

# Demographic, educational, and experiential factors associated with dentists' decisions to report hypothetical cases of child maltreatment

Steven M. Adair, DDS, MS Shirin Yasrebi, DDS Inger A. Wray, DMD  
Carole McKnight Hanes, DMD Deirdre R. Sams, DDS, MS Carl M. Russell, DMD, MS, PhD

## Abstract

*The purpose of this study was to examine demographic factors associated with dentists' decisions to report hypothetical cases suggestive of child maltreatment. Surveys were mailed to 500 general dentists (GDs) in Georgia and all 200 pediatric dentists (PDs) in Georgia and Florida. The general dentists were chosen from a pool of 1500 by a stratified randomization scheme. Each survey contained two brief vignettes suggestive of, but not conclusive for, child neglect and abuse. Respondents were asked about their likelihood of reporting each vignette. General demographic questions were asked about the population served by the dentist, the year of dental degree and specialty certificate acquisition, and gender of the respondent. Further questions were asked about the individual's exposure to continuing education in child maltreatment, knowledge of legal requirements to report and the agency to which reports should be directed, and experience with suspected and filed cases. Responses were received from 185 GDs (37%) and 103 PDs (51.5%), a total of 288 (41.4%). PDs had more practitioners in larger communities and had more female respondents. PDs were more likely to answer yes to the questions about education/experience with child maltreatment. Factors associated with likely reporting of neglect were: 1) serving communities with populations  $\leq 100\ 000$ ; 2) PDs acquiring specialty certificates after 1980; 3) being female; 4) exposure to continuing education; 5) having suspected cases in practice; and 6) having filed a maltreatment report. Factors associated with likely reporting of abuse were: 1) PDs acquiring specialty certification after 1980 and 2) self-reported recognition of the legal obligation to report. (Pediatr Dent 19:466-469, 1997)*

**K**nowledge among dentists about child maltreatment (neglect and abuse) has been documented in several studies.<sup>1-5</sup> A number of questions about education and experience with child maltreatment were common to most of those studies. Of responding dentists, 45-86% indicated that they were aware of their legal obligations as mandated reporters of child maltreatment, while 28-77% indicated that

they knew the appropriate state agency for reporting such cases. Child abuse had been seen or suspected in the practices of 8-54% of the respondents, and 9-66% of respondents had reported suspected abuse. An inadequate educational background in child maltreatment was reported by 22-75% of responding dentists. None of the surveys assessed the likelihood of respondents to report hypothetical cases suspicious for neglect or abuse.

The purpose of this survey study was to assess demographic factors, educational and experiential factors, and the relationships between those factors and dentists' likelihood of reporting case vignettes suspicious for neglect and abuse.

## Materials and Methods

This study was approved by the Human Assurance Committee of the Medical College of Georgia. The methodology has been described elsewhere.<sup>6</sup> Briefly, a pretested survey was mailed to 500 GDs in Georgia and to all 200 members of the American Academy of Pediatric Dentistry in the states of Georgia and Florida. The survey consisted of a brief set of instructions to the respondent, two vignettes with associated questions, and a section requesting demographic data.

The vignettes were brief descriptions of hypothetical clinical situations suggestive of, but not conclusive for, child neglect and abuse. Respondents were asked to indicate whether they would be likely to report the hypothetical cases. Responses were marked on a five-point ordinal scale: definitely not, probably not, not sure, probably yes, and definitely yes. The general demographic information requested from each respondent included practice type (general vs. pediatric dentistry), year of dental degree and specialty certificate acquisition, population of community served, and gender. Questions on education and experience with child maltreatment included any exposure to continuing education in child maltreatment, having suspected cases of child maltreatment in private practice, and having filed at least one case, all in the 5 years previous

to the survey. Respondents also were asked whether they were mandated reporters of suspected cases of child maltreatment, and whether they knew the appropriate state agency to which cases should be reported.

Responses to the questions were coded and recorded in a computer database for analysis. We dichotomized the possible responses to the report intention question into *yes* (probably yes, definitely yes) and *no* (not sure, probably not, definitely not) categories. Answers to the demographic questions were also dichotomized, where necessary, on a central value. Where they could be assessed, differences in distributions of responses were examined by two-tailed Fisher's exact tests for 2x2 tables.

## Results

We received a total of 288 completed surveys for an overall response rate of 41.1%. GDs returned 185 surveys (37% response rate) and PDs returned 103 (51.5% response rate). Forty-one respondents were female (14.2%). Table 1 illustrates responses to the general demographic questions. About half of the respondents practiced in communities with populations of 100 000 or less. More than 60% of GDs practiced in communities of this size, while more than 70% of the PDs practiced in communities of populations greater than 100 000. This difference in distribution was statistically significant ( $P < 0.0001$ ). The median year of dental degree acquisition for all respondents was 1978. For GDs, the

median year was 1979, while the median year for specialty certificate acquisition by PDs was 1980. The median year for dental degree acquisition by PDs was 1976. Females composed 10.3% of the GDs respondents, as did 21.4% of the pediatric dentists ( $P = 0.013$ ).

Table 2 shows the percentages of respondents who answered *yes* to the questions about education and experience with child maltreatment. Fewer than half of all respondents had received any continuing education in this topic in the previous 5 years. However, almost 70% of the PDs answered *yes* to this question, compared to less than 25% of the GDs. A majority of all respondents reported that they were aware of their maltreatment reporting obligations and knew the appropriate state agency for reporting. Again, more PDs answered these questions in the affirmative. About half of all respondents reported suspecting cases of maltreatment in their practices, but only about a fifth of the respondents had ever filed a maltreatment report. Higher percentages of PDs reported having suspected and filed cases. The distributions of *yes/no* responses to these questions between PDs and GDs were all statistically significant ( $P < 0.0001$ ).

Table 3 illustrates the distributions of the general demographic factors among the respondents who were likely to report the hypothetical cases of neglect ( $N = 28$ , 16 GDs, 12 PDs) and abuse ( $N = 103$ , 70 GDs, 33 PDs). For neglect, a higher proportion of likely reporters lived in smaller communities ( $P = 0.009$ ). Among the 12 PDs who were likely to report neglect, a higher percentage received their training after 1980 ( $P = 0.03$ ). Females were significantly more likely to report the neglect incident ( $N = 11$ ,  $P = 0.0005$ ). No significant differences in distribution were seen for the year of dental degree acquisition for all respondents and for GDs alone. For abuse, PDs who received their specialty training after 1980 were significantly more likely to report the abuse incident ( $P = 0.0006$ ). There were no other significant differences observed for general demographic variables and abuse reporting.

Table 4 illustrates the percentages of likely reporters and nonreporters who answered *yes* to the questions on education and experience with child maltreatment. Factors were considered associated with the likelihood of reporting if the difference in the percentage of *yes* responses between likely reporter and nonreporters exceeded 10%. It appeared that the likelihood of reporting the neglect vignette was associated with exposure to continuing education, having seen suspected cases in practice,

TABLE 1. RESPONSES TO GENERAL DEMOGRAPHIC QUESTIONS

	All	General Dentists	Pediatric Dentists
Population Served	< 100 000	50.7%	62.7%*
	> 100 000	49.3%	37.3%*
Median year of degree (or Specialty certification)	1978	1979	1976 (1980)
Percent females	14.2	10.3 <sup>†</sup>	21.4 <sup>†</sup>

P-values for two-tailed Fisher's exact test of 2x2 distributions between generalists and specialists were \* $< 0.0001$  and <sup>†</sup>0.013

TABLE 2. PERCENTAGE OF RESPONDENTS ANSWERING YES TO EDUCATIONAL/EXPERIENCE QUESTIONS

	All (N = 288)	General Dentists (N = 185)	Pediatric Dentists (N = 103)
Continuing education?	40.7	24.3	69.9
Required to report?	62.8	54.6	77.7
Know agency?	69.4	59.5	87.4
Suspected cases?	54.5	39.5	81.6
Ever filed a report?	20.7	8.1	43.7

P-values for two-tailed Fisher's exact tests of 2x2 distributions between generalists and specialists all  $< 0.0001$

and having filed at least one maltreatment report in the previous 5 years. The likelihood of reporting the abuse vignette appeared to be associated with self-reported recognition of the legal obligation to report.

## Discussion

In terms of general demographics, the PDs and GDs who responded to this survey could be considered as two distinct groups based on the population of the communities served by the majority of respondents in each group, and the proportion of respondents from each group who were female. Also, significant differences between the two groups were found for each of the five educational/experiential factors. However, Adair et al.<sup>6</sup> have demonstrated no significant differences between PDs and GDs in the proportion of each group that was likely to report the neglect and abuse vignettes. Within the group of PDs who were likely reporters of neglect and abuse, significantly more had received their specialty training after 1980, perhaps reflecting increased training in child maltreatment in advanced education programs in recent years. PDs were more likely to report some continuing education in child maltreatment in the previous 5 years, as well as personal experience with suspected and reported cases. Still, this experience did not make them more likely to report the hypothetical cases. Continuing education exposure might occur more frequently, though perhaps tangentially, in pediatric dental continuing education than in courses routinely attended by GDs. Thus, PDs may be exposed to more discussions about child maltreatment, but not more courses devoted exclusively to

**TABLE 3. DISTRIBUTION (PERCENTAGE) OF GENERAL DEMOGRAPHIC FACTORS AMONG LIKELY REPORTERS OF NEGLECT AND ABUSE VIGNETTES**

Factor		Percentage of Likely Reporters of:	
		Neglect Vignette (N = 28 except as noted)	Abuse Vignette (N = 103 except as noted)
Population Served	≤ 100 000	75.0*	55.3*
	≥ 100 000	25.0*	44.7*
Year of Dental Degree (All respondents)	1978 or earlier	42.9	45.6
	after 1978	57.1	54.4
Year of Dental Degree (General dentists only)	1979 or earlier	37.5 (N = 16)	51.4 (N = 70)
	after 1979	62.5	48.6
Year of Certificate (Pediatric dentists only)	1980 or earlier	16.7 <sup>†</sup> (N = 12)	24.2 <sup>†</sup> (N = 33)
	after 1980	83.3 <sup>†</sup>	75.8 <sup>†</sup>
Sex of Respondent	Female	39.3*	17.5
	Male	60.7*	82.5

\*†P-values for two-tailed Fisher's exact tests of 2x2 distributions < 0.03.

**TABLE 4. PERCENTAGES OF LIKELY REPORTERS AND NONREPORTERS WHO ANSWERED YES TO QUESTIONS ABOUT EDUCATION AND EXPERIENCE WITH CHILD MALTREATMENT**

Factor	Likelihood of Reporting			
	Neglect Vignette Likely (N = 28)	Neglect Vignette Not Likely (N = 259)	Abuse Vignette Likely (N = 103)	Abuse Vignette Not Likely (N = 183)
Continuing education?*	53.6	39.2	43.7	38.9
Knowledge of reporting obligation?	64.3	62.7	70.9	58.4
Knowledge of appropriate agency?	75.0	68.9	74.8	66.5
Suspected cases in practice?*	78.6	51.9	54.4	54.6
Filed any cases?*	35.7	19.2	23.3	19.5

\* In 5 years prior to survey date

**TABLE 5. COMPARISON OF FINDINGS ON EDUCATION/EXPERIENCE FACTORS WITH SIMILAR STUDIES IN THE LITERATURE.**

Factor	This Study	Becker et al. <sup>1</sup>	Study			Mathewson et al. <sup>5</sup>
			Malecz <sup>2</sup>	Saxe et al. <sup>3</sup>	Kassebaum et al. <sup>4</sup>	
Aware of obligation to report?	62.8%	45%	NA	86%	NA	59%
Appropriate referral agency?	69.4%	28%	56%	36%	NA	77%
Suspected cases in practice?	54.5%	8%	NA	50%	36%	54%
Filed a report?	20.7%	18%	9%	66%	19%	18%

that issue. Exposure to continuing education was, however, more common among likely reporters of the neglect vignette than among nonreporters. Perhaps continuing education is important in heightening dentists' sensitivity to neglect and their obligations to report it. The same relationship was not seen among likely reporters and nonreporters of abuse.

Dentists who practiced in communities with populations  $\leq 100\,000$  were significantly more likely than their counterparts in larger communities to report the neglect vignette, but not the abuse vignette. Perhaps neglect is common enough in larger cities to the point that respondents from those communities are less likely to report such maltreatment. No other general demographic factors were significantly related to reporting the neglect or abuse vignette.

Table 5 presents a comparison of the educational and experiential factors assessed in this study with similar factors assessed in previous studies. The percentages of respondents answering *yes* to these questions in our study were most comparable to the findings in Mathewson et al.<sup>5</sup> That study surveyed GDs in Oklahoma. Comparable findings for each factor can be found in at least one other study.

Respondents who recognized their obligation to report suspected cases of maltreatment appeared more likely to report the abuse vignette, but not the neglect vignette. There are some differences among the states in their requirements to report neglect, though dentists in Florida and Georgia are mandated reporters. Brodersen et al.<sup>7</sup> surveyed GDs and PDs with three vignettes of varying degrees of possible neglect. The majority of respondents would not report them without additional information. Their study provided little evidence that dentists would report child neglect. Adair et al.<sup>6</sup> found that PDs were more likely to report the neglect vignette than were GDs, but the percentages of likely reporters from each group were small. Our study found that fewer factors were associated with the decision to report the abuse vignette, which may be related to less ambiguity surrounding the abuse vignette. Adair et al.<sup>6</sup> found that almost four times as many respondents were likely to report hypothetical abuse compared to neglect.

Our question about knowledge of the state agency to which maltreatment reports should be filed assessed only the respondents' beliefs that they knew the proper agency; we did not ask respondents to name the state agency. Majorities of both likely reporters and nonreporters indicated they knew the proper agency. The differences between reporters and nonreporters were small, however, indicating that such assumed knowledge among our sample was not a factor in the decision to file a report.

Experience with suspected cases and previous filing appeared to be associated with the likelihood of reporting the neglect but not the abuse vignette. Abuse cases may be considered more clear-cut with regard to the

responsibility to report, so that previous reporting experience is not a factor in that decision. Neglect is more ambiguous, making a decision to report more likely among those with some experience.

## Conclusions

For the sample of dentists who responded to the survey, the following conclusions were drawn:

1. Pediatric dentists were more likely than general dentists to report:
  - Exposure to continuing education in child maltreatment
  - Knowledge of their reporting obligations
  - Knowledge of the agency for reporting
  - Having suspected cases of maltreatment in their practices
  - Having filed a maltreatment report.
2. The likelihood of reporting the neglect vignette was associated with:
  - Practicing in communities with populations  $\leq 100\,000$
  - Pediatric dentists who received their specialty certificates after 1980
  - Females
  - Having received continuing education in child maltreatment
  - Having suspected cases of child maltreatment in practice
  - Having filed a maltreatment report.
3. The likelihood of reporting the abuse vignette was associated with:
  - Pediatric dentists who received their specialty certificates after 1980
  - Knowledge of their obligation to report maltreatment.

Drs. Adair and Hanes are professors and Dr. Sams is a clinical associate professor in the Department of Pediatric Dentistry, and Dr. Russell is an associate professor in the Departments of Oral Diagnosis and Patient Services and the Office of Biostatistics at the Medical College of Georgia. Drs. Yasrebi and Wray are in private practice in Lakeland, FL, and Austin, TX, respectively.

1. Becker DB, Needleman HL, Kotelchuck M: Child abuse and dentistry: orofacial trauma and its recognition by dentists. *J Am Dent Assoc* 97:24-28, 1978.
2. Malecz RE: Child abuse, its relationship to pedodontics: a survey. *J Dent Child* 46:193-94, 1979.
3. Saxe MD, McCourt JW: Child abuse: a survey of ASDC members and a diagnostic-data-assessment for dentists. *ASDC J Dent Child* 58:361-66, 1991.
4. Kassebaum DK, Dove SB, Cottone JA: Recognition and reporting of child abuse: a survey of dentists. *Gen Dent* 39:159-62, 1991.
5. Mathewson RJ. Child abuse and neglect: The dental profession's responsibility. *Compendium* 14:656 1993.
6. Adair SM, Wray, IA, Hanes CM, Sams DR, Yasrebi S, Russell CM: Perceptions associated with dentists' decisions to report hypothetical cases of child maltreatment. *Pediatr Dent* 19:461-65, 1997.
7. Brodersen G, Dooley R, Fadavi S, Punwani I: Child dental neglect reporting by pediatric and general dentists (abstract). *Pediatr Dent* 18:167, 1996.