

Dentists' perceptions of selected characteristics of their child patients

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Abstract

The purpose of this project was to examine the perceptions of both general and pediatric dentists regarding selected characteristics of the children they treat. A survey including questions on patients' ages, caries activity estimates, and types of patients treated was mailed once to a national random sample of 2,000 general and 1,000 pediatric dentists. The respondents provided a reasonable distribution by age and location, with the majority (69%) in practice more than 10 years. The pediatric dentists who responded perceive that they treat a younger population of child patients with more caries activity ($P < 0.001$), except in those patients older than 12 years. They also perceive that their patient pools include a larger percentage of patients with handicapping conditions ($P < 0.01$), behavior problems ($P < 0.001$) and patients who require treatment with general anesthesia ($P < 0.001$) than do the general dentists. (*Pediatr Dent* 16:268-71, 1994)

Introduction

The demand for child dental care has increased despite a decline in dental caries.¹ Despite the decline, there remains a large segment of children, particularly in minority and low socioeconomic groups, with unmet dental needs.² In addition, the population of children younger than 18 years of age is increasing.³ Therefore it is not surprising that dental care for children is under consideration for inclusion in health care reform.

Parents choose pediatric or general dentists to provide dental care for their children. Differences in the dental care recommended for children by general and pediatric dentists have been reported⁴⁻⁷ in areas such as radiographic recommendations,^{4, 5} restorative treatment,^{6, 7} and behavior management techniques.⁸ The purpose of this project was to assess and compare general and pediatric dentists' perceptions of selected characteristics of the child patients they treat.

Method

The survey instrument, which has been described previously,⁸ was mailed once in 1991 to 2,000 general and 1,000 pediatric dentists selected randomly through the American Dental Association's data processing service. The dentists included both ADA members and nonmembers distributed across the United States.

The survey questions elicited information regarding the dentists' perceptions of their child patients' ages, caries patterns, types of patients (e.g., patients with handicapping conditions), and types of treatments provided. The characteristics of the child patient populations of the responding dentists are the focus of this paper. Chi-square statistical analysis was employed to compare the responses of the general dentists with those of the pediatric dentists.

Results

The return rate was 33% (662) for the general and 49% (492) for the pediatric dentists. There were 1,141 usable surveys, for an overall rate of 38%. The respondents were distributed by age, practice type, and length of time in practice. The distribution of respondents by age and length of time in practice is shown in Tables 1 and 2. Five percent of the respondents were younger than 30 years old and 6% were 60 or older, with the largest group from 40 to 49 years old. The majority (69%) had been in practice more than 10 years.

Patient age

Table 3 illustrates the differences between the general and pediatric dentists regarding the percentage of patients younger than 18 years of age. Ninety-four per-

Table 1. Respondents based on age

	Age				
	<30	30-39	40-49	50-59	60+
GD	31 (3)	216 (19)	242 (21)	122 (11)	39 (3)
PD	24 (2)	163 (14)	182 (16)	92 (8)	30 (3)

() = percentage.

Table 2. Respondents based on length of time in practice

	Practice Time			
	< 2 years	2-5 years	6-10 years	> 10 years
GD	20 (2)	79 (7)	103 (9)	449 (39)
PD	15 (1)	60 (5)	74 (7)	338 (30)

() = percentage.

cent of the responding pediatric dentists indicated that 75% or more of their patients were younger than 18 years old. Ninety-six percent of the general dentists who responded reported that less than 50% of their patient population was younger than 18 years old. Twenty-two percent of the general dentists responded that none of their patients were 3 years old or younger, while approximately 32% of the pediatric dentists reported that at least 24% of their patients were in this age group.

Table 3. Respondents' perceptions of patient pool younger than age 18 and age 3 or younger

Percent of Patients	< 18 years		≤ 3 years	
	GD	PD	GD	PD
100	0 (00)	127 (27)	1 (<1)	2 (<1)
75-99	1 (<1)	319 (67)	2 (<1)	4 (01)
50-74	22 (03)	14 (03)	0 (00)	27 (06)
25-49	259 (39)	6 (01)	8 (01)	113 (24)
1-24	374 (57)	10 (02)	504 (76)	330 (69)
0	1 (<1)	0 (00)	147 (22)	1 (<1)
	$\chi^2 = 1035$ $P < 0.001$		$\chi^2 = 277$ $P < 0.001$	

() = percentage.

Caries activity

The respondents were asked to estimate the caries activity (low 1 to high 5) for each age group they treated (Table 4). For all ages (0-2, 3-5, 6-11, and 12+ years old), there were significant differences in the general and pediatric dentists' assessments of their patients' caries activity. The pediatric dentists indicated a higher level of caries activity for all ages except the 12+ group, where the general dentists indicated a slightly higher level of caries activity.

Patient types

The responding dentists were asked to indicate whether the number of patients in each of five categories were increasing, decreasing, or staying the same (Table 5). The categories were: healthy and essentially

cooperative, younger than 3 years of age, behavior problems requiring special management (restraint/sedation), handicapped (physical/mental/emotional), and requiring general anesthesia for dental treatment.

The majority of the responding general dentists (60%) reported that the number of healthy, cooperative patients they treat was increasing. An approximately equal number of pediatric dentists indicated that the number of patients in this category was staying the same (48%) or increasing (49%).

The majority of general dentists (65%) indicated that the number of their patients younger than 3 years old had remained constant. An approximately equal number indicated that this population was increasing (18%) or decreasing (16%). Patients younger than 3 years old were increasing for 52% of the pediatric dentists, while 43% reported no change. Only 6% of the pediatric dentists indicated that the number of patients in this age category was decreasing.

When asked about patients with behavior problems requiring sedation or restraint, the general dentists were evenly divided (48% each) between no change and decreasing numbers of patients with behavioral problems. Only 4% of the general dentists who responded indicated that their population of management problems had increased.

The majority of the pediatric dentists surveyed (55%) reported that the number of patients they treated with behavior problems had not changed over time. Twenty-five percent of the pediatric dentists indicated that the number of patients they were treating with behavior problems had increased and 21% reported a decrease.

The majority of both general (71%) and pediatric dentists (67%) indicated that the number of patients they treat with handicapping conditions had remained the same. However 12% of the pediatric dentists compared with only 6% of the general dentists reported treating more patients with handicapping conditions.

General dentists reported that the number of patients requiring general anesthesia for dental treatment were evenly divided between no change (49%) and a decrease (48%). The pediatric dentists were more divided across all three categories. Forty-two percent

Table 4. Respondents' perceptions of caries activity by age group

Caries Activity	0-2 Years		3-5 Years		6-11 Years		12+ Years	
	GD	PD	GD	PD	GD	PD	GD	PD
1 (Low)	485 (90)	195 (41)	395 (61)	91 (19)	229 (35)	79 (17)	192 (29)	160 (34)
2	38 (07)	118 (25)	177 (27)	144 (30)	252 (39)	162 (34)	234 (36)	192 (40)
3	13 (02)	69 (15)	53 (08)	153 (32)	138 (21)	204 (43)	186 (28)	107 (22)
4	3 (01)	62 (13)	18 (03)	71 (15)	30 (05)	27 (06)	37 (06)	16 (03)
5 (High)	2 (<1)	30 (06)	2 (<1)	19 (04)	5 (01)	5 (01)	8 (01)	2 (<1)
	$\chi^2 = 279$ $P < 0.001$		$\chi^2 = 269$ $P < 0.001$		$\chi^2 = 80$ $P < 0.001$		$\chi^2 = 12$ $P < 0.05$	

() = percentage.

Table 5. Respondents' perceptions of trends in categories of patients

Category	Increasing		Same		Decreasing		P-value	χ^2
	GD	PD	GD	PD	GD	PD		
Healthy	380 (60)	233 (49)	229 (36)	225 (48)	29 (05)	15 (03)	< 0.01	16
< 3	113 (18)	244 (52)	402 (65)	205 (43)	99 (16)	27 (06)	< 0.001	139
Behavior problem	25 (04)	117 (25)	303 (48)	260 (55)	298 (48)	99 (21)	< 0.001	146
Handicapped	39 (06)	57 (12)	442 (71)	317 (67)	141 (23)	102 (21)	< 0.01	12
General anesthesia	13 (02)	96 (21)	284 (49)	175 (38)	276 (48)	193 (42)	< 0.001	95

() = percentage.

reported a decrease in the number of patients requiring general anesthesia, 38% reported that this patient population had not changed in their practice, and 21% reported an increase.

Discussion

The response rate (38%) for this once-mailed survey was similar to the rates of previously reported surveys.⁴⁻⁷ The age distribution of the respondents was representative of the overall dentist population.⁹ The majority (69%) of respondents had been in practice more than 10 years. The responses represent the dentists' perceptions regarding their patient populations, rather than actual patient data.

The majority of general dentists reported that less than half of their practice was made up of children younger than 18 years old (Table 3), which suggests that the emphasis in their practices is on adult dental procedures. Obviously, children are the focus of pediatric dentists; 98% indicated that 75% or more of their patients were younger than 18 years old. Approximately 32% of the pediatric dentists reported that at least 24% of their patient population was 3 years of age or younger. Twenty-two percent of the general dentists reported no children in their practices in that category. The perceived populations of child patients treated by these two types of practitioners were very different in terms of age.

The results of this study appear to reflect the increase in the number of children in the United States.³ The majority of the general dentists (60%) indicated that the number of healthy, cooperative children in their practices had increased (Table 5). The pediatric dentists were more evenly distributed between an increase (49%) and no change (48%). These numbers support Waldman,¹⁰ who described an overall increase in the percent of children who visited the dentist during the first two-thirds of the 1980s.

Over the past several years, the American Academy of Pediatric Dentistry has recommended that a child's first dental visit be 6 months after the eruption of the first tooth or by 1 year of age.¹¹ The results of our survey indicate that pediatric dentists perceive that they see more young patients than do general dentists. Not

only do the pediatric dentists report that a higher percentage of their patients are younger (Table 3), but they also report a higher level of caries activity in their younger patients (Table 4). The higher level of caries activity perceived by the pediatric dentists probably relates to their perception that they treat more young patients who are affected by nursing bottle caries. It is also possible, based on previous data regarding radiographic examination practices,⁴ that pediatric dentists take more caries-detecting radiographs on younger children and therefore identify caries earlier. Another explanation for pediatric dentists reporting higher caries levels may be the fact that general dentists, especially those who have been in practice for more than 10 years, may be more likely to refer young patients with high caries activity than to treat them.

In addition, the segment of the child population seeking dental care that was perceived by the pediatric dentists to have increased the most was children younger than 3 years old (Table 5). Possibly the Academy's attempts to educate parents on the need for early first dental visit have had an impact on parents and pediatric dentists.

In view of the age differences in the patient populations of the pediatric and general dentists, it is somewhat surprising that there was not a greater difference between the two groups in perceived behavior problems (Table 5). Only 25% of the pediatric dentists, compared with 4% of the general dentists, indicated an increase in the number of patients with behavior problems. While this contradicts the perceived increase in the number of children younger than 3 years old, this may be related to behavioral expectations of young patients. Precooperative behavior is the norm for this age group and may not be perceived by most pediatric dentists as a "behavior problem."

It was somewhat surprising to find that 48% of general and 21% of pediatric dentists indicated the number of patients in their practices with behavior problems was decreasing. Since the majority of responding dentists had been in practice more than 10 years, general dentists may be referring more of the patients with behavior problems. Also, years of practice experience may have altered the dentists' perceptions of

children's behavior problems. The fact that significantly fewer of the pediatric dentists reported a decrease in patients with behavior problems may reflect that the parents of younger children and children with special needs are inclined to seek out a pediatric rather than a general dentist.

The reported decrease in general anesthesia use by a large percentage of the pediatric dentists (42%) is surprising based on their reported increase in treating very young patients (Table 5). This finding contradicts a recent report indicating that parents would rather have their child subjected to general anesthesia than HOM.¹² This finding suggests a fundamental difference in the perspective of parents and dentists in managing very young children. There are several factors that may contribute to the decrease in general anesthesia use, such as cost of dentistry in the operating room, increased concern over the risk of general anesthesia for children, and dentists' reluctance to spend time away from their dental office in the operating room.

Twelve percent of the pediatric dentists compared with 6% of the general dentists reported an increase in the number of patients with handicapping conditions (Table 5). Since 23% of general and 21% of pediatric dentists indicated that their populations of patients with handicapping conditions had decreased, it is probable that this segment of the population continues to have unmet oral health care needs.¹³

This survey highlights differences in the perceptions of the child patient populations among general and pediatric dentists. Compared with general dentists, pediatric dentists perceive that they treat a younger population of child patients that has greater caries activity except for those patients older than 12 years. Pediatric dentists also perceive that their patient populations include a larger percentage of patients with handicapping conditions and behavior problems and who require treatment with general anesthesia.

A limitation of this study is that the findings are based on the responding dentists' perceptions of their patient population rather than on actual demographic data. However, based on the respondents' perceptions

it would appear that general and pediatric dentists provide dental care to different cohorts of the population under 18 years of age in the United States. Future studies should evaluate patient populations to determine whether there are actual differences and should investigate the factors that influence parents in selecting a dental care provider for their children.

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