

Aspects of Dental Anxiety at Children of Different Ethnicities

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Abstract

Objectives: The aim of our study is to identify the differences in how the dental act is perceived among children of different ethnic groups. For this purpose, we started from the hypothesis that the degree of child anxiety at the dentist can be influenced by the socio-economic status of the family of origin. **Material and methods:** A sample of 115 school children, including 40 Romanian children, 36 Hungarian children and 39 Roma children, aged between 8-9 years old, were interviewed. We have chosen these three ethnic groups to see if there are differences in the perception of the dental act. In terms of psychological method, the questionnaire, the semi-structured interview, and the demonstration were used.

Results: The results showed that most children of the Romanian and Hungarian groups had been to the dentist, whereas only 48.71% of the Roma children had been there. The highest degree of anxiety is manifested by the Roma children. There are no significant differences in this study between the answers of Romanian children and Hungarian children regarding the degree of anxiety in the dental office. **Conclusions:** The study confirmed the hypothesis that the degree of child anxiety at the dentist is influenced by the socio-economic status of the family of origin. When the socio-economic level is low, parents do not go to the dental office for treatment or prevention and this behaviour is passed on to children.

Keywords: Dental anxiety, school children, oral health, parents

Introduction

Dental anxiety is a significant health issue in many countries. (Ng and Leung, 2008) Anxiety is one of the most common problems in the dental activities and is a real challenge for Pediatric Dentistry. Many children who are very anxious avoid dental examination and refuse dental treatment. Dental anxiety is described as anxious condition as it occurs due to the dental treatment procedure and is related to negative expectations which are determined by earlier traumatic experiences, negative attitudes in the family, fear of pain and perception of a painful previous dental treatment. (Cohen et al, 1982, Taani, 2001)

Children have always had a preconceived opinion about dental treatment. This fact has determined the appearance of dental anxiety with negative effects on their behaviour, which hampers their capacity to adaptability to a clinical situation. Among common fears, the fear of dentist has been ranked the fourth. (Beena, 2013) It has been found that anxiety varies in content, pattern, and level of fear across different cultures and across different populations. (Armfield et al, 2006) Research indicates the estimated prevalence of dental fear from the lowest level of 3% to the highest level of 43% in different populations. (Pramilla et al, 2010) The aim of our study is to identify the differences in the dental anxiety among children from different ethnicities- Romanian, Hungarian, and Roma.

Material and methods

A sample of 115 school children were chosen, including 40 Romanian children, 36 Hungarian children, and 39 Roma children. These belong to the same geographical areas, Mureş county, Tîrgu Mures town, and Sângeorgiu de Mureş locality. Children of the same age, 8 or 9 years old, were selected, pupils in the second grade. Both the Romanian and Hungarian children are pupils of "Nicolae Balcescu" Secondary School in Tîrgu Mureş and come from the urban environment, from families with relatively similar socio-economic status. As methods of psychological investigation, the questionnaire, the conversation, and the demonstration were used.

To identify how the act of dental work is perceived by children, we used two questionnaires with multiple choice answers. The first questionnaire contained nine closed questions and one open question at the end. Children had the opportunity to reveal information about the perception of the act of dental work choosing among the given answers. The open question at the end of the questionnaire asked children to list three reasons why they would not want to go to the dentist. The second questionnaire covered 5 questions and was used to show the fidelity of the children's answers. It included questions with answers showing sad or happy faces, on

a Likert scale from 5 to 1 (very afraid - absence of fear). The results were evaluated using the Graph Pad demo version software. The collected data was analyzed and the non-parametric qualitative chi-square test was used. The level of statistical significance was set to 0.05 ($p < 0.05$).

Results

Question 1: *Have you ever been in a dental office?*

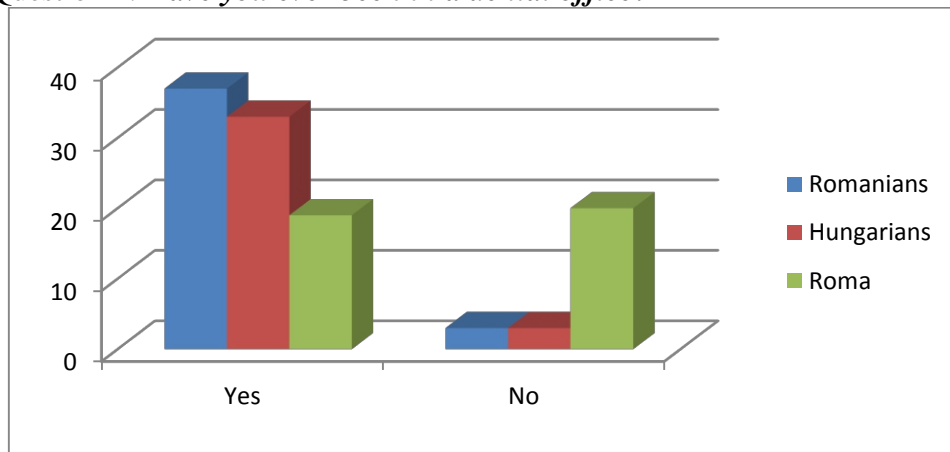


Figure 1. Distribution of answers to question 1

The results showed that most of the Romanian and Hungarian children had been to the dentist. The answers to the first question show that 92.5% of the Romanian children and 91.66% of the Hungarian children had been at least once to the dentist, whereas only 48.71% of the Roma children had been there. ($p < 0.0001$)

Question 3: *How was your first visit?*

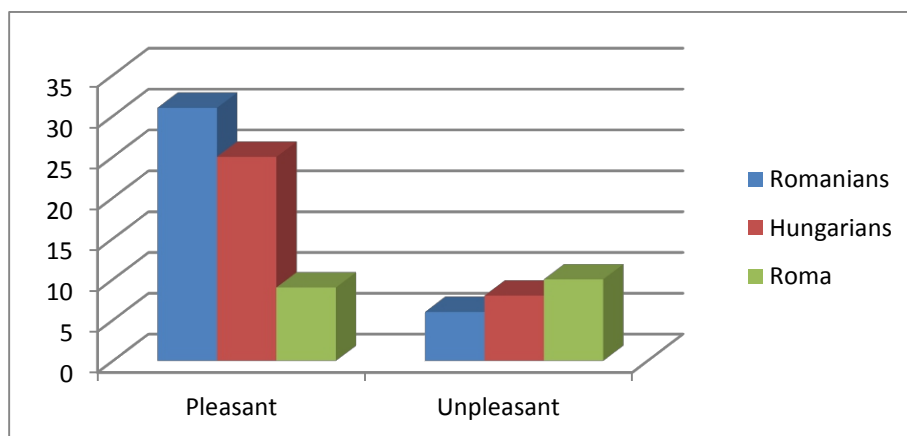


Figure 2. Distribution of answers to question 3

From the selection, 83.78% of the Romanian children found the first visit to the dentist to be pleasant, whereas 75.75% of the ethnic Hungarians and only 47.36% of the Roma communities found it so. ($p=0.0132$)

Question 4: *Are you afraid of medical equipment?*

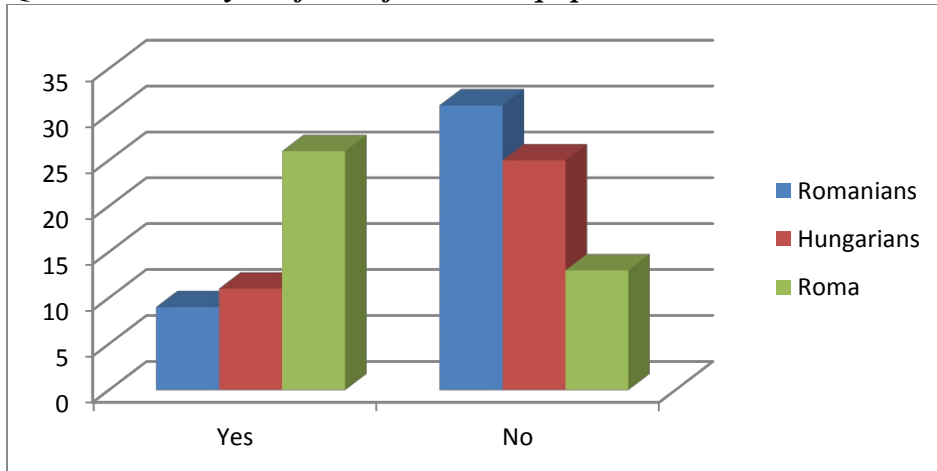


Figure 3. Distribution of answers to question 4

The children declared that they were afraid of medical equipment: 22.5% of the Romanians, 30.55% of the ethnic Hungarians, and 66.66% of Roma communities. ($p=0.0001$)

Question 5: *Are you afraid of injection?*

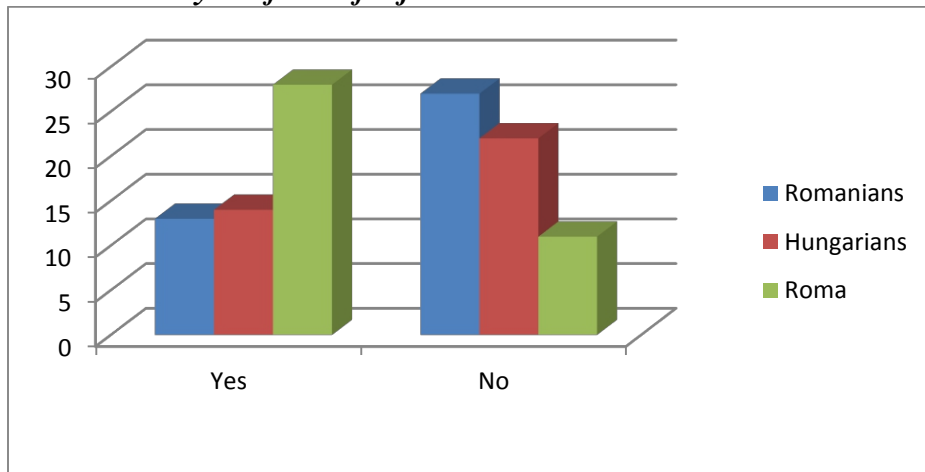


Figure 4. Distribution of answers to question 5

32.5% of the Romanians, 38.88% of the Hungarians and 71.79% of the Roma children expressed fear of injection for anaesthesia. ($p=0.0010$)

Question 6: *How often would you like to go to the dentist?*

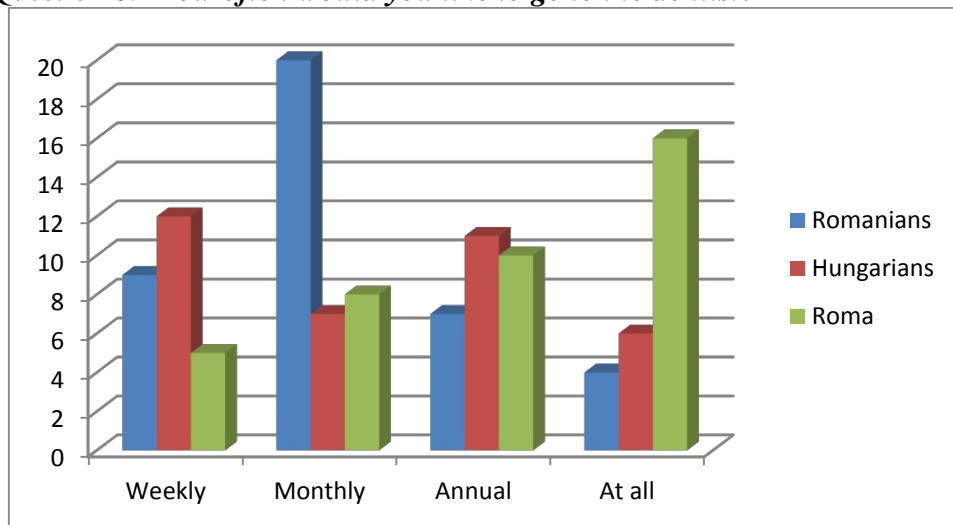


Figure 5. Distribution of answers to question 6

Children declared that they would not want to go to dentist at all: 10% of the Romanians, 16.66% of the Hungarians, and 41.02% of the Roma ethnicity. ($p=0.0013$)

Question 9: *What do your parents do when they have teeth problems?*

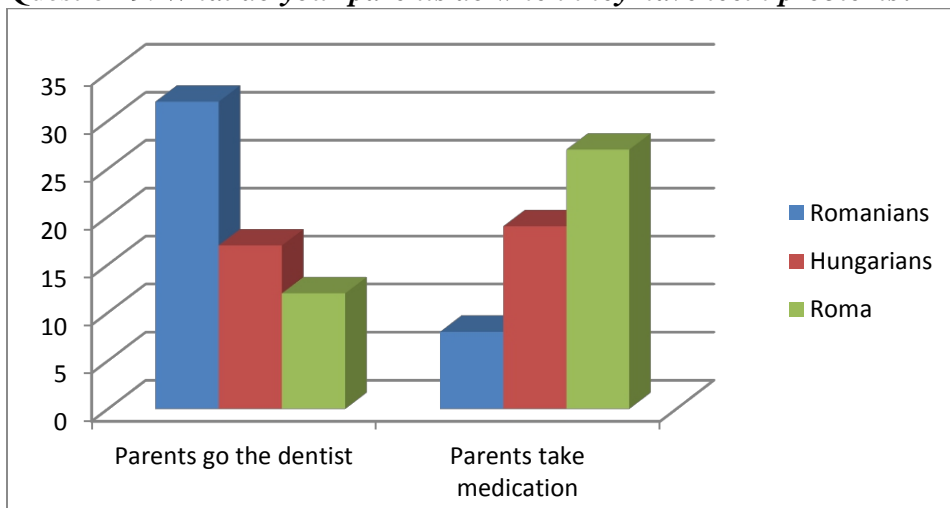


Figure 6. Distribution of answers to question 9

They replied that their parents go to the dentist when they have teeth problems: 80% of the Romanians, 47.22% of the Hungarians, and 30.76% of the Roma children. ($p<0.0001$)

Most parents who do not visit the dentist (69.24%) are of Roma origin. The graphs showing the answers to the first questionnaire were

statistically significant ($p < 0.05$) among the three ethnic groups. There were no statistically significant differences in questions 2, 7, and 8.

In the second questionnaire there were statistically significant differences in questions 1, 3, 4, and 5 (about the fear of the dentist, the turbine noise, the injection (anaesthesia) and the tools used by the dentist). 22.5% of the Romanians said that they were afraid of the dentist, whereas 22% of the Hungarians and 58.97% of the Roma children said so. (Question 1, $p = 0.0018$). They are afraid when they hear the noise of the turbine: 22.5% of the Romanians, 36.11% of the Hungarians, and 53.84% of the Roma children. (Question 3, $p = 0.0178$) They fear the injection: 27.5% of the Romanians, 52.77% of the Hungarians, and 64.10% of the Roma children. (Question 4, $p = 0.0228$) They say that they fear the tools that the dentist uses: 22.5% of the Romanians, 27.77% of the Hungarians, and 58.97% of the Roma children. (Question 5, $p = 0.0100$)

Discussion

The study confirmed the hypothesis that the degree of child anxiety in the dentist is influenced by the socio-economic status of the family of origin. Two questionnaires were used to observe the fidelity of the answers. As the objective aspects of the child's anxiety were observed, the questions in the first part of the questionnaire were factual, and the last question was to list the personal reasons that cause anxiety. Among the most common reasons for anxiety in the dentist were: the fear of injection (in both questionnaires), the medical equipment, and the dentist. The similar results in the two questionnaires show the fidelity of the children's answers. It has been demonstrated that the socio-economic level is a key indicator of oral health in the case of children, showing that subjects from families with low socio-economic background experience a much higher number of dental cavities than those with high socio-economic levels. There is evidence in Europe that people with a poor socio-economic status have more serious oral health problems than wealthier social strata. (Petersen, 2003)

Dental anxiety is associated with the impact oral health has on life quality. Those experiencing high levels of dental anxiety are among those with the poorest oral health-related quality of life. (McGrath and Bedi, 2004)

Our study confirms the ideas presented in the other mentioned studies, showing that the highest level of anxiety regarding the dentist is present in the Roma children. The lack of financial means, the absence of family education, and the parental model lead to this situation. There were no significant differences between the answers of the Romanian and Hungarian children regarding anxiety. However, a higher percentage of Hungarian children (52.78%) than Romanians (20%) said that their parents take medication instead of going to the dentist when they have problems, and

69.24 % of the Roma parents do so. This can be explained by either lack of time, of financial possibilities or by lack of education. The problem of child anxiety in the dental office has been a subject of concern, the fear of the dentist being a common phenomenon. Its prevalence varies between 6 and 20% for children and teenagers with an average of 11%. (Klinberg and Broberg, 2007) Other specialized studies have shown that there is a 23.4% prevalence of dental fear in schoolchildren aged from 12 to 15 and that the prevalence of dental anxiety is 50.2% as compared to phobia (4.38%) (Pramilla et al 2010, Marya et al 2012) It has been shown that continuing medical training and the dentist's experience are essential in treating anxious children. (Diercke et al, 2012)

The results of our study show that most Romanian and Hungarian children have been at least once to the dentist, and only 48.71% of the Roma children did so. The first visit to the dentist was pleasant for 83.78% of the Romanians, for 75.75% of the Hungarians, and for 47.36% of the Roma children. A similar study, conducted on 583 children with ages from 9 to 12, showed that 66% of the children had been to the dentist. Most children (64%) found a pleasant visit to the dentist, while only 11% said they did not like it. 12% said that they were afraid of the dentist, while 14% said they did not know how they felt during the dentist visit. (Alsarheed, 2011) Also, another study on 165 children aged from 7 to 11, which dealt with factors associated with dental management issues, showed that previous dental experiences, duration and complexity of treatment have a great impact on how the child behaves in the dental office. (Pai et al, 2015) The results of our study showed that there are no significant differences between the Romanian children and the Hungarian children as regards the degree of anxiety in the dental office. The highest degree of anxiety is recorded in Roma children. The reasons behind these results are the precarious material state of the families of origin and the lack of family education.

Conclusion

Oral health is influenced by the socio-economic level of the family. When it is low, parents do not go to the dental office for treatment or prevention. This behaviour is also passed on to children, who are not educated in the sense of oral health, look for dental treatment and visit the dentist with disbelief and reluctance. The results of the study show that most children who declared they did not want to go to the dentist are Roma (41.02%), followed by Hungarians (16.66%) and Romanians (10%). The interpretation of the answers to the question about the first visit to the dentist leads to the same conclusion. 83.79% of the Romanians said they liked it, whereas 75.75% of the Hungarians and only 47.36% of the Roma children said so. More than half of the surveyed Roma children (51.29%) said they

had never been to a dentist. The study has shown that it is important to educate children, but also to educate their parents, especially the Roma people. The age of young pupils is a very good time to establish a healthy relationship between the child and the dentist, to form a correct perception of the dental act and to learn a way of caring for the teeth.

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