

# Albanian Dentist's Attitude towards Pain-Free Local Anesthetics in Children, A Country Profile

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## Abstract

**Aim:** The aim of this study was to access the Albanian dentist's attitude and perception toward pain-free dental injections in children. **Methods:** The survey was conducted in Tirana, Albania. A questionnaire regarding the dentist's attitude toward "Pain-free Local Anesthetic Techniques in Children" was used. It was structured as anonymous with six closed-ended questions in a Likert scale. Also, dentist information about gender, age, region and years of practice was part of the form. The information collected was analyzed using IBM SPSS 20. Descriptive statistics and one way ANOVA was used in comparing groups. The results were evaluated within a 95% confidence interval. Statistical significance level was established at  $p<0.05$ .

**Results:** A total of 203 dentists were included in the study. 86 (42.4%) were male and 117 (57.6%) were female dentists. Their mean age was 35 years old (sd 10.1) and the mean clinical practice experience was 10 years old (sd 9.5). 72 (35.5%) of dentists believed that pain is inevitable during local anesthesia in children and 158 (77.8%) agreed that cotton pellet should be better applied as a topical anesthetics. 128 (63%) of dentists believed in the possibility of pain-free local anesthesia in children. There was a higher agreement in males but not statistically significant. There was a statistically significant higher agreement between dentists in Tirana (the capital)  $p<0.03$  compared with the other regions while experience ( $p<0.2$ ) and age ( $p<0.9$ ) did not show any significant change. **Conclusions:** A higher proportion of Albanian dentists believe the importance of pain free dental injections in children. Especially dentists in urban seem to perform pain-free LA injections.

**Key Words:** *Albania, Dental education, Dental analgesia, Pain-free*

## Introduction

Pain in dentistry has been for many years one of the factors keeping patients away from dental settings. Even though the developing technologies are improving the quality of care still dental injections remain the popular method of anesthesia among the dental profession. Recent studies indicate that fear from intra-oral injections was found to keep the patients away from necessary treatment [1-5]. This might be the case in early childhood that will derive the same behavior to following ages. Pain-Free dental treatment is a keystone of creating a motivated group of young children who will establish better oral hygiene and follow the recall system. While implementing a 'pain-free dental treatment', pain-free dental anesthesia is compulsory. It has been recently advised that following a two minutes topical anesthetic application, slow and low-pressure injections are the key to pain-free and comfortable delivery of local anesthetic and named as "Pain-free local anesthesia technique" [6]. It is questionable if this procedure is well practiced in dental schools and if it has been widely used among dentists throughout dental practices. Probably this might be a cost-effective technique especially in countries with developing economies and low economic status where the dental diseases prevalence is high and also there are difficulties to implement the costly technologies [7]. Albania is a small Eastern European country undergoing through economical, health care and education system changes to become an EU member. There are a few pediatric dentists in Albania and 95% of the treatment is performed by a general dentist. The small size dental community would give us the chance to receive a nationwide perception about certain dental techniques. Therefore the aim of this study was to access the Albanian dentist's attitude and perception toward pain-free dental injections in children.

## Methods

The study protocol was approved by the Albanian Dental Association and Faculty of Dental Medicine of Tirana.

Alias/Nickname: .....	Gender:(F/M).....	
City: .....	Age: .....	Yrs of experience: .....
<b>Questionnaire for</b> <b>The dentist's approach and attitude toward child patient</b>		
Please mark your sincere opinions about the statements below. Answers given will be confidential and will only be used for scientific purposes.		
1) Pain is inevitable during local anesthesia in children.		
(1) Totally agree (2) Agree (3) Neither agree nor disagree (4) Disagree (5) Totally disagree		
2) Topical anesthetic solutions, due to possible bad taste should not be sprayed in children, should better be applied by the help of a cotton pellet.		
(1) Totally agree (2) Agree (3) Neither agree nor disagree (4) Disagree (5) Totally disagree		
3) Local anesthesia should be administered promptly and as quick as possible in uncooperative children.		
(1) Totally agree (2) Agree (3) Neither agree nor disagree (4) Disagree (5) Totally disagree		
4) Child's cooperation or un-cooperation is strongly influenced by the dentist's approach and attitude during dental treatment.		
(1) Totally agree (2) Agree (3) Neither agree nor disagree (4) Disagree (5) Totally disagree		
5) Treatments in uncooperative children should start from easy interventions, whereas in painful, urgent cases treatment can start with tooth/teeth extraction(s).		
(1) Totally agree (2) Agree (3) Neither agree nor disagree (4) Disagree (5) Totally disagree		
6) It is possible to administer pain-free dental injections in children.		
Please mark on the scale below.		
Totally Disagree		Totally Agree

**Figure 1.** The survey.

There was no need to obtain consent prior to the study since it was not an intervention study and the participation of the dentists was voluntary. The survey was conducted in Tirana, Albania. A questionnaire regarding the dentist's attitude toward "Pain-free Local Anesthetic Techniques in Children", was used. It was structured as anonymous with six closed-ended questions in a Likert scale. Also, dentist information about gender, age, region and years of practice was part of the form. The study was conducted in a one-page survey (*Figure 1*) as recently defined by Kuscu et al [8-10].

**Table 1.** Favorite answers to question statements on the survey of pain-free local anesthesia in children.

Statement	Favorable answers
1 <sup>st</sup> statement	4 and 5
2 <sup>nd</sup> statement	1 and 2
3 <sup>rd</sup> statement	4 and 5
4 <sup>th</sup> statement	1 and 2
5 <sup>th</sup> statement	4 and 5
6 <sup>th</sup> statement	>5

Dentists were advised to respond based on their own opinions and to ensure confidentiality a nickname should be used. It was distributed to the dentists participating in the 20<sup>th</sup> Annual Dental Conference in Albania. This was the main dental event of the year with the highest number of participants from the country and abroad. There was no time limit for filling the questionnaire and it was not obligatory. They were distributed at the beginning of the first session and the filled questionnaires were collected at the end of it. In order to have comparable data, average values of age and experience in years were recorded since almost half of the dentist practice in the City of Tirana (the capital) the answers

were compared regarding whether they work in Tirana or outside. The favorite answers to the question statements were put on *Table 1*.

## Statistical Analysis

Statistical calculations were performed with IBM SPSS v.20 for standard descriptive statistical calculations and one way ANOVA tests for comparison of groups. The results were evaluated within a 95% confidence interval. Statistical significance level was set at  $p<0.05$ .

## Results

The participants who completed the questionnaire were 203 dentists aged between 24-70 years. 86 (42.4%) were male and 117 (57.6%) were female dentists. Their gender, age, city of practice and yrs. of experience are shown in *Table 2*.

**Table 2.** Demographic data of Albanian dentists participating in the study.

Gender	n	%
Female	117	57.6
Male	86	42.4
Age	Mean age (SD)	
	35 (10.1)	
City		
Tirane	102	
Vlore, Shkodra, Durres, Elbasan, Berat, Lezhe, Fier, Korça	101	
Years of experience	Mean years (SD)	
	10 (9.5)	

**Table 3.** Albanian dentists' attitude for the possibility of pain-free local anesthesia in children.

	Gender	Age	Experience	1	2	3	4	5	6
<b>Statement</b>									
<b>Favorite answer</b>				5	1	5	1	5	10
<b>Painfree (Choice 4-5)</b>	0.61	34.31	9.93	4.16	2.15	2.87	1.77	2.92	7.73
<b>Impossible (Choice 1-2-3)</b>	0.55	35.27	10.64	2.19	2.01	2.64	2.03	2.78	5.48

**Table 4.** Favorable answers for pain-free anesthesia by gender.

	Gender (F)	Mean age (years)	Experience (years)	1	2	3	4	5	6
<b>Statement</b>									
<b>Favorite answer</b>				5	1	5	1	5	10
<b>Tirane</b>	0.65*	32.32	8.29**	3.27	2.07	3.05	1.79	2.89	6.88
<b>Other city</b>	0.49	37.44	12.42	2.95	2.08	2.43	2.03	2.79	6.16

\* $p<0.03$ ; \*\* $p=0.2$

Their mean age was 35 years old (SD 10.1) and the mean clinical practice experience was 10 years old (SD 9.5). 72

(35.5%) of dentists believed that pain is inevitable during local anesthesia in children and 158 (77.8%) agreed that

cotton pallet should be better applied as a topical anesthetics. 128 (63%) of dentists believed in the possibility of pain-free local anesthesia in children. Dentists who answered the 1<sup>st</sup> statement with favorable choices (4 and 5) gave much more favorable answers (yellows) for pain-free anesthesia (Table 3).

There was a higher agreement in males but not statistically significant ( $p>0.05$ ). There was a statistically significant higher agreement between female dentists in Tirana (the capital) ( $p<0.03$ ) compared with the other regions while their years of experience ( $p=0.2$ ) and age ( $p: 0.9$ ) did not show any significant change (Tables 4-6).

**Table 5.** Favorable answers for pain-free anesthesia using the mean age as cut off.

	Exp. in years						
Statement		1	2	3	4	5	6
<b>Favorite answer</b>		5	1	5	1	5	10
>35	21.58	2.98	2.09	2.54	1.82	2.35	6.6
<35	4.99	3.17	2.07	2.85	1.95	3.07	6.5

**Table 6.** Favorable answers for pain-free anesthesia using the mean years of clinical experience as cut off.

	Age						
Statement		1	2	3	4	5	6
<b>Favorite answer</b>		5	1	5	1	5	10
>10	45.13	2.99	2.06	2.6	1.92	2.4	6.61
<10	28.52	3.19	2.08	2.84	1.9	3.11	6.48

## Discussion

A small European nation, Albania, has little excess to dental services. Recent literature indicates that Albanian children had a high dental caries experienced, untreated cavities [11] and numerous dental disorders such as Molar Incisor Hypomineralization [12]. Thus this dilemma highlights the importance of local anesthesia for children.

It is assumed that to learn what Albanian practitioners think of pain-free local anesthesia, would better serve the children and the nation regarding dental health. Hitherto education of new generation dentist would also benefit from the conclusive remarks. For the last decade serving painless local anesthesia [13-15] was regarded as a new step, while it is questionable if it was widespread among Albanian dentists. In the present study, favorable or expected answers for pain-free anesthesia were noted and given answers were calculated to have an average value regarding each demographic data. Choice 3 “Neither agree nor disagree” was considered unfavorable for a pain-free outcome due to its hesitant meaning. Results seem to report that younger, female and dentists working in Tirane (or in a big city where competition is high) care more for pain. Doctors who believe in pain-free injections, seem to give more correct answers to statements (2, 3, 4 and 5) which also require some theoretical knowledge.

## Conclusion

A higher proportion of Albanian dentists believe the importance of pain-free dental injections in children. Especially dentists in urban seem to perform pain-free LA injections.

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