Dental fear and knowledge of children treated by certified pediatric dentists and general practitioners

Malka Ashkenazi, DMD
Dan Faibish, DMD
Haim Sarnat, DMD, MSc

Recently, there seems to be an increased tendency to treat children by certified pediatric dentists (CPDs), rather than by dental general practitioners (GPs).[1-2] Concomitantly, pediatric dentistry is recognized as a distinct specialization field in many countries. The major goals of the specialization include: raising the knowledge and awareness for prevention of oral diseases and teaching a variety of behavioral approaches required in managing anxious children.[3]

Caries and periodontal disease prevention

Caries and periodontal disease, the 2 most common diseases of the oral cavity, can be prevented by proper health habits that are preferably acquired during childhood. These habits include correct tooth-brushing, twice a day, with fluoridated dentifrices and for some children also rinsing with fluoride mouthwash and / or systemic fluoride supplementation. In addition, the patient has to accept significant changes in his lifestyle, such as avoiding frequent consumption of carbohydrates between meals, and visit a dentist every 6 months for routine examinations. These require good compliance by the children and their parents. However, achieving compliance is one of the most difficult challenges in medicine as well as in dentistry.[5] Lack of compliance in medicine is estimated to be 92% in short treatments and 50% in chronic diseases.[5,6]

In order to improve compliance and develop new habits, the therapeutic intervention must be accompanied by effective health education. This is a complicated process, especially when dealing with establishing habits of preventive behavior where results are not seen immediately. Moreover, compliance and the aquisition of new habits do not necessarily improve just by the accumulation of knowledge and depend on macro and micro components:

The macro components are thoughts, social environment, and ability to follow instructions. During dietary instructions, for instance, the dentist should be aware of the strong social forces that encourage carbohydrate consumption and therefore, be ready to give constant reinforcement and not be discouraged if behavioral changes do not happen immediately.[7,8]

Dr. Ashkenazi, is a Lecturer, Department of Pediatric Dentistry, The Maurice and Gabriela Goldschleger School of Dental Medicine, Tel-Aviv University, Tel-Aviv, Israel.

Dr. Faibish is in private practice. This work is part of his D.M.D. thesis.

Dr. Sarnat is Associate Professor and Head, Department of Pediatric Dentistry, The Maurice and Gabriela Goldschleger School of Dental Medicine, Tel-Aviv University, Tel-Aviv, Israel.

The micro components are part of the interaction between the dentist and his patient and are extremely important. The dentist must adopt a friendly approach in order to improve patient satisfaction, and the patient himself must take an active role in this relationship.[7]

Fear reduction

Children may fear a specific treatment or dental treatment in general. Reducing children's dental fear is an important role of general and pediatric dentists. Successful treatment of fearful children requires more time, effort, and expertise from the dental medical team. Thus, dentists who treat children must use various behavioral techniques, such as, giving information and rational explanations, giving the child a feeling of control, using empathy, as well as reinforcement and systematic desensitization techniques.[9-12]

It was found that the members of the Australian Society of Dentistry for Children used behavioral techniques more often compared to general dentists. They taught the children more often to relax by taking deep breaths. The female members used more Tell-Show-Do technique, and let the children hold a toy or mirror during treatment.[10] Holst and Ek studied the influence of a training program in behavior management on the acceptance of dental treatments.[13] They found that after the training, the number of child patients who accepted treatment improved by 20%.

The goals of specialization in pediatric dentistry are similar in part to goals already taught to general dentists; however, the assumption was that pediatric dentists practice these principles with greater emphasis and efficiency. Therefore, a patient treated by a pediatric dentist would be expected to be more aware of prevention of dental diseases, less anxious, healthier, and more cooperative. However, these presumptions were never validated by a controlled study.

The purpose of this study was to assess the impact of treating children by certified pediatric dentists on children's dental fear and knowledge of preventive measures of dental diseases, compared to those treated by GPs.

SUBJECTS AND METHODS

Study population

Three hundred children, 8 to 10 years old, from various urban and rural settlements (kibbutzim) around the country, participated in the study and filled out a questionnaire. One hundred and fifty children were treated by 24 GPs and 150 by 15 CPDs; 13 out of the 15 were faculty members in pediatric dentistry at Tel Aviv University. The number of children treated by the same dentist was limited to 15 in order to obtain a wider variety of children treated by different dentists. Parental consent was obtained before their children received the questionnaire.

Questionnaire

A structured questionnaire, designed to assess the impact of the dentist on his child patients, was given to all participants (see appendix). The questionnaire included:

- Information regarding periodic checkup visits.
- Information dealing with what the dentist told his patients regarding preventive measures. The questions examined knowledge about tooth-brushing, eating habits, and use of fluoride.
- Information on child's fear level of dental treatment. The questions were based on Corah's dental anxiety scale which examined dental anxiety in adults[14], however, the number of choices for each question was decreased from 5 to 4 and the language was adapted to the level of children aged 8 to 10 years.
- Information regarding past dental experience.
- Information regarding the children's attitude toward their dentists.

Procedure

The secretary, student, or dental assistant read the questions to the children and marked their answers. The dentist himself was not involved in the process in order to prevent bias. The investigation was carried out in several private clinics and in 9 communal settlements (kibbutzim).

Statistical analysis

The data was analysed by BMDP (Statistical software (1992) editor: W.J. Dixon, University of California press), using Pearson's chi-square test. A p-value of 0.05 was considred to be significant

RESULTS

Study population

Three hundred children participated in this study, 158 boys (52.7%) and 142 girls (47.3%). Their mean age was 9.2 years and the median 9.5. Half of the children were

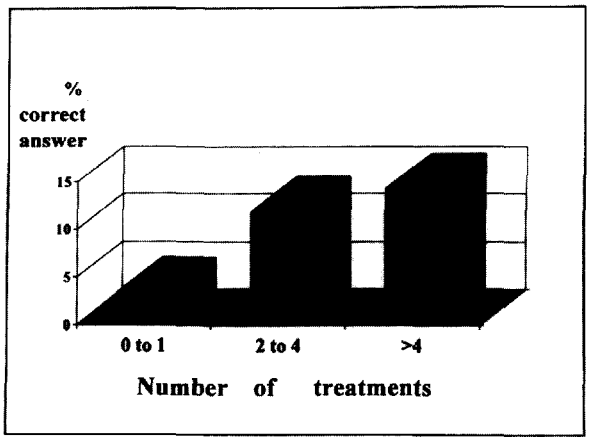


Figure 1. The correlation between the number of treatments and the percentage of correct answer regarding not eating sweets between meals

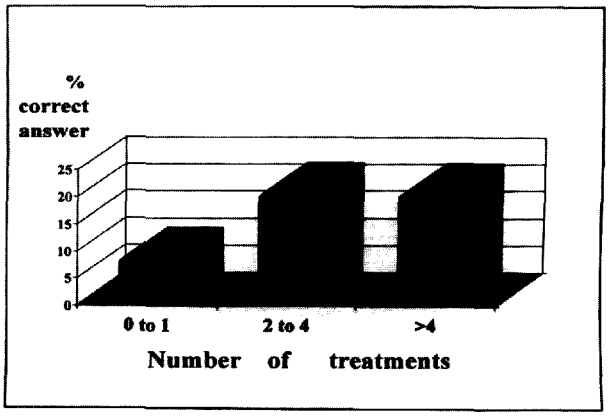


Figure 2. The correlation between the number of treatments and the percentage of correct answer regarding the use of fluoridated toothpaste

treated by GPs and the other half by CPDs. In the group treated by GPs, were 74 boys (49.3%) and 76 girls (50.7%). In the group treated by CPDs, were 84 boys (56%) and 66 girls (44%). No significant statistical differences were found between the answers of boys and girls.

Sociodemographic variables

Forty-six percent of the children treated by general dentists lived on a kibbutz and the rest in cities. Eighty percent of the children treated by a pediatric dentist lived in cities and were treated by faculty pediatric dentists, the rest lived on a kibbutz. In both groups, most of the children visited the dentists for the first time for routine dental examination and not for emergency treatment.

Reports on preventive measures

In general, the percent of children who gave correct answers was higher in children treated by CPDs compared to GPs ($p<0.001$). However, the differences were limited to 7%-20% for questions dealing with knowledge on preventive measures. More children treated by CPDs claimed that their dentist explained to them the need to eat a reduced number of meals (16% vs. 6%, $p<0.01$) and not to eat sweets between meals (14% vs. 2%, $p<0.05$). However, 50%- 80% of the children did not remember that the dentist told them anything about sweets or frequency of meals.

More children treated by a CPD reported that their dentist reminded them regularly to brush their teeth (62% vs. 42%, $p<0.01$), brush their teeth twice a day (82% vs. 65%), gave instructions about tooth-brushing (34% vs. 26.7%, $p<0.01$), instructed them as to the recommended toothbrush (33% vs. 13%, $p<0.05$) and toothpaste (24% vs. 3.3%, $p<0.05$), gave prescriptions for mouth rinses (17 % vs. 2 %, $p<0.05$), reminded them to take fluoride tablets (18% vs. 8.7%, $p<0.05$), and applied topical fluoride (49% vs. 33%, $p<0.01$).

Interestingly, children who experienced more treatments, reported more frequently that their dentist instructed them not to eat sweets between meals (Figure 1) and to use toothpaste that contained fluoride (Figure 2).

Reports on dental fear

More children treated by a CPD answered that they were not afraid of dental treatments (75% vs. 39%, $p<0.01$), although they had experienced more dental treatments (62.3% vs. 39.3%, $p<0.01$, Table 1). However, when the children were asked how they feel in the waiting room and on the treatment chair, the answers of children from both groups were similar with no statistical difference.

The correlation between the reason for the first visit and fear was studied. It was found that children who experienced routine dental examination at their first appointment were more frequently not afraid at all (63.6%) or only slightly afraid (21.7%) of dental treatment compared to children who received operative treatment (51.4% and 8.1%, respectively) (Table 2). Moreover, 35% of the children who visited the dentist for the first time because of cavities were very afraid or unwilling to receive treatment in comparison to only 12% of those who arrived for a routine dental examination.

Table 1 ☐ The relationship between the number of dental treatments and the degree of dental fear.

Number of treatments	Not afraid%	Mildly afraid%	Moderately afraid%	Very afraid%	Refuse to accept dental treatment%	Total
Low (0-1)	56.6	15.2	6.2	16.6	5.5	100
Moderate (2-4)	55.9	8.5	20.3	10.2	5.1	100
High (>4)	64.3	22.6	1.2	9.5	2.4	100

Table 2 ☐ The relationship between the reason for the first appointment and degree of dental fear.

Reason for the first Appointment	Not afraid%	Mildly afraid%	Moderately afraid%	Very afraid%	Refuse to accept dental treatment%	Total
Routine examination	63.6	21.7	2.8	9.2	2.8	100
Cavities	51.4	8.1	5.4	29.7	5.4	100
Pain	20	0	20	30	30	100
Trauma	18.2	27.3	18.2	0	36.4	100

The correlation between prizes, compliments, and dental fear was also studied. It was found that there was a positive correlation between receiving prizes and reduced dental fear ($p < 0.05$). Children treated by a CPD reported more frequently that they are not afraid at all of dental treatment (75% vs. 39%, $p<0.01$) and received prizes and compliments at the end of every treatment (85% vs. 32.7%, $p<0.05$). In contrast, receiving prizes irregularly was positively correlated with increased dental fear more than not receiving prizes at all; 70%-93% of the children who regularly received or regularly did not receive a prize were not afraid as compared to only 22% of the children who received a prize irregularly (Table 3). An inverse comparison showed that most of the children who were not afraid or slightly afraid, claimed that they had always received a prize. Most of the children who were very afraid or unwilling to receive treatment received prizes irregularly.

More children treated by a CPD loved their dentists in comparison to those treated by a GP (50% vs. 31.5%, $p<0.01$). But, when they were asked if they would like to be a dentist, the answers of the children from both groups were similar.

DISCUSSION

One of the most important tasks of a pediatric dentist is to instill correct oral habits to prevent oral diseases in his patients. The first step in establishing a habit is to provide the relevant knowledge to the child and his parents and raise their awareness of prevention of oral diseases. The present study showed that children who were treated by a CPD had statistically more knowledge about prevention of oral diseases compared to those who were treated by a general practitioner. These findings indicate that CPDs apparently put in more effort in communication and education of their patients concerning preventive dentistry.

Similar findings were obtained by McKnight *et al*,[15] They showed that a CPD dedicated more time and attention to child and parent education and believed that their relationship with the parents is important and is an integral part of the treatment.

Notwithstanding, the percent of children who showed good knowledge in our study was relatively low (14%-82%), and the difference between the children who answered correctly in the 2 groups was only 7%-20%. The small discrepancy between the groups is surprising, especially since the children who were treated by a CPD were treated mainly by faculty pediatric dentists who instruct students regularly and are expected to be knowledgeable and up to date. It might even be speculated that children treated by a CPD not associated with the university would get even less attention regarding preventive measures.

The reason for the relatively small difference between the 2 groups is not completely clear. One possibility is that there was not enough emphasis on the importance of transmitting knowledge about prevention to the patients during specialty training. In that case our findings could originate from paucity of information given by the dentist.

A second possibility is that the information was given mainly to the parents and the dentist did not pay enough attention to the child during that conversation. When examining children aged 8 to 10, the relationship between the dentist and the parents has to be close and

sometimes information in the clinic is given specifically to the parents because of their responsibility in performing these directions. The children are not necessarily partners to this discussion. Therefore, it is not surprising that important information items are not transmitted to the children.

Table 3 □ The relationship between receiving prizes at the end of the treatment and degree of dental fear.

Receiving prizes at the end of the dental treatment	Not afraid%	Mildly afraid%	Moderately afraid%	Very afraid%	Refuse to accept dental treatment%	Total
Always	70.1	24.3	0.6	5.1	0	100
Sometimes	22.1	10.5	22.1	31.6	13.7	100
Never	93	0	0	6.3	0	100

A third possibility is that some children, and maybe also their parents, did not understand the information. Interestingly, in some cases the parents reported that their children had indeed received proper instructions, but they answered according to the common public belief. One example is the question on the role of sweets in preventing dental caries. The dentist told the children about the importance of not eating between meals, but they claimed that they were told "not to eat many sweets". Thus, in at least some of the cases, there was faulty communication between the dentist and the child. Obviously, the essence of good communication is transmission of information in a way that both sides can comprehend. This can be achieved by understanding and considering the specific characteristics of the patient and adjusting the content transferred to him accordingly.[16]

In this context, it should be remembered that other factors can also determine the general awareness of children to dental treatment. Tedesco *et al* found that preventive activities are influenced by 3 factors: thoughts (beliefs, values, expectations), social environment (significant persons) and personal ability.[17] Moreover, in order to follow directions, the patients have to believe that they are exposed to the disease, that the disease is serious, and that they can gain from their effort.[18] A significant relation was found between the belief in the treatment benefit and improvement of oral hygiene as expressed in bleeding index.[19] Thus, it is possible that information has been delivered, but without enough emphasis on the benefit of oral hygiene.

Another possibility is that the information might have been transmitted, but there was not enough practice of the instructions by the dentists during recall meetings, or by the parents at home. In both cases, the children did not have the chance to practice and internalize the information in order to adopt it as a habit. The results of this study indicate that there is a positive relation between the number of treatments and the knowledge about preventive measures. Meaning that repeated treatments gave an opportunity to the dentist to repeat and reinforce important information.

Another major task of a pediatric dentist is to reduce the dental fear of children. The results of this study showed that specialist-treated children reported more frequently that they were not afraid of dental treatments (75.3% vs. 39.3%, $p<0.05$). Reduction of dental fear in children treated by CPDs can be related to a number of factors, such as the dentists' attitude, the number of visits, and prizes received at the end of the treatment. In addition, it can be related to the greater experience and knowledge of CPDs in treatment of uncooperative children.

Wright *et al* found several significant differences between GPs and CPDs.[10] The CPDs spent more time talking to the children and their parents, and more often used various behavioral techniques. It could be that the CPDs show more empathy. In the empathic process, the dentist gives up his egocentric attitude and tries to understand the child's way of grasping the dental situation. This process helps the child to accept the "threat" of dentistry more easily, and allows better relationships with the children and their parents. It seems that anyone can express empathy, but at different levels. This ability can be learned and reinforced, yet some people can develop this skill to a higher level than others.[20]

Another variable in the dentist-patient relationship that helps to diminish children's fear is the dentist's ability to evaluate the fear level of children by their behavior during treatment. Some dentists are able to respond to fear earlier than others and in this way prevent a sharp decline in cooperation. In a research by Veerkamp *et al*, it was found that dentists are able to evaluate children's fear during treatment, but the degree of this subjective impression and the ability to respond to it are different from one dentist to another.[21] It is possible that specialization training improves this ability.

Fear reduction could be related also to the higher number of treatments received by CPD-treated children. Klingberg *et al* found that there is a negative relationship between experiencing restorative dental treatments and dental fear.[22] Moreover, repeated visits to the dental clinic might help develop better communication and reduce fear level.[23]

Receiving a prize at the end of the treatment could also contribute to fear reduction among children ($p<0.05$). It was found that children treated by CPDs received more prizes than those treated by GPs (85% vs. 32%) and are less afraid of dental treatment in general. Interestingly, irregularly receiving prizes was found to be much worse than not receiving prizes at all. It seems that the disappointments accompanied with irregular prize receiving increased significantly the dental fear and the negative attitude to dentistry.

Another finding of this study was that in spite of the fact that CPD-treated children reported being less afraid of dentistry than GP-treated ones, no difference was found in the reported fear level in the waiting room or in the dentist's chair. The explanation for this fact is not completely clear, but it is possible that when the children imagined the real situation without their dentist's support they felt more fear.

Fear of dental treatment could be related to factors other than the dentist, such as the age of the child, parent's attitude, and socioeconomic status.[24,25] Cuthbert claims that fear level decreases around the age of 6-7.[26] At this age, most of the children succeed in coping with dental treatment. In our study we could not find any correlation between age and dental fear, probably due to the narrow range of ages examined in the study. Additional factors that can significantly influence the stress resistance of children include the parent's approach to dental treatment, the kind of interaction between parents and children, and the discipline and socialization processes. It was found that responsible mothers have children that cope successfully with dental fear. In contrast, mothers who are upset or have lower self-esteem have children with a negative attitude to dental treatment or with a reduced ability to cope.[25] These findings reinforce the assumption that children's ability to control fear depends on their relationship with a positive response or secure mothering figure.[25]

The discrepancy between the CPDs' ability to reduce dental fear and the inability to transmit the knowledge for prevention of oral diseases is significant. The reason is not completely clear. Most of the children referred to a pediatric dentist from a GP are referred because of communication problems. Success in managing a difficult child gives immediate rewards: professional satisfaction and financial gain, whereas patient education requires time, effort and expertise for which the rewards are very limited and the results if any are not immediate.

In conclusion, the results of this study indicated that children treated by CPDs were less afraid of dental treatment and knew more about preventive measures. However, the percentage of children treated by CPDs who gave wrong answers was quite high and the difference between the 2 groups was limited. These findings should have implications regarding specialization programs in pediatric dentistry, in order to improve the achievements of CPDs in teaching children how to maintain their oral health, as well as emphasize patient education skills in both dental schools and specialization programs.

REFERENCES

1. Venezie, R.D.; Vann Jr, W.F.; Cashion, S.W. *et al*: Pediatric and general dentists' participation in the North Carolina Medicaid program: Trend from 1986 to 1992. Pediatr Dent 19:114-117 , Mar-Apr, 1997.
2. Schneider, H.S.: Parental education leads to preventive dental treatment for patients under the age of four. ASDC J Dent Child 60: 33-37, Jan-Feb, 1993.
3. Post graduation in pediatric dentistry, basic information for graduate students, Israel dental association, the scientific committee, 1997.
4. Rinchuse, D.J. ; Rinchuse, D.J.; Zullo, T.G.: Oral hygiene compliance: A clinical investigation. J Clin Orthod 26: 33-38, January, 1992.
5. Bergman, A.B. and Werner, R.J.: Failure of children to receive penicillin by mouth. N Engl J Med 268:1334-1338, June, 1963.
6. Haynes, R.B.: Introduction, in Compliance in Health Care, ed. R.B. Haynes, D.W. Taylor, D.L. Sackett, Johns Hopkins University Press, Baltimore, 1979, pp 1-7.
7. Blinkhorn, A.S.: Factors affecting the compliance of patients with preventive dental regimens. Int Dent J 43: 294-298, Jun, 1993.
8. Cohen, S.; Sarnat, H.; Shalgi, G.: The role of instruction and a brushing device on the oral hygiene of blind children. Clin Prev Dent 13: 8-12, July-August, 1991.
9. Murray, J.J. and Niven, N.: The child as a dental patient. Curr Opin Dent 2: 59-65, December, 1992.
10. Wright, F.A.; McMuray, N.A.; Giebartowski, J.: Strategies used by dentists in Victoria, Australia, to manage children with anxiety or behavior problems. ASDC J Dent Child 58: 223-228, May-Jun, 1991.
11. Wright, G.Z.; Starkey, P.E.; Gardner, E.D.: Managing children's behaviour in the dental office. Mosby, St. Louis, Missouri 1983.
12. Smith T.; Milgrom P.; Weinstein P : Evaluation of treatment at a dental fears research clinic. Spec Care Dentist 7:130-134,May-Jun, 1987
13. Holst, A. and Ek L.: Effect of systematized "behaviour shaping"on acceptance of dental treatment in children. Comm Dent Oral Epidemiol 16: 349-355, December, 1988.
14. Corah, N.L.: Development of Dental Anxiety Scale. J Dent Res 48:596, July-August, 1969.
15. McKnight-Hanes, C.; Myers, D.R.; Davis, H.C.: Dentists' perceptions of the variety of dental services provided for children. ASDC J Dent Child 61: 282-284, July-August, 1994.

16. Venham L.L and Gaulin-Kremer, E.: A child-oriented philosophy of dental management. Pediatr Dent 5:261-265, December, 1983.
17. Tedesco, L.A.; Keffer, M.A.; Davis, E.L.: Social cognitive theory and relapse prevention: Reframing patient compliance. J Dental Educ 55:575-581, September, 1991.
18. Barker, T.: Role of health beliefs in patient compliance with preventive dental advice. Comm Dent Oral Epidemiol 22: 327-330, October, 1994.
19. Borkowska, E.D.; Watts, T.L.; Weinman, J.: The relationship of health beliefs and psychological mood to patient adherence to oral hygiene behavior. J Clin Periodontol 25: 187-193, March, 1998.
20. Roberts, J.F.: How important are techniques? The empathic approach to working with children. ASDC J Dent Child 62: 38-43, January-February, 1995.
21. Veerkamp, J.S.; Gruythuysen, R.J.; van Amerongen, W.E. *et al*: Dentist's ratings of child dental-patients' anxiety. Comm Dent Oral Epidemiol 23: 356-359, December, 1995.
22. Klingberg, G.; Berggren, U.; Carlsson, S.G. *et al*: Child dental fear: Cause-related factors and clinical effects. Eur J Oral Sci 103: 405-412, December, 1995.
23. Sinha, P.K.; Nanda, R.S.; McNeil, D.W.: Perceived orthodontist behaviors that predict patient satisfaction, orthodontist-patient relationship, and patient adherence in orthodontic treatment. Am J Orthod Dentofacial Orthop 110: 370-377, October, 1996.
24. Corkey, B. and Freeman, R.: Predictors of dental anxiety in six-year-old children: Findings from a pilot study. ASDC J Dent Child 267-271, July-August, 1994.
25. Venham, L.L.; Murray, P.; Gaulin-Kremer, E.: Child-rearing variables affecting the preschool child's response to dental stress. J Dent Res 58: 2042-2045, November, 1979.
26. Cuthbert, M. and Melamed, B.: A screening device: children at risk for dental fears and management problems. ASDC J Dent Child 49: 432-436, November-December 1982.

APPENDIX

Dental questionnaire
Date _____ Gender: Male/ Female Age_____
Name of private dentist _____ Male/ Female
Mother's education in years _____

1. Why did you go to the dentist for the first time?
   a. Routine examination
   b. Cavities
   c. Pain
   d. Dental trauma

2. Do you receive regular invitations for check-ups from your dentist?
   a. Yes
   b. No

3. Did your dentist tell you not to eat sweets?
   a. Yes, not to eat sweets between meals
   b. Yes, not to eat many sweets
   c. Yes, not to eat sweets at all
   d. No, he did not mention anything about sweets

4. Which of the following sentences were used by your dentist?
   a. It is worth while to reduce the number of meals a day
   b. It is worth while to reduce the amount of food in each meal and increase the number of meal
   c. Food does not harm the teeth
   d. My dentist did not mention any of the above sentences

5. Did your dentist tell you to brush your teeth?
   a. Yes, at almost every appointment
   b. Yes, sometimes
   c. Yes, but only once
   d. Never

6. Did your dentist instruct you on how to brush your teeth?
   a. Yes, and he checks my brushing every appointment
   b. Yes, and he checks my brushing sometimes
   c. Yes, only once
   d. No

7. Did your dentist tell you which toothbrush to use?
   a. Yes
   b. No
   c. I don't know

8. Did your dentist tell you which toothpaste to use?
   a. Yes, toothpaste that contains fluoride
   b. Yes, all the toothpastes are good
   c. Yes, toothpaste for children
   d. I don't remember

9. How many times a day did your dentist tell you to brush your teeth?
   a. Twice a day
   b. Once a day
   c. Sometimes
   d. After every meal

10. Do you remember whether your dentist put a tray with fluoride in your mouth?
   a. Yes, at the end of each appointment
   b. Yes, at the end of the treatment-session or every half a year
   c. No
   d I don't know

11. Does your dentist remind you to take fluoride tablets?
   a. Yes, at every appointment
   b. Yes, sometimes
   c. No

12. Does your dentist remind you to use fluoride rinse?
   a. Yes, at every appointment
   b. Yes, sometimes
   c. No

13. Do you love your dentist?
   a. Yes, very much
   b. Yes
   c. No
   d No, and I do not want to be treated by him

14. Do you want to be a dentist?
   a. Yes
   b. No
   c. Maybe

15. Do you get prizes and compliments at the end of dental treatment?
    a. Yes, always
    b. Yes, sometimes
    c. Yes, when I was younger
    d No

16. Are you afraid of dental treatment?
    a. Yes, I do not want to receive any treatment
    b. Yes, I am very afraid, but I am getting regular treatments
    c. Yes, I receive treatment but only when I have pain
    d. I am afraid a little, but I am getting regular treatments
    e. I am not afraid at all

17. How do you feel in the reception area before treatment?
    a. Calm
    b. A little bit restless
    c. A little afraid
    d. Very afraid

18. Sitting in the dental chair, how do you feel when your dentist prepare the drill for your treatment?
    a. Calm
    b. A little restless
    c. A little afraid
    d. Very afraid

19. How many dental treatments have you experienced in the past? (Fillings and crowns)
    a. 0-1
    b. 2-4
    c. more than 4