

Parental Perception toward Dental Sedation in Pediatric Patients

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Abstract: ***Aim:** To evaluate parental perception towards sedation through a pre-operative survey. The survey comprised of three parts: knowledge, beliefs and attitude. In addition, to assess any significant association between demographic data and pre-operative questionnaire. **Methods:** One hundred and one parents of children underwent dental treatment under sedation at University of Maryland responded to the pre-operative questionnaire in clinic prior to dental sedation procedure. **Results:** Most of the parents were the only one accompanying person with the child undergoing dental sedation (57.43%). Fisher's exact test was significant (0.006) in parents who thought that dental sedation was of a low risk and had education of college or higher. **Conclusion:** Less than half of parents brought an additional responsible person with them to the child's dental sedation appointment, suggestive of inconsistent compliance with the pre-operative instructions at screening appointments. Parents with higher education (postgraduate) viewed dental sedation for children as a safe approach.*

Keywords: Parental knowledge, Parental beliefs, Parental attitude, Dental sedation, Pediatric patients

1. Introduction

Parental acceptance for various basic and advanced behavior guidance techniques has changed over the years and can also vary significantly among different populations. Parental acceptance towards sedation was rated lower than other behavior management technique as reported in studies by other investigators (Fields et al., 1984; Murphy et al., 1984). Field et al., found that general anesthesia and sedation were consistently unacceptable except when used for emergency extraction (Fields et al., 1984).

As reported by Murphy et al., Techniques employing drugs (e.g. general anesthesia or sedation) were rated as least acceptable, only acceptable if it is for completing anxiety-provoking and/or necessary dental procedures (Murphy et al., 1984).

EL Badrawy and Riekman thought that parents would generally agree when the option of sedation is recommended but believed that parental reaction to sedation has not been explored and there was little information about it in the literature. Their questionnaire was designed to assess the treatment techniques from parents' perspective (EL Badrawy & Riekman, 1984).

Parents overtime are certainly tending to be more comfortable with the idea of having their child treated under general anesthesia or sedation as reported by Eaton et al (Eaton et al., 2005).

In the process of making decisions towards dental treatment, parents are integral part and thus perception towards pharmacological intervention in dental procedures is of paramount importance. An understanding of the difference between the views of parents and professionals

is essential for today's dental practice (Murphy et al., 1984).

From knowledge point of view, surprisingly White et al., found that previous sedation experience was not correlated with increased knowledge of parents and this highlighted the importance of re-educating parents regarding treatment expectations when sedation is planned for a child, even if the child has had a previous sedation experience (White et al., 2016).

Re-visiting this issue will lead to a greater body of knowledge thus better dentist-parent communication, better parent education and ultimately, better patient care (Eaton et al., 2005). Additionally, perceptions help determine the acceptability of behavior management techniques and perceptions of acceptability have been one of the most important factors influencing dental school curriculum changes (Allen et al., 1995).

The purpose of this study was to assess parental perception towards dental sedation. The objective was to assess the knowledge, attitude and beliefs of parents regarding oral and intravenous sedation. Moreover, the study aimed to evaluate any significant association between demographic data and components of pre-operative questionnaire.

2. Materials and Methods

This study was approved by the University of Maryland Institutional Review Board, Baltimore, MD, USA. Subjects were recruited were English speaking and could be from any income group, or ethnicity. One hundred and one participants were obtained for dental treatment under both intravenous and oral sedation. The research project

was explained to the parent, and then the parent was enrolled following verbal consent.

Inclusion criteria

- Any parent of a child treated for dental procedure under sedation either intravenous or oral who consents for participation.
- Child underwent sedation (patient) between three to ten years old.
- Patient did not have systemic disease or in ASA I/II categories (American Society of Anesthesiologist).

Exclusion criteria

- Parent did not consent or refused to participate.
- Patient had systemic disease (ASA III/IV).

Instrument

This study used a pre-operative questionnaire which has a demographic part included that asked parents for age, gender, number of children, the age of sedated child, number of accompanying persons with sedated child, level of education, county, and duration of time to reach the university of Maryland.

Then questionnaire was divided into three parts each with approximately four questions asked about knowledge, attitude, and beliefs towards sedation respectively. The participants were allowed to pick one answer or all that applied in the form of multiple choices, fill in blank and yes or no answers. The questionnaire was developed by the authors and was pretested to ensure that respondents could understand the questions and respond in a consistent manner.

Procedure:

Potential participants were selected according to the schedule of appointments for either intravenous or oral sedation, were asked to participate voluntarily and verbally consented. Patients were scheduled either for Midazolam (short dental procedure) or Meperidine/Hydroxyzine combination (long dental procedure) as oral sedation or Ketamine/Propofol combination as intravenous sedation. Then the pre-operative questionnaire with total of twenty questions was given to the parent before the procedure of sedation, while they were waiting in clinic.

Data were analyzed using descriptive statistics and chi-square analysis for the information focused on relationships between demographic data and the variables of pre-operative (knowledge, attitude, belief). Fisher's exact probability test was conducted when the number of items in the groups was too small for the chi-square. All statistical analysis was done with the STATA (version 14.2), and the level of significance was set at $P < 0.05$.

3.Results

Demographic data

The majority of parents were between the ages of 31-40 years (51.49%), female (83.17%), and most parents were having a total of two children (36.63%). Most of the children, who were about to receive dental sedation, were between 3-4 years (31.68%) and 5-6 years (30.69%). Most of parents were the only one accompanying person with the child undergoing dental sedation (57.43%). Parents' education was mostly of High school or General educational development (40.00%), living in Baltimore city (71.29%) and it took them about 10-20 minutes to reach University of Maryland, Dental school (28.71%). The number of oral sedation cases was 65 (64.00%) and intravenous cases were 36 (35.64%) (**Appendix 1**).

One hundred and one parents answered the pre-operative questionnaire; responses were reported for the three categories of knowledge, attitude and belief.

Pre-operative questionnaire (knowledge, attitude and belief)

For the "Knowledge" category of pre-operative questionnaire, majority of parents first learned about dental sedation through physician, dentist or health care provider (84.16%), and were familiar with oral sedation rather than intravenous sedation (58.42%), but only few were familiar with the medication used through the procedure of dental sedation (34.65%). Forty-six parents picked "prolonged sleepiness" as a side effect a child might have after receiving dental care under sedation (45.54%).

In the "Attitude" category of pre-operative questionnaire, forty-three parents (42.57%) perceived dental sedation as a "low risk" procedure, and picked "nothing, they already knew it" as a response to how they felt when they were told that their child needed to be treated under dental sedation (37.62%). Ninety-five parents (94.06%) would recommend dental sedation to their relatives and friends. Parents made their decision of having their children to be treated under dental sedation after having recommendation from the dentist (78.22%).

In the "Belief" category of pre-operative questionnaire, seventy-six parents believed that a child with good behavior with the dentist may still need dental sedation (75.25%) and said: "Yes" to providing dental sedation more in dental offices (84.16%).

Most parents would pay about \$ 400 for dental sedation, if their children were not covered by insurance (64.36%), and almost all parents believed that the general public should have more awareness regarding dental sedation (97.03%).

Relation between Demographic Data and Knowledge

Testing demographic data with knowledge category of pre-operative questionnaire, Fisher's exact test was

significant (0.031) in parents who first learned about dental sedation through family, friends, neighbors or colleagues and their ages; they were more likely to be in the thirty-one years and older age group $X^2(1, N=101) = 5.12, P=0.024$.

There were two significant relationships between parents' familiarity with intravenous sedation and demographic variables: parental education and child's age. A chi-square test of independence examined the relation between parents who learned about intravenous sedation and their level of education, the relation between these variables was significant, $X^2(1, N=101) = 6.25, P=0.044$ (Appendix 2).

A significant difference was found between parents who answered "headache and vomiting" as a side effect a child might have after dental sedation, and their level of education $X^2(1, N=101) = 12.531, P=0.002$, Fisher's exact=0.002, and $X^2(1, N=101) = 7.54, P=0.023$, respectively (Appendix 2).

Additionally, those parents who picked "decreased activity and prolonged sleepiness", had significant relationship with their level of education, which is some college or higher, $X^2(1, N=101) = 9.81, P=0.007$, and $X^2(1, N=101) = 12.75, P=0.002$, respectively (Appendix 2).

On the other hand, parents who reported "don't know" as an answer to side effects of dental sedation a child might have following the procedure, were more likely to have high school or general educational development level of education, $X^2(1, N=101) = 19.1, P=0.000$, Fisher's exact=0.000 (Appendix 2).

Parents who learned about intravenous dental sedation, their children were sedated of age older than six years old, $X^2(1, N=101) = 14.72, P=0.000$, Fisher's exact=0.000.

Chi-square test examined the relation between parental familiarity with sedation medications and the total number of children each parent has, those who had three or more children were not familiar with dental sedation medication, $X^2(1, N=101) = 8.766, P=0.012$.

Most parents who picked "headache" as a side effect a child might have after dental sedation, their children were sedated of age older than six years old, $X^2(1, N=101) = 5.75, P=0.016$.

Relation between Demographic Data and Attitude

Testing demographic data with attitude category of pre-operative questionnaire, two significant relations were found. First finding, parents who discussed the decision of having their child treated under dental sedation with family, friends and their ages; less likely of 31 years or older, $X^2(1, N=101) = 5.00, P=0.025$. Table 1.1 (Appendix 3).

The second finding, Fisher's exact test was significant (0.006) in parents who thought that dental sedation was of a low risk and had education of college or more, $X^2(1,$

$N=101) = 24.73, P=0.000$, Fisher's exact=0.006. Table 1.2 (Appendix 3).

Relation between Demographic Data and Belief

Testing demographic data with belief category of pre-operative questionnaire, three significant relations were found. First finding, Fisher's exact test was significant (0.020) when examining the relation between parents who had one child and paying \$ 400 for dental sedation when needed if insurance is not covering or not available, $X^2(1, N=101) = 7.97, P=0.019$. (Appendix 4).

Second finding, parents of children underwent intravenous sedation, were able to pay \$ 400 if insurance is not covering dental sedation, $X^2(1, N=101) = 6.39, P=0.011$.

Moreover, parents would pay \$ 400 if insurance is not covering or not available, when their children were of age six years or older, $X^2(1, N=101) = 5.65, P=0.017$. (Appendix 4).

4. Discussion

The history of parental acceptance and attitude toward dental sedation especially oral premedication or formerly called conscious sedation along with general anesthesia go back in time to 1984 and 1991, when they were rated the lowest. However, the acceptability for dental sedation (pharmacologic approach) has increased over the past years (Patel et al., 2016). The body of literature had many studies assessing the attitude of parents toward advance behavior management techniques, but few were targeting solely dental sedation including oral and intravenous routes.

In the present study, the purpose was to assess knowledge, attitude, and belief in parents toward dental sedation.

5. Research subjects

One hundred and one parents answered the pre-operative questionnaire on the day of dental sedation procedure, after being informed about the procedure at the screening (initial visit) appointment by one of pediatric dentistry residents at the department of pediatric dentistry at the University of Maryland. Testing demographic data with pre-operative variables was done and tabulated.

Almost half of the subjects (57.43%) comprised of only one parent/guardian accompanied the child receiving dental sedation to the appointment. This is a critical issue needs to be revisited and emphasized with parents, in screening appointment and before the dental sedation appointment when instructions given over the phone. As per Ritwik et al., if additional responsible adult is not accompanying the child, then guardian driving the car will be unable to reposition the child's head and maintain a patent airway (Ritwik et al., 2013). This is not uncommon finding, Dosani et al., reported that 32% children were accompanied by only one adult and 63% of these children slept on the way home monitored only by the driver (Dosani et al., 2014). AAPD highly recommends the

consideration for a longer period of observation if the responsible person's ability to observe the child is limited (e.g., only one adult who also has to drive) (AAPD, 2015).

Subjects in this research when asked about where they first learned about dental sedation, majority answered that it was through physician, dentist or health care provider. Interestingly, few answered through newspaper, radio or TV (4.95%) and those who answered internet were about six parents (5.94%) and no one answered billboards (0%) and only one answered brochures, posters and other printed materials (0.99%). Sheller described in her conference paper one of the difficulties to reach an agreement on a specific treatment with parents was the influence of marketing, media and internet research (Barbara Sheller, 2004). It is clear that Internet and media had no or low influence on knowledge of the present study's subjects, however it could be because of the small sample size. On the other hand, White et al, had only 24.6% of the two hundred fifty-six subjects reported seeing media coverage regarding dental sedation, and very few reported it having any influence on their decision about choosing sedation (White et al., 2016).

6.Relation between Demographic Data and Knowledge

When Testing demographic data against knowledge category of pre-operative questionnaire, Fisher's exact test was significant (.031) in parents who first learnt about dental sedation through family, friends, neighbors or colleagues and their ages; they were more likely to be in their thirty-one years and older age group. This is in part disagreement to many studies, which found no relation between parental age and parental acceptability and attitude. Murphy et al., did not have a significant relationship between age of parents and approval of management technique. Moreover, Boka et al., find no relation between parental age and acceptance of all behavior management technique. Percentage of parents who had media coverage awareness about sedation in White et al., study was about only 14.5% and not aware about sedation was 73.6% (White et al., 2016). Possibly parents who were not aware about sedation through media and internet, not necessarily lacking the information but probably gained knowledge through different sources or simply did not have any pre-existing knowledge about it.

A statistical significance association was found between those parents who learned about intravenous sedation previously and their level of education ($P=.044$). Murphy et al, did not find correlation between educational level and approval of management techniques but found significant relationship between higher socioeconomic status and the understanding of the increased risk that is involved with general anesthesia (Murphy et al., 1984). In this study, we did not address the level of socioeconomic status, income and occupation were not asked; it is possible to assume that high socioeconomic status is equivalent to high education because it is often measured as a combination of education, income and occupation. Most of the patients are of Medicaid and Medical assistance insurance in the present study.

Moreover, Parents who learned about intravenous dental sedation, their children were sedated of age older than six years old, $X^2(1, N=101) = 14.72, P=0.000$, Fisher's exact=.000. It could be explained that parents before actual appointment of dental sedation they go through screening and patient get evaluated accordingly. In the present study, no questions were asked about behavioral disorder or disability, this could be an additional factor to why deep sedation or intravenous suggested at the first place. Patients who had history of failed oral sedation or as per request of parent to have intravenous sedation rather than oral are some of the assumptions to this finding.

Chi-square test examined the relation between parental familiarity with sedation medications and the total number of children each parent has, those who had three or more children were not familiar with dental sedation medication, $X^2(1, N=101) = 8.766, P=0.012$. In contrary to other studies that used different methodology to test parental attitude and acceptability (toward all behavior management techniques including sedation) and cross-tabulated it with number of children in the family found no association between the two variables (Pretez et al., 2013; Elango et al., 2012).

One explanation could be that parents with more than one child tend to have more responsibilities distracting them including but not limited to socioeconomic status, educational level, parental age and psychological characteristics. In one study parental happiness trajectories were studied before and after the birth of a child using large British and German longitudinal data set. One of their aims was whether number of children would influence well-being or happiness of parents. Potential reason suggested was happiness impact of anticipating having children get attenuated with parity, being highest for the first, lower for the second, and non-positive for the third child (Mikko Myrskylä & Rachel Margolis, 2012).

When Parents answered, "headache and vomiting" as a side effect a child might have after dental sedation, there was significant relationship with their level of education, Fisher's exact=0.002, and $P=0.023$, respectively. Additionally, those parents who picked "decreased activity and prolonged sleepiness", showed significant relationship with their level of education, which was some college or higher ($P=0.007$, and $P=0.002$), respectively. In this study, no previous experience has been explored or asked in the pre-operative questionnaire, which could be an explanation of the relationship between possible side effect of sedation picked by parents and their educational level.

However, White et al, found that previous sedation experience was not correlated with increased knowledge of many of the aspects of sedation, especially those instructions before sedation appointment which include but limited to NPO and returning to school (White et al., 2016).

Parents who picked "headache" as a side effect a child might have after dental sedation, their children were

sedated of age older than six years ($P=0.016$). Parents who had the knowledge that the possible side effect that might happen to their children of age six and older following dental sedation procedure would be headache. This could be attributed to the fact that one third of children at least seven years of age and one half of adolescents at least 15 years of age have headaches (Donald W.Lewis, 2002). Because headaches are common in children and adolescents, expecting them as a potential side effect following any medical or dental procedure is not uncommon, especially in this age group who could differentiate pain and describe it.

On the other hand, parents who reported “don’t know” as an answer to side effects of dental sedation a child might have following the procedure, were more likely to have high school or general educational development level of education, Fisher’s exact=0.000. This finding is in agreement with White et al, study, reported that those parents who were young and of low education were more likely to select “not sure” as a response (White et al., 2016).

7.Relation between Demographic Data and Attitude

Testing demographic data with attitude category of pre-operative questionnaire, Fisher’s exact test was significant (0.006) in parents who thought that dental sedation was of a low risk and had education of college or more. This finding is in agreement with White et al, study, although not significant but most of parents who viewed oral sedation as “very safe and safe” were of college or professional degree educational level (White et al., 2016). Other study suggested that contemporary parents as opposed to parents in past decades might be more likely have had personal or family experience with outpatient general anesthesia. In addition, they may also more likely encountered pharmaceuticals marketing or seen surgical cases under general anesthesia on television. Dental treatment under general anesthesia or sedation may be perceived as less severe or risky to these parents (Eaton et al.,2005).

Significant relation was found between parents who discussed the decision of having their child treated under dental sedation with family, friends and their ages; less likely of 31 years or older ($p=0.025$). According to Grembowski et al, the evidence indicates that clinical decision-making is a social process that includes the dentist, the patient, sometimes family members and insurers, as well. Anxiety could be the reason lying behind having other people to participate in reaching a decision.

8.Relation between Demographic Data and Belief

Fisher’s exact test was significant when examining the relation between parents who had one child were willing to pay \$400 for dental sedation if insurance is not covering or not available, parents of children older than six years old were willing to pay as well same amount if

insurance is not covering the service ($P=0.020$, $P=0.017$) respectively. For the pediatric patients being the only child, parents tend to be overprotective and less likely to be aggressive in decision-making and setting limits. This suggesting that parents would be inclined toward pharmacological approaches in treatment, which would make their children less receptive to pain or discomfort. According to Patel et al, parents may perceive oral premedication (sedation) and general anesthesia to be less risky, more cost effective, more comfortable for their child and convenient than in the past; which led to a rise in acceptability rate (Patel et al., 2016). Moreover, parents of children who undergone intravenous sedation, would be able to pay \$ 400 if insurance is not covering dental sedation, ($P=0.011$). Paying \$400 “out of pocket” if insurance not covering the expense in the present study was in disagreement with the Patel et al study, they found parents were able to pay up to \$200 per visit for oral premedication but not \$400 (Patel et al., 2016). Due to the more complexity and affectivity of intravenous sedation procedure in analgesia and amnesia, especially if oral sedation was not effective in case of previous experience, parents will be more willing to pay out of pocket.

9.Limitations

- The cohort of participants in this questionnaire was regional, self-selected, English-speaking and might not be representative of different cultures and geographic locations.
- This study did not address socioeconomic status, previous dental sedation experience. Additionally, did not investigate if developmental delay or behavioral disorder/disability was present in patients.
- Small sample size; patient could get sedated multiple times, so we could only survey their parents once.

10. Conclusion and Clinical Significance

- Based on this study’s results, the following conclusions can be made:
 1. Less than half of all the parents brought an additional responsible person with them to the child’s dental sedation appointment, suggestive of inconsistent compliance with the pre-operative instructions.
 2. There was significant association between parental pre-existing knowledge about intravenous sedation and their higher educational level.
 3. Parents of high education (post-graduate) viewed dental sedation for children as a safe approach.
 4. Parents reported no side effects or did not know about side effects post-sedation were mostly of high school level of education.
 5. Parents younger than thirty years relied more on their family, friends, and/or colleagues for decision making regarding dental sedation as a suggested advanced behavior guidance technique.

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Appendix 1

Demographic characteristics of the survey group	
Characteristic	% of respondents (N=101)
<i>Parent's age</i>	
<ul style="list-style-type: none"> • <30 years • 31-40 years • 41-50 years • >50 years 	<ul style="list-style-type: none"> • 34 (33.66%) • 52 (51.49%) • 12 (11.88%) • 3 (2.97%)
<i>Parent's gender</i>	
<ul style="list-style-type: none"> • Male • Female 	<ul style="list-style-type: none"> • 17 (16.83%) • 84 (83.17%)
<i>Number of children</i>	
<ul style="list-style-type: none"> • 1 • 2 • 3 • 4 • 5 or more 	<ul style="list-style-type: none"> • 20 (19.80%) • 37 (36.63%) • 21 (20.79%) • 14 (13.86%) • 9 (8.91%)
<i>Age of child receiving sedation</i>	
<ul style="list-style-type: none"> • 3-4 years • 5-6 years • 6-7 years • 7-8 years • 9-10 years 	<ul style="list-style-type: none"> • 32 (31.68%) • 31 (30.69%) • 6 (5.94%) • 17 (16.83%) • 15 (14.85%)
<i>The only person accompanying the child</i>	
<ul style="list-style-type: none"> • Yes • No 	<ul style="list-style-type: none"> • 58 (57.43%) • 43 (42.57%)
<i>Educational level</i>	
<ul style="list-style-type: none"> • Elementary • High school/GED • Some college • Finished college/more 	<ul style="list-style-type: none"> • 5 (5.00%) • 40 (40.00%) • 32 (32.00%) • 23 (23.00%)
<i>County</i>	
<ul style="list-style-type: none"> • Baltimore city • Out of Baltimore city 	<ul style="list-style-type: none"> • 72 (71.29%) • 29(28.71%)
<i>Traveling time to reach UMB, Dental school</i>	
<ul style="list-style-type: none"> • <10 min • 10-20 min • 21-30 min • 31-40 min • >40 min 	<ul style="list-style-type: none"> • 11 (10.89%) • 29 (28.71%) • 24 (23.76%) • 19 (18.81%) • 18 (17.82%)

GED: General educational developmental

UMB: University of Maryland, Baltimore

Appendix 2(Relation between Demographic data and Knowledge)

Knowledge	Parental education*			P
	1	2	3	
Knowledge physician				
No	10(22.22)	2(6.25)	3(13.04)	0.147
Yes	35(77.78)	30(93.75)	20(86.96)	
Knowledge family				
No	37(82.22)	30(93.75)	19(82.61)	0.309
Yes	8(17.78)	2(6.25)	4(17.39)	
Familiar with oral sedation				
No	22(48.89)	9(28.13)	10(43.48)	0.182
Yes	23(51.11)	23(71.88)	13(56.52)	
Familiar with IV				
No	30(66.67)	14(43.75)	9(39.13)	0.044
Yes	15(33.33)	18(56.25)	14(60.87)	
Don't know sedation				
No	34(75.56)	29(90.63)	19(82.61)	0.236
Yes	11(24.44)	3(9.38)	4(17.39)	
Are you familiar with meds				
No	29(64.44)	20(62.50)	16(69.57)	0.859
Yes	16(35.56)	12(37.50)	7(30.43)	
Headache side effect				
No	41(91.11)	18(56.25)	17(73.91)	0.002 F.002
Yes	4(8.89)	14(43.75)	6(26.09)	
Vomiting side effect				
No	39(86.67)	19(59.38)	16(69.57)	0.023
Yes	6(13.33)	13(40.63)	7(30.43)	
Increased activity side effect				
No	37(84.09)	28(87.50)	21(91.30)	0.703
Yes	7(15.91)	4(12.50)	2(8.70)	
Decreased activity				
No	34(75.56)	14(45.16)	10(43.48)	0.007
Yes	11(24.44)	17(54.84)	13(56.52)	
Prolonged sleepiness side effect				
No	33(73.33)	11(34.38)	10(43.48)	0.002
Yes	12(26.67)	21(65.63)	13(56.52)	
Fever side effect				
No	41(91.11)	24(75.00)	20(86.96)	0.142
Yes	4(8.89)	8(25.00)	3(13.04)	
Don't know side effect				
No	21(46.67)	28(87.50)	20(86.96)	0.000 X ² 19.0804
Yes	24(53.33)	4(12.50)	3(13.04)	

*parental education: 1=high school, 2=some college, 3=college or higher

IV: intravenous, Meds: medications

Appendix 3 Table 1.1 (Relation between Demographic data and attitude)

Attitude	Parental age		P
	<30 (0)No	>30(1)Yes	
Risk of dental sedation			
Low	14(41.18)	38(56.72)	0.268
Moderate	12(35.29)	20(29.85)	
High	8(23.53)	9(13.43)	
Feeling toward dental sedation; Fear			
No	22(64.71)	39(73.13)	0.381
Yes	12(35.29)	18(26.87)	
Feeling toward dental sedation; Relief			
No	24(70.59)	48(71.64)	0.912
Yes	10(29.41)	19(28.36)	
Nothing, I already knew it			
No	22(64.71)	41(61.19)	0.731
Yes	12(35.29)	26(38.81)	
Decision of sedation; Discussed w/family			
No	21(61.76)	55(82.09)	.025
Yes	13(38.24)	12(17.91)	
Decision of sedation; Dentist recommendation			
No	7(20.59)	15(22.39)	0.836
Yes	27(79.41)	52(77.61)	

Table 1.2.

Attitude	Parental Education*			P
	1	2	3	
Risk of dental sedation				
Low	23(51.11)	14(43.75)	14(65.22)	0.005 F0.006
Moderate	9(20.00)	16(50.00)	7(30.43)	
High	13(28.89)	2(6.25)	1(4.35)	
Feeling toward dental sedation; Fear				
No	32(71.11)	21(65.63)	17(73.91)	0.784
Yes	13(28.89)	11(34.38)	6(26.09)	
Feeling toward dental sedation; Relief				
No	33(73.33)	22(68.75)	17(73.91)	0.882
Yes	12(26.67)	10(31.25)	6(26.09)	
Nothing, I already knew it				
No	30(66.67)	18(56.25)	14(60.87)	0.645
Yes	15(33.33)	14(43.75)	9(39.13)	
Decision of sedation; Discussed w/family				
No	35(77.78)	23(71.88)	17(73.91)	0.833
Yes	10(22.22)	9(28.13)	6(26.09)	
Decision of sedation; Dentist recommendation				
No	8(17.78)	8(25.00)	6(26.09)	0.651
Yes	37(82.22)	24(75.00)	17(73.91)	

*parental education: 1=high school, 2=some college, 3=college or higher

Appendix 4 (Relation between Demographic data and Belief)

Variables	Child number*			p	Child's age		
	1	2	3		<6 years	≥6 years	P
Do you believe that more dental offices should provide dental sedation?							0.183
No	2(10.00)	5(14.29)	7(15.91)	0.820	11(17.74)	3(8.11)	
Yes	18(90.00)	30(85.71)	37(84.09)		51(82.26)	34(91.89)	
If you are not covered by insurance, would you pay a \$400 for a dental sedation?							0.017
No	3(15.00)	19(51.35)	14(31.82)	0.019	28(44.44)	8(21.05)	
Yes	17(85.00)	18(48.65)	30(68.18)		F.020	35(55.56)	

*children number: 1=one child, 2= two children, 3=three or more children

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