Referring children to a Special Dental Care Centre in the Netherlands: parents’ experiences and expectations

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ABSTRACT. Aim The aim of the present study was to assess the relation between treatment at the family dentist versus referral and different aspects of treatment at a Special Dental Care Centre (SDCC), including the choice to return to their family dentist or not. The same study was performed for a group of patients recently referred to and still treated at a Special Dental Care Centre (SDCC). Methods A questionnaire was sent to the parents of 852 children for whom complete dental records were available. Treatment was completed for 111 children (study 1) and 170 children were recently referred and had just started treatment (study 2). Results/Statistics In total 281 questionnaires were returned and filled out. Parents of children who returned to their general dental practitioner (GDP) were more satisfied with their GDP treatment than parents of children who did not return to their GDP (study 1: Z=-3.65, p<0.001; study 2: Z=-2.86, p=0.004). Conclusion The decision to return to the family dentist or not after treatment at a SDCC centre was based on their satisfaction with their treatment.

KEYWORDS: Child dental anxiety, Special Dental Care, Referral.

Introduction

General dental practitioners (GDPs) treat most children in the Netherlands. When, however, dental anxiety or disruptive behaviour is displayed by children and their GDP is not able to fulfil treatment adequately, they can be referred to a Special Dental Care Centre (SDCC) [ten Berge et al., 1999]. The same possibility exists for disabled children, having their own specific management problems in a normal dental setting. Disruptive behaviour or dental anxiety can be caused by, or is related to, amongst other factors, age, gender, temperament, socioeconomic health status, former experiences with dental treatment, parental dental anxiety and the child dental health status [Mejàre et al., 1989; Klingberg et al., 1994; Milgrom et al., 1995; Raadal et al., 1995; Klingberg and Broberg, 1998; ten Berge et al., 1999]. The aim of any intervention in such a SDCC is to ultimately refer the child patient back to the family dentist as soon as all necessary treatments have been completed [SBT, 1996]. It is important to keep this intervention period short to strengthen and maintain the relationship with the referring dentist and to reduce the threshold to refer to a clinic. To increase the possible success of a GDP’s future treatment, treatment at a centre by a paediatric dentist is aimed at reducing the child’s dental anxiety and Behavioural Management Problems (BMP) [ten Berge, 2001].

Every year in a SDCC in Amsterdam, every year several hundred children between 2 and 17 years of age are cared for and then referred back to their GDP. Prior to treatment in the centre children are screened for dental anxiety using the Children’s Fear Survey Schedule - Dental Subscale (CFSS-DS) and on behavioural problems using the Child Behaviour Checklist (CBCL). The number of referred patients returning to their family dentist after treatment at the clinic varies. Between 50-60% of Dutch adults are able to visit a GDP on a regular basis after being treated at a SDCC for their high level of dental anxiety [Aartman et al., 2000; van der Zijp et al., 1996]. In an
evaluation of fearful children at the SDCC in Amsterdam, Weerheijm et al. [1999] found a large percentage (91.7%) of children went back to a GDP. After full restorative treatment at the SDCC parents were satisfied and the family dentist took care of further dental supervision. This earlier study also indicated that sometimes the parents decided to visit a GDP other than the one they visited before dental treatment at SDCC. The reasons for returning to their own GDP or switching to another one were unclear.

Therefore, the aim of the first part of this study was to assess the relation between treatment at the family dentist on the one hand, versus referral and different aspects of treatment at a Special Dental Care Centre (SDCC), and the choice to return to their family dentist or not on the other hand. The question to be answered was: does the child's behaviour and satisfaction with their GDP, the parents' expectations, unanswered questions and the nature of the actual dental treatment during attendance at the clinic play a role in their behaviour afterwards? The second part of the study was carried out with those patients who had recently been referred to and were still being treated at SDCC. The relationship between the aforementioned variables and the intention to return to their GDP, or not, was assessed.

**Materials and methods**

Subjects and procedure. The subjects for this study were children referred by their GDP and treated with behavioural management techniques at an Amsterdam Special Dental Care Clinic (SDCC). Children treated with intravenous sedation, general anaesthesia and nitrous oxide sedation were excluded, as this inhibited a quick referral back. A questionnaire was sent to the parents of 852 children for whom complete dental records were available. In total 281 questionnaires were returned (33%). Approximately 25% (n=143) of those not responding were approached by telephone and asked some questions for additional information. The children selected were divided into two groups: 111 children whose treatment was finished (63 girls, 48 boys; mean age 73.8 months; SD=23.6) and 170 children who had just started treatment (76 girls, 94 boys; mean age 68.1 months; SD=21.8).

_**Questionnaire.**_ This consisted of 19 questions, divided into four parts, each part covering a different period in time:
- part 1 - before referral;
- part 2 - at the time of referral;
- part 3 - period at SDCC;
- part 4 - after discharge from SDCC.

These questions concerned the type of treatment and satisfaction with the referring dentist, the referral procedure and the content of and satisfaction with treatment at the SDCC. Questions were structured in different formats: multiple choice questions, open-ended questions and questions with a five-point Likert-type scale, ranging from 1 (totally agree) to 5 (totally disagree).

_Dental data._ From the dental records of each child patient attending at SDCC the following variables were taken:
- number of treatment sessions;
- half year check-ups;
- restorations;
- extractions;
- root canal treatments.

_**Statistical analysis.**_ This was performed using SPSS 8.0 [Voekl and Gerber, 1999]. Frequencies of the children who returned to the family dentist or to another were calculated. Differences in age between groups were analysed using independent sample t tests. Variables with an ordinal measurement and those not normally distributed, such as treatment sessions at SDCC, half year check-ups, number of fillings, extractions, root canal treatments at SDCC and the questions about satisfaction, referral, expectations about SDCC, effort of SDCC staff and the GDP were assessed using Mann-Whitney U tests to identify differences between children returning to their GDP and those who did not. Chi Square tests were performed to assess the relationship between returning to the GDP or not. The same test was used for questions about the treatment provided by the GDP, who decided to refer, questions parents had during treatment at SDCC, gender and one question of the non-response group. All calculations were performed separately for both parts of the study.

**Results**

_Part 1_ (treatment at SDCC completed). In this group 66.7% returned to their family dentist, 21.6% did not, and the remaining 11.7% had not yet decided. Children of parents who completed and returned the questionnaire returned to their family dentist more often than the children of the non-responding parents (who subsequently answered the questions by telephone) (c2=14.60; df=2; p<0.001). The group who had not yet decided was excluded from this analysis.

Children who were referred by their own GDP returned more often to him/her than children who were referred at the first visit of a new dentist (c2=9.31; df=1; p=0.002). The Mann-Whitney test showed that
the parents of children who returned to their GDP were more satisfied about treatment by their GDP than patients who did not return to their family dentist ($Z=3.65; p<0.001$). Furthermore, parents of those children who did not return to the family dentist were more likely to think that their GDP should have put more effort into treating the child himself than parents of patients who did return to the GDP ($Z=-2.99; p<0.003$). Boys returned to their GDP more often than girls ($c^2=3.98; df=1; p=0.046$). There were no differences in age and number of treatment sessions at SDCC, half year check-ups, number of fillings, extractions, root canal treatments and the remaining questions of the questionnaire between the two groups.

Part 2 (child still under treatment at SDCC). In this group 64.9% intended to return to their GDP, 16.0% did not and the remaining 19.1% were undecided. There was no difference between the response and non-response group with regard to the intention to return to the GDP or not. Here again, those who were undecided were excluded from the analysis.

Parents of children who intended to return to their GDP were more satisfied about treatment by their GDP than patients who did not want to return to their GDP ($Z=-2.86; p=0.004$). Parents who intended to return to their family dentist believed more often that the dentist had referred their child in time compared with the group that did not want to see the family dentist again ($Z=-2.01, p=0.045$). There were no differences in all remaining variables between the two groups.

Discussion

These two studies seem to imply that the parents’ choice to return to their referring GDP or to visit another was based on the satisfaction with treatment that had been previously provided by their GDP. This decision was not related to any of the variables pertaining to the content of the treatment at the SDCC, nor to the GDP using local analgesia during treatment. Dissatisfaction with treatment by a GDP might in general be a reason to seek another dentist. The referral to the SDCC gives an opportunity to meet another treatment or communication approach, and this may, if dissatisfaction already existed, have led to the choice for a new GDP. Treatment at SDCC itself, which is only meant to be temporary and a short-term intervention, does not seem to influence this choice.

It is intriguing that only 65% of the referred children in both groups returned to their family dentist. So it might be speculated that a SDCC is not fully integrated into the system, because after referral to another specialist, for example an orthodontist, the patient in general goes back to his/her family dentist. A lack of compliance with the referring dentist might also play a role. In a national epidemiological study the satisfaction with the GDP, assistants and the practice was graded by patients with a score of 8.5 (1 = very bad, 6 = adequate and 10 = excellent) [van Rossum, 1999]. Further research is needed if this is the case as in the group of patients in this present study. The percentage of the children, reported on here, who went to another dentist might even be an underestimate, because in the first part of the study the non-response group went to another dentist more often than the response group. Taking this into account, the percentage of children returning to the family dentist could even be lower.

The different nature of the groups in this study made it necessary to analyse them separately. In the first group (study 1, in which children finished their treatment) it was important who undertook the referral to SDCC and then decided to go back to their family dentist or not. This was contrary to the second group (study 2, in which children had just started treatment) where only the question whether their GDP referred them in time was important. This difference may have been influenced by the fact that the parents of the children who had finished treatment were a step ahead. They had to decide where to go to after treatment at SDCC whereas the parents of the children who just started treatment at the centre were being introduced to another more effective restorative treatment style.

The present findings are in line with a suggestion from an earlier study [Weerheijm et al., 1999], that parents’ reason to change to another GDP can be dissatisfaction with the treatment received before referral. It also confirms the suggestion that an explanation of the reason for referral and an early referral could probably increase the parents’ confidence in their GDP. It could also be that dental anxiety is of such importance that parents of children with a low dental anxiety level perhaps feel the urge to visit another dentist, because they believe that their child was referred unnecessarily. SDCC, however, has a strict acceptance protocol; children are referred for a specific reason and screened on their anxiety level and/or BMP.

In the first part of the study boys would more often return to their family dentist than girls. This could be related to the parent’s attitude towards their daughters. Girls often have a higher dental fear level than boys do [Milgrom et al., 1995; Raadal et al., 1995]. Thus, combined with the fact that cultural factors and social stigmas might be involved, parents might be more
likely to protect their daughters and send them to another GDP than their sons.

Finally, additional research on this subject is essential, because knowledge about parents’ experiences and expectations concerning referral to a SDCC and a quick return to their family dentist improves treatment for the patient, the GDP, as well as the centre. Ideally, a referral to a paediatric dentist has to be a natural step in the treatment of children with dental fear or BMP. Based on clinical studies, guidelines need to be developed to ensure that in the Netherlands referral of children to special care centres ensures long term continuity of case.

**Conclusion**

The decision to return to the referring family dentist or not was based on the satisfaction about the treatment previously provided by that GDP. Additionally the decision whether or not to return to the referring family dentist depended on the person who did the actual referral (first group) and on the timing of the decision to refer (second group). Since only 65% of the referred children in both groups returned to their family dentist, Special Dental Care Clinics do not seem to be fully integrated into the referral system in the Netherlands.

**References**


