

Passive Observer Instruction on Parental Satisfaction in a Dental Setting

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Purpose: To assess the effect of a single pre-operative instruction given to parents to be a passive observer on satisfaction with their child's dental visit. **Study design:** Parents of 105 healthy three to nine year-old patients presenting for their first restorative appointment were randomly assigned to the test or control group. The former received an oral instruction at the beginning of the appointment from the treating dentist to be a passive observer while the latter received a mock instruction. The dentist assessed whether the parent remained a passive observer during the visit. Parents completed a survey assessing satisfaction with their child's dental visit. **Results:** More parents were rated as passive in the test group than in the control group, 67.3% vs. 32.1%, ($P < 0.01$). However, no statistically significant difference was found in parental satisfaction between the test and the control group. **Conclusion:** Asking parents to act as passive observers may help preserve the advantages of parental presence in the operatory while eliminating many of the disadvantages. A single preoperative instruction given orally by the treating dentist to be a passive observer was effective and did not lead to a reduction in parental satisfaction.

Key words: pediatric dentistry, parents, satisfaction.

INTRODUCTION

The debate about the role parents should play in the dental office is as old as the profession. As society changes, so does the perception of that role. Although multiple studies have investigated the dynamic of dentist, parent and child, their findings differ greatly. Frankl *et al* found that a mother's presence had no negative effect on children's behavior.¹ Pfefferle *et al* confirmed that there was no significant difference in negative behavior of children with or without parents in the operatory.² Johnson and Baldwin discovered a significant relationship between a mother's anxiety and the behavior of the child regardless of the nature of the visit.³ More recently, Marzo *et al* concluded that children were significantly more cooperative without their parents present. In addition to decreased cooperation, children whose parents were present were less likely to return for further dental care.⁴

Multiple studies have evaluated parent's preference to remain in the operatory during their child's dental treatment.⁵⁻⁸ These studies, from several countries, show that parents generally want to be present for their child's dental care. Kamp as well as Shroff, *et al.* in the US, found that 66% and 78% of parents respectively, wanted to stay with their child during treatment.^{5,6} Peretz and Zadik in Israel, found 70% of parents wanted to be with their children and 65% were willing to help during treatment if necessary.⁷ Arathi and Ashwini showed in an Indian study that 78% of parents wished to stay with their child during treatment.⁸ The most common reason parents wanted to be outside of the treatment area was that they felt

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that their presence would make their child misbehave⁵. Generally, the younger the child the more often parents want to be present.^{5,8}

The perspective of pediatric dentists on parental presence has been investigated in several studies.⁹⁻¹¹ A survey of pediatric dentists by Marcum *et al* revealed that pediatric dentists who chose to exclude parents from the dental operatory felt that parental presence wasted time, disrupted the child and made the dentist uncomfortable. Practitioners who allowed parents in the operatory responded that it was a “parental right” to be present during their child’s dental visit.⁹ Casamassimo *et al*. reported that U.S. board-certified pediatric dentists believed parenting changes have occurred. These changes were believed to have negatively influenced children’s behavior, as well as having a significant effect on the way pediatric dentists practice. Despite the change in patient behavior, pediatric dentists reported using less assertive behavior management techniques.¹⁰ A survey of members of the British Society of Paediatric Dentistry by Crossley and Joshi revealed that a majority (80%) of pediatric dentists supported parental presence during treatment. Interestingly, older practitioners were more accepting of parents in the treatment area than their younger colleagues.¹¹

Several studies have looked at parental presence as it relates to parent satisfaction. Kim *et al*. found that parents were significantly more satisfied when their wish to be present or absent during their child’s treatment was fulfilled. This study suggests that it is important to include parent’s wishes in the decision process to maximize their satisfaction with their child’s dental experience.¹² In a systematic review of parental presence during medical treatment Piira *et al*. found that when comparing levels of parental satisfaction, parents who were present during their child’s painful medical procedure were either more satisfied or no different than parents who were absent.¹³

In addition to its effect on behavior, how a parent’s presence affects a child’s perception of their own dental treatment may be important when deciding to include parents in the treatment area. Cox *et al*. evaluated children’s feelings about their treatment experience using the Wong-Baker Faces Rating Scale. The authors did not find any difference in children’s responses with or without their parent’s presence. Furthermore, both the dentists and parents thought anxious children behaved better when their parent was not in the operatory.¹⁴

A short communication by Parashar suggests the role of a “silent observer” is an appropriate one for parents to play in the dental care team. He adds that the dentist should educate the parent to refrain from “coaxing or pleading” with the patient as well as to stay calm and ignore minor disruptive behavior.¹⁵ In a study by Jain *et al*. parents were asked to be silent in the dental operatory utilizing what they termed the “silent chair”. Parents were asked to remain silent either in written form or by written and oral instructions. When both forms of instruction were used, the treating dentist reminded the parent to be silent, as needed. The results showed an average of 82% compliance in this mainly English speaking population. No measure of parental satisfaction was made.¹⁶

The goal of the present study was to test the effectiveness of a single pre-operative instruction given parents to remain passive observers during dental treatment and to measure its effect on parental satisfaction.

MATERIALS AND METHOD

The protocol for this research was approved by the Institutional Review Board of Nicklaus Children’s Hospital (NCH), Miami, Florida, USA. All participants were randomly selected from parent-patient dyads of record at the NCH Pediatric Dental Clinic. Included patients were children between 3-9 years of age and classified by the American Society of Anesthesiologists (ASA) as Class I or II. No discrimination was made for sex, race or ethnic origin. Participants’ eligibility was determined during their initial dental appointment. To qualify for inclusion, patients needed at least one quadrant of regularly scheduled restorative dental treatment with local anesthesia. Qualifying restorative treatment may have included one or multiple teeth requiring composite or glass-ionomer restorations, or stainless-steel crowns with or without pulpal treatment; sealants, extractions and space-maintainers may have been done if called for in the quadrant receiving restorative treatment. Parental consent was obtained after identifying a patient who met the selection criteria.

Parents were randomly divided into test or control group using a coin flip. Before the procedure began, parents in the test group were given an instruction to remain as a passive observer during their child’s dental treatment. The following was said to the parent in either English or Spanish by the treating dentist (HR):

“We always like parents to support their children by being here. We ask parents to remain a passive observer while the dentist treats their child. A passive observer parent stays in their seat and watches their child and the dental procedure. It is best if you help us by letting us explain things to your child using easy-to-understand, non-threatening and age appropriate language. The passive observer parent plays an important role by allowing the dental staff to develop a positive relationship with your child and focus our attention on their treatment while minimizing distractions. We like to have the parents in the room with their children during treatment.”

In order to eliminate the potential for any preoperative statement to have an effect, parents in the control group received a similar verbal interaction, a mock instruction, but it did not include the request to be a passive observer:

“We always like parents to support their children by being here. We like to have the parents in the room with their children during the treatment.”

Treatment for all children proceeded in the usual and customary manner utilizing nitrous oxide/oxygen analgesia, local anesthesia, and placement of an Isolite isolation device (Isolite Corporation, Berwyn, TX). Nitrous oxide/oxygen analgesia was routinely used for dental treatment. After the procedure, the child’s parent was asked to complete a 14-question survey, which was available both in English and Spanish. The questionnaire was both distributed and collected by the lead author (HR). Six questions were related to the socio-demographics of the study’s population. Six questions explored parental satisfaction with various aspects of the dental visit utilizing a Likert scale. Five questions were asked parents in an effort to eliminate the clinic environment and personnel as confounding factors of satisfaction. The sixth question asked the

parent to evaluate their overall satisfaction with their child’s dental experience. The last two questions of the survey were related to anxiety. The first was the validated Dental Anxiety Question (DAQ) which measures the child’s anxiety by assessing their parent’s perception.¹⁷⁻¹⁹ The second question asked parents to rate their own level of anxiety. In addition, the child was asked to rate their overall experience using the Wong-Baker Faces Rating Scale. Immediately after treatment the dentist evaluated whether the parent had remained a passive observer. A parent was not considered a passive observer if they left their chair, gave instructions to the child, or asked questions of the dentist or child. The same dentist (HR) treated all patients.

The Statistical Package for Social Sciences (SPSS 19® IBM, Chicago, IL, USA) was used in order to organize, validate and analyze the collected data. Indicators of central tendency and dispersion: medians, means (M), frequencies, and chi-square tests were performed to detect significant differences between selected groups. A level of significance of 0.05 was selected for all tests.

RESULTS

Data were collected from 105 healthy child–parent dyads, 53 in the control group and 52 in the test group. The patients’ mean age was 6.4 years and 51% were female. Most self-described as Hispanic/Latino (85%) and African-American (10%), the remainder (5%) included Non- Hispanic Caucasians, Native Americans, and others. Half of the participants reported that their family income

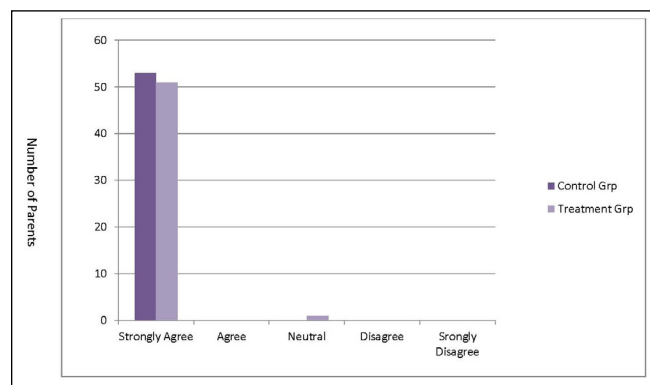
was below \$30,000 a year, although many respondents opted not to disclose this information.

The five questions on satisfaction dealing with administration and the dental environment showed that parents in both the test and control groups were highly satisfied with their experience at NCH Dental Department. When asked to rate the question: “I am satisfied with my child’s dental experience today” all but one parent answered that they “strongly agreed”. One parent, in the test group, answered that they were “neutral”. No significant differences were found between the groups (Figure 1).

No significant differences were found between the test and control groups in the two questions asked of the parents about anxiety. In response to the question “I felt anxious during my child’s treatment today” 36% of parents responded that they agreed or strongly agreed (Figure 2). However, when responding to the Dental Anxiety Question (DAQ), only 12% of parents placed their child in the two highest fear categories, “yes, a lot” or “yes”(Figure 3). There was a significant difference in the dentist’s rating of parent’s remaining a passive observer, 67.3% in the test group versus 32.1% in the control group (P<0.01) (Figure 4). No differences were found between the groups when children rated their overall dental experience using the Wong-Baker Faces Scale.

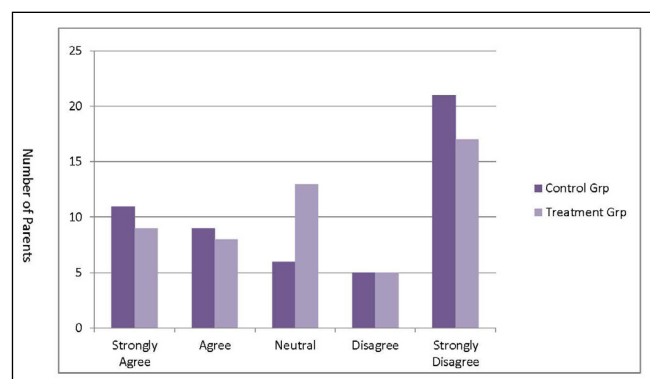
Parents’ compliance with the dentist’s instruction to be a passive observer was analyzed by age of their children. Ages of children were stratified into two subgroups, 3 – 6 and 7 – 9 years. The number

Figure 1. Parent’s Overall Satisfaction with Their Child’s Dental Treatment



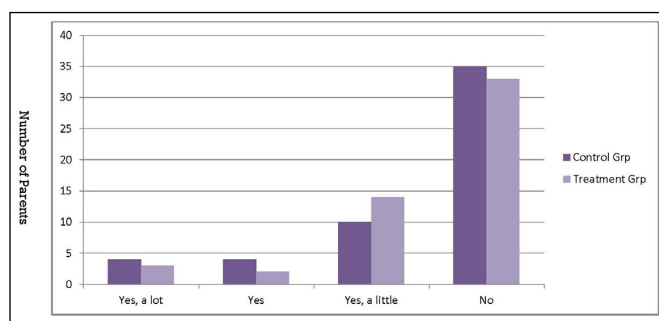
Parents asked: “I am satisfied with my child’s dental experience today?”

Figure 2. Parent’s Anxiety with Their Child’s Dental Treatment



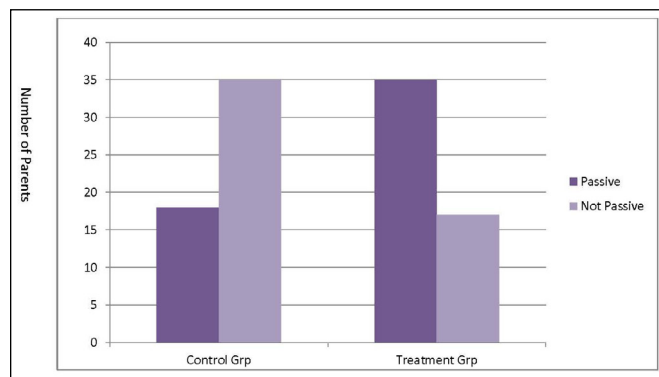
Parents asked: “I felt anxious during my child’s treatment today.”

Figure 3. Dental Anxiety Question (DAQ) for children



Parents asked: “Do you think your child is afraid of going to the dentist?”

Figure 4. Treating Dentist’s Evaluation of Parents Remaining Passive during Operative Procedure



of children in each group was similar. Parental compliance with the dentist request to be a passive observer was greater in the older subgroup, (59.6%) than in the younger group (41.5%). However, this difference was not statistically significant (chi-square = 3.409, p=0.065) (Table 1).

The effect of parental age on compliance to be a passive observer and the child's dental anxiety was investigated. Parents were grouped into two subgroups, under 35 and over 35 years of age. There was no significant difference between the two groups (Fisher's test p=0.54). Even when parents' age was divided into five subgroups there was no significant difference in compliance (Fisher's test p=0.78). Parents most often answered that their child had no dental anxiety across all of the 5 parental age groups (Table 2).

Table 1. Parent's compliance by age of children

Age of Child	Total Number of Participants	Percent of Total Participants	Number of Non-compliant Parents	Number of Compliant Parents	Percent of Compliant Parents
3	6	5.7%	4	2	33%
4	10	9.5%	5	5	50%
5	17	16.2%	10	7	41%
6	20	19.0%	12	8	40%
Subgroup 3-6	53	50.5%	31	22	41.5%
7	15	14.3%	6	9	60%
8	23	21.9%	10	13	57%
9	14	13.3%	5	9	64%
Subgroup 7-9	52	49.5%	21	31	59.5%

Table 2. Relationships between Parental Age, Child Age, DAQ and Compliance

	Age In Years			Dental Anxiety Question (DAQ)			Compliance	
	Age of Parent	Number of Subjects	Mean Age of Children	No	Yes, a Little	Yes, a Lot	Yes	No
Subgroup 1	<24	8	5.4	5	3	0	3	5
	24-34	44	6.4	29	10	2	23	21
	35-44	45	6.6	28	10	3	4	23
Subgroup 2	44-54	7	7.2	5	1	1	0	3
	>55	1	5	1	0	0	0	1

DISCUSSION

This study attempts to test what may seem as a compromise: allowing parents to stay in the dental operatory but instructing them to be passive observers. Providing a preoperative instruction allows parents an opportunity to play a positive role in the dental team. Pediatric dentists may shy away from this idea for a number of reasons. Some dentists may fear that they will be viewed as coercive and thus reduce parental satisfaction; the findings of this study suggest that is not the case. Parental satisfaction with their child's operative dental visit was the same whether a parent received a pre-operative instruction to remain a passive observer or not. It may be speculated that giving parents appropriate expectations and providing parameters for their behavior in a non-confrontational setting is more desirable than confronting parents after they have behaved in an undesirable manner. The treatment planning stage or prior to the initiation of treatment may be appropriate opportunities to discuss all aspects of treatment including the dentist's behavioral expectations for both the child and the parent.

In Johnson and Baldwin's classic paper on the effect of maternal presence in the dental operatory, negative behavior is well correlated with maternal anxiety.³ To gauge the child's fear in the present study the Dental Anxiety Question (DAQ) was utilized. This question, which has been validated in previous studies, assesses the child's fear through a single question asked of their parents.^{17,18,19} Parents were asked about their own anxiety in the same questionnaire. Interestingly, parents reported that their anxiety was in the highest two categories of fear three times more often than they reported for their children's perceived dental fear. Since negative behavior is well correlated with the presence of an anxious parent,³ putting parents at ease is important if the parent is to stay with their child during treatment. Encouraging parents to assume a passive role may have the effect of relieving them of what they may perceive as their responsibility to control their child's behavior. Further research would be necessary to address this idea. It was speculated that parental age may have an effect on both the child's anxiety as well as the parent's ability to remain a passive observer. In this population no relationship could be found.

It was of interest to know how child and parental anxiety affected satisfaction when the pre-operative instruction to be a passive observer was given. This question could not be answered in this study due to a high rate of satisfaction in both the test and control groups. Similarly, no significant differences were found in the test and control groups of children in their response to the questions of their overall satisfaction with their dental visit as measured with the Wong-Baker Faces Scale.

While this study was inspired by Jain *et al*¹⁶ there were a number of differences that may have contributed to a variance in parental compliance. In the present study only the treating dentist gave the pre-operative instruction to be a passive observer and it was not reinforced during treatment. It was felt that reinforcing a request to be silent, as it was done in Jain *et al.*, did not seem to encourage cooperation between the dentist and parent. In the present study, the same dentist who treated the child was the only evaluator of the parent's compliance, which may have introduced a degree of bias. Furthermore, several factors unique to this study may limit the result to be generalized to other populations. Our patient population was primarily low income, Hispanic, and Spanish speaking. Despite

these substantial differences the two studies showed high compliance with instructions intended to influence parental behavior. Further research may be warranted to assess whether the same results would be seen in other populations and whether multiple instructions during treatment may give better results in compliance without affecting satisfaction. In addition, the effect on productivity and the dentist's satisfaction are still unanswered.

The trend toward parental presence in the dental operator has become a reality. Dentists who treat children are facing the challenges of an ever-changing society and evolving parenting styles. Demand for parents to be included in the dental setting as well as changing expectations have led the profession to adapt. Several studies have documented how these changes have evolved.^{4,9,10} The acceptance of these changes comes with challenges to direct communication with the child as well as the need to modify behavior management techniques.⁴ Similar to previous studies, this study found that parents may be amenable to a pre-operative discussion of the dentist's expectations of parental behavior during their child's dental treatment. Assigning appropriate roles to all members of the dental team, including parents, has the potential to provide a more comfortable overall experience for everyone. A passive observer parent may help dentist-patient communication, reduce conflicting messages, decrease distractions and increase productivity with a potential to make an improvement in overall patient care.

CONCLUSIONS

From this study the following conclusions can be made.

1. A single pre-operative instruction to parents to be a passive observer was effective.
2. A single pre-operative instruction to parents to be a passive observer did not affect parents' satisfaction with their child's dental care.

REFERENCES

1. Frankl SN, Shiere FR, Fogels HR. Should the parent remain with the child in the dental operator? *J Dent Child*; 36: 150-163. 1962.
2. Pfefferle JC, Machen JB, Fields HW, Posnick WR. Child behavior in the dental setting relative to parental presence. *Pediatr Dent*; 4(4): 311-316. 1982.
3. Johnson R, Baldwin DC. Maternal anxiety and child behavior. *ASDC J Dent Child*; 36 (2): 87-92. 1969.
4. Marzo G, Campanella V, Albani F, and Gallusi G. Psychological aspects in paediatric dentistry: parental presence. *Eur J Paediatr Dent*; 4: 177-180. 2003.
5. Kamp A. Parent child separation during dental care: a survey of parent's preference. *Pediatr Dent*; 14: 231-35. 1992.
6. Shroff S, Hughes C, Mobley C. Attitudes and preferences of parents about being present in the dental operator. *Pediatr Dent*; Jan-Feb;37(1):51-5. 2015.
7. Peretz B, Zadik D. Attitudes of parents towards their presence in the operator during dental treatments to their children. *J Clin Pediatr Dent*; Fall;23(1):27-30. 1998.
8. Arathi R, Ashwini R. Parental presence in the dental operator-parent's point of view. *J Indian Soc Pedod Prev Dent*; Dec;17(4):150-5. 1999.
9. Marcum BK, Turner C, Courts FJ. Paediatric dentists' attitudes regarding parental presence during dental procedures. *Pediatr Dent*; 17 (7): 432-436. 1995.
10. Casamassimo PS, Wilson S, Gross L. Effects of changing U.S. parenting styles on dental practice: perceptions of diplomats of the American board of pediatric dentistry. *Pediatr Dent*; 24(1):18-22. 2002.
11. Crossley ML, Joshi G. An investigation of paediatric dentists' attitudes towards parental accompaniment and behavioural management techniques in the UK. *Br Dent J*; 192(9): 517-52. 2002.
12. Kim J, Boynton J, Inglehart M. Parents' presence in the operator during their child's dental visit: a person-environmental fit analysis of parents' responses. *Pediatr Dent*; 34 (5): 407-413. 2012.
13. Piira T, Sugiura T, Champion GD, Donnelly N, Cole ASJ. The role of parental presence in the context of children's medical procedures: a systematic review. *Child Care Health Dev*; 31 (2) 233-243. 2005
14. Cox ICJ, Krikken JB, Veerkamp JSJ. Influence of parental presence on the child's perception of, and behavior, during dental treatment. *Eur Arch Paediatr Dent*; 12(4):200-204. 2011.
15. Parashar V. Parental presence during their child's dental treatment. *J Oral Health Comm Dent*; 4(3):52-54. 2010.
16. Jain C, Mathu-Muju KR, Nash DA, Bush HM, Li HF, Nash PP. Parental compliance with instructions to remain silent in the dental operator. *Pediatr Dent*; 35(1):47-51. .
17. Neverlien PO. Assessment of a single-item dental anxiety question. *Acta Odontol Scand*; 48 (6): 365-369. 1990.
18. Oliveira MMT, Colares V. The relationship between dental anxiety and dental pain in children aged 18 to 59 months: a study in Recife, Pernambuco State, Brazil. *Cad Saude Pública*; 25 (4): 743-750. 2009.
19. Torriani D, Ferro R, Bonow M, Santos I, Matijasevich A, Barros A, Demarco F, Peres K. Dental caries is associated with dental fear in childhood: findings from a birth cohort study. *Caries Res*; 48: 263-270. 2014,