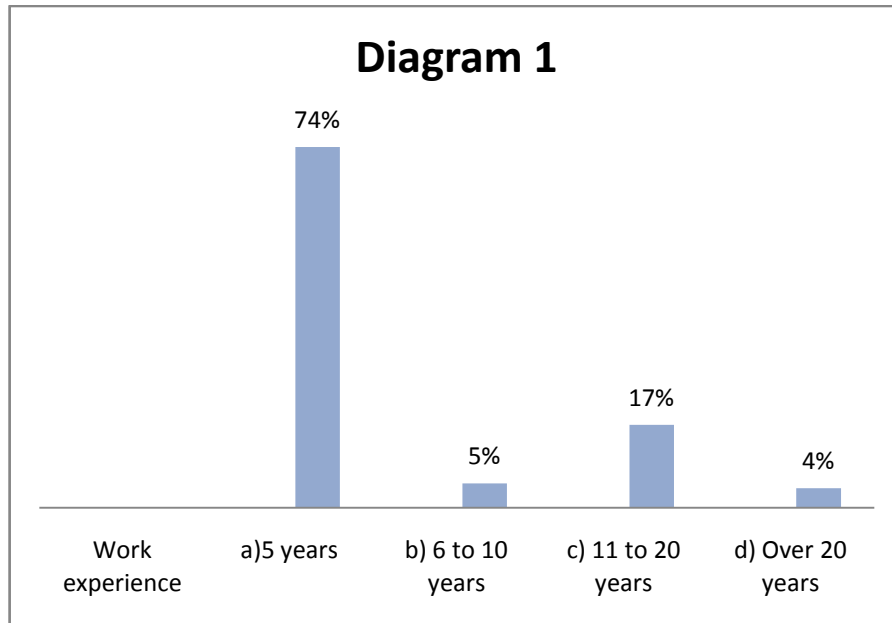
**Purpose:** Exploring the awareness of dentists about up-to-date diagnostic methods and devices for non-invasive preventive procedures concerning management and control of the caries process.

## II. Material and Methods

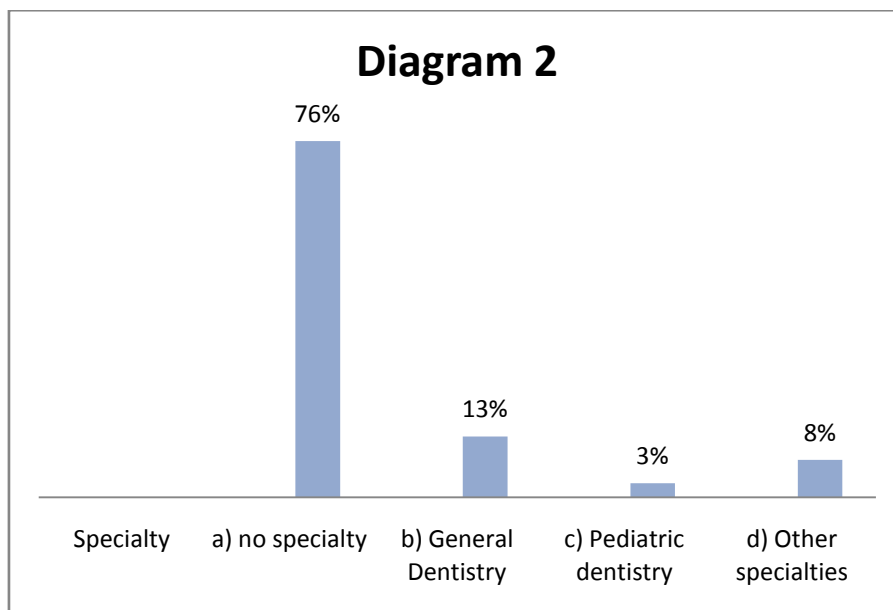
Subjects of the survey are 100 dentists from the city of Varna who perform treatment of deciduous teeth. The individual-addressed anonymous survey was fulfilled during educational, clinical and organization meetings at the Faculty of Dental Medicine– Varna and on the territory of the city of Varna. The statistical measurer applied for the aims of the survey is a non-parametric theory for evaluation of statistical hypotheses by comparing the relative values of two samples.

### III. Results

Regarding Question № 6 "Are you familiar with the new preventive and non-operative caries treatment approaches in children?" compared to Question № 3 "For how long have you been practicing?", we obtained these results:  $p = 0.05$  at  $K = 3$ , critical value is 7.82 and the empirical value of  $X^2 = 0.89$ . The results ( $0.89 < 7.82$ ) confirm that the prolonged respondents' practical experience is not a significant factor about their awareness of the contemporary treatment approaches addressed to children. Better informed are dentists with practical experience not longer than 5 years (Diagrams 1, 3). The last is related with the factor of dentists' age.

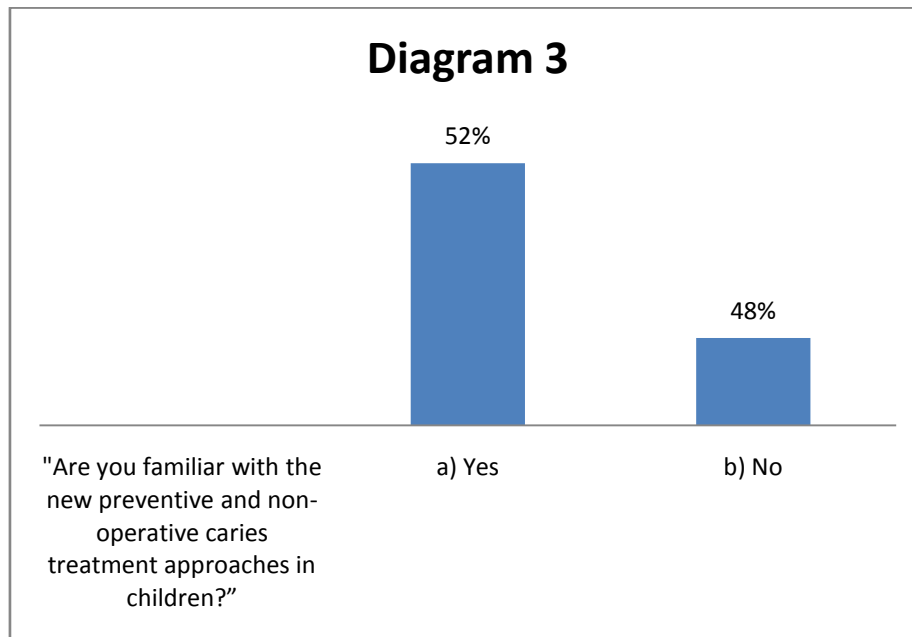


Results of question № 6 "Are you familiar with the new preventive and non-operative caries treatment approaches in children?" compared to results of Question № 4 "What is your speciality?", at  $p = 0.05$  at  $K = 3$ , the critical value is 5.35 and empirical value of  $X^2 = 2.08$ . Therefore, the speciality of respondents is not an essential factor about their awareness of contemporary treatment methods of children (Diagrams 2, 3).

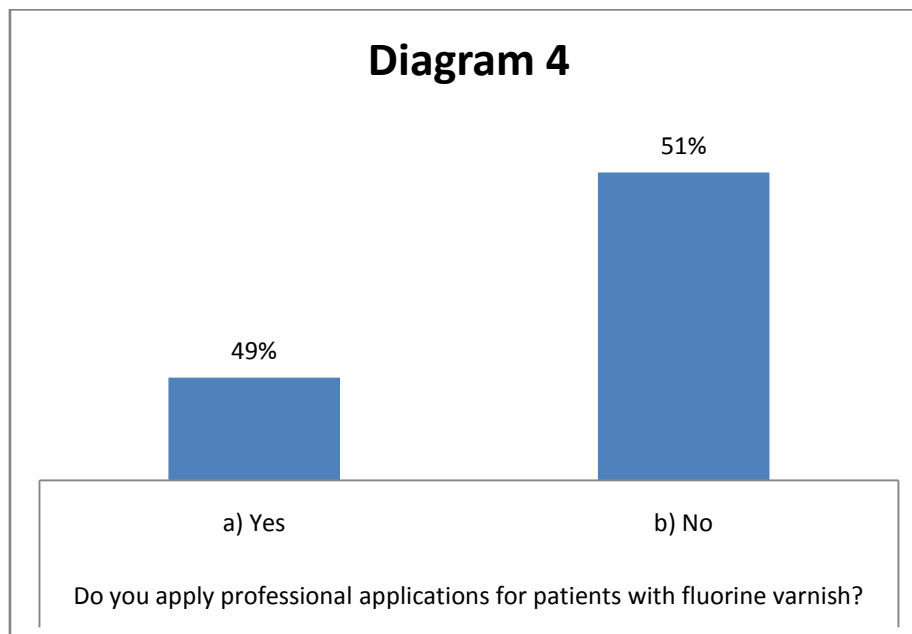


Regarding Question № 6 - "Are you familiar with the new preventive and non-operative caries treatment approaches in children?" compared to Question № 2 "What is the age of the dentist?", the result we obtained, at  $p = 0.05$  and  $K = 3$ , is that its critical value is 7.82, and the empirical value of  $X^2 = 8.98$ . It has been

established that the age of dentists is a factor of their awareness about the up-to-date approaches for treatment of children. Better informed are young dentists not older than 30 years (Diagram 3).



As shown in Diagrams 4, 49 % of the dentists perform professional applications with Fluorine varnishes to their patients and 51 % of them implement these over a period of 6 to 12 months per year.



Approximately 27 % of them apply varnishes professionally on each 3 to 6 months, and only 22 % of them- on every 3 months. These results indicate that dental practitioners apply fluorides-containing varnishes predominantly for prevention compared with non-invasive treatment of early caries lesions of deciduous teeth in patients aged from 3 to 6 years. The results obtained from question № 12 "Do you prescribe Tooth Mousse to Your patients?" compared with results from Question № 3 "For how long have you been practicing?", it becomes clear that  $1.21 < 1.96$ . It indicates that the duration of work experience has no impact upon the dentists' decision to prescribe GC Tooth Mousse to their patients (Table 1).

**Table 1.** Influence of the duration of work experience to the prescription of GC Tooth Mousse

Work experience	<i>fi</i> no	<i>ci</i>	<i>ci * fi</i>	$(ci - \bar{x})$	$(ci - \bar{x})^2$
Up to 5y.	26	3	78	-3	9
6-10	1	8	8	2	4
11-20 y	5	16	80	10	100
over 20 y.	1	28	28	22	484
<b>Total</b>	<b>33</b>		<b>194</b>		<b>597</b>

Of the 66 % inquired dentists prescribe GC Tooth Mousse to their patients, and 59 % of these indicate it for use for every night for 2 weeks, 32 % for application 2 nights per week and 9 % prescribe its usage only once per week.

**Summarizing the results of the survey in task shows:**

- 49% stated that they apply professional treatment to patients with fluorine varnish
- 66% prescribe to their patients GC Tooth Mousse and only 8% of dentists prescribe other products for remineralization therapy, for example GC MI Paste Plus [5,6].

**IV. Conclusions**

1. Dentists involved in the survey rely mainly on their theoretical and practical experience and routine clinical methods for non-surgical treatment of initial dental caries.
2. The age, practical experience and speciality of dentists are not a significant factor about their awareness of new treatment approaches.
3. Dentists who participated into the survey face difficulties concerning proper diagnosis and treatment of initial dental caries in deciduous teeth.

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