Irish dental practitioners perceived barriers to the care of patients with special healthcare needs and the effect of postgraduate training

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Abstract

Inequalities in oral health care service provision to people with special health needs have been reported in the Republic of Ireland. These include higher unmet dental treatment needs and longer waiting period to access routine dental treatment than the general population.

Aim: The aims of this study were to determine the groups of patients with special needs which pose a challenge to manage in the dental surgery and to examine perceived barriers to the care of these patients. We aimed to determine whether postgraduate training in the management of these patients increases the practitioners' frequency of treatment provision. We also aimed to examine the relationship between the practitioners' frequency of treatment and their desire for further training in this area.

Methods: A questionnaire was used to survey 326 randomly selected dentists from the Dental Council's register of dentists. Questionnaire and information sheets explaining the purpose of the survey, confidentiality and anonymity of the responses were posted to the dentists.

Results: The results showed that children with intellectual disability posed the biggest challenge for dentists to manage in the dental surgery. Behaviour management issues and the degree of disability were perceived by many dentists as factors that would have high effects on their willingness to treat patients with special needs. Dentists who have postgraduate training in the management of patients with special needs were significantly more willing to treat these patients and to seek additional training in the future.

Conclusion: There are links between the training and the willingness of practitioners to undertake dental treatment for patients with special healthcare needs.

Key words: *Special Care Dentistry, Ireland*

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Introduction

People with special needs are those whose dental care is complicated by a physical, mental, or social disability (Davies *et al.*, 2000). Poor oral health in this vulnerable group, with the accompanying pain, and discomfort can only compound issues for this group of people. Inequalities in oral health care service provision to people with special needs and the long waiting period for this group of patients in the public dental services have been widely reported in the literature. There have been reports noting some dentists' reluctance to care for disabled populations, suggesting that practitioners experience numerous obstacles to care of the disabled, issues range from low reimbursement to inadequate dental school training on the dental treatment of patients with special needs (Siegal, 1985).

Children and adults with special needs in the Republic of Ireland have been reported to have higher unmet dental treatment needs when compared to the general population. The National Oral Health Surveys of children and adults with disabilities carried out over 2002 and 2003 in Ireland revealed inequalities in oral health care service provision to people with disabilities. When compared with children and adults in the general population, the surveys showed that more dental decay was untreated in children with disabilities and adults with special needs had higher unmet dental treatment needs (Whelton *et al.*, 2002; Crowley *et al.*, 2005). The same reports showed that they had more extractions and less preventive measures provided. Patients with special health needs have longer waiting period to access dental screening and routine treatment in the public dental services than the general population. It was reported that the waiting period for routine treatment ranged from 1 month up to 18 months, depending on the community areas (Dolan-Mulhall, 2001), with up to 12 and 18 months in some community areas.

Whelton *et al.* (2002) and Crowley *et al.* (2005) reported that the majority of patients with special health needs are treated by a small number of dentists, and most of these patients were assessed as being able to undergo dental treatment in the dental surgery without sedation and/or general anaesthesia. Holland and O'Mullane (1990) also reported that 80% of patients with intellectual disability surveyed in the Republic of Ireland (ROI) could be treated in the primary care setting while the minority of the patients required care at specialist centres.

Evidence from the literature reveals that most dental practitioners including private dental practitioners could provide care for the majority of this group of patients in their surgery. Practitioners who work with people with disabilities also believe that most are treatable by general dentists. However, issues such as limited experience in handling these patients, fear about how to manage their needs and how other patients may react are significant factors which affect dentists' decisions to provide care to patients with special health care needs (Steinberg, 2005). Reimbursement for treatment and behavioural management issues have also been implicated in the poor access of this group of patients to oral health care (Waldman *et al.*, 2002).

The authors observed that many patients with special needs have poor oral health status, have long waiting periods for treatment and rely entirely on the public health system for their care. These factors and the previous reports of oral health care inequalities in the National Oral Health Surveys (Whelton *et al.*, 2002; Crowley *et al.*, 2005) informed our decision to carry out a study to examine the educational and other issues affecting the access of persons with special need to dental care in Ireland. Thus, the aims of this study were to:

- Determine the groups of patients with special health care needs which practitioners find challenging to manage in the dental surgery
- Examine perceived barriers to the care of patients with special health care needs
- Determine whether postgraduate training in the management of patients with special needs increases the practitioners' frequency of providing such treatment
- Determine if the frequency of providing treatment affects practitioners' desire for additional training in this area.

Materials and method

The research was approved by the University College Cork, Ireland, Social Research Ethical committee. A questionnaire based survey of dentists from the Dental Council's register of dentists was carried out. A sample size of 326 was calculated using a confidence level of 95%, and a population of 2,401 dentists with addresses in the Republic of Ireland. The dentists were chosen using a random sample generator and every practitioner on the register had an equal chance of being included in the study sample. Each questionnaire and information sheet explaining the purpose of the survey, the confidentiality, and anonymity of the responses were posted to the selected dentists. Self-addressed, stamped envelopes were included in the mailing for return of completed questionnaires. The return of completed questionnaires was taken as implicit consent to participate in the study. Non-responders could not be followed-up due to the anonymous nature of the survey. The year of graduation from dental school and the type and location of practice were recorded. Respondents were asked if they had postgraduate training in the care of patients with special health care needs and if they desired additional training to treat this group of patients. The forms of postgraduate training recorded include; relevant attendance at lectures, continuing dental education programmes, training as part of specialty training in the dental schools, training as part of Non-Consultant Hospital Doctor appointments in the dental hospitals as well as formal training in Special Care Dentistry. The dentists practice patterns with persons with special needs, how often they treated this group and which groups of patients they found challenging to manage were recorded.

Respondents were also asked to what degree various factors acted as barriers to their willingness to provide treatment for patients with special needs.

All responses were entered into Statistical Package for the Social Sciences (SPSS), Statistics for Windows, Version 18.0 (SPSS Inc., 2009), which was used to collate and analyse the data. The Interactive Calculation Tool was used for chi-square tests of goodness of fit and independence (Preacher, 2001). Microsoft Excel was used to produce the chart presented in the results. Results are presented in tables and charts as frequencies and percentages.

Results

The survey questionnaires were sent to a total of 326 randomly selected dentists. One hundred and twenty four completed questionnaires were included in the study, giving a response rate of 38%. Forty seven percent of the respondents were female and 53% were male. The years of graduation from dental school were between 1956 and 2009, with 30% graduating between 1980 and 1989. Thirty four percent of respondents had 20 to 29 years of clinical dental experience. Sixty six percent of respondents to the survey were General Dental Practitioners (GDPs), 27% were Public Service Dentists (PSD), 4% were Hospital Dentists (HD), and

Table 1: Effect of various issues perceived by responding dentists as barriers to willingness to treat patients with special heath care needs.

Issues	Level of Effect			
	High	Medium	Low	No Effect
Behaviour management issues (N=121)	62 (51.2%)	30 (24.8%)	14 (11.6%)	15 (12.4%)
Degree of disability (N=115)	57 (49.6%)	27 (23.5%)	15 (13.0%)	16 (13.9%)
Level of dental disease (N=113)	28 (24.8%)	27 (23.9%)	24 (21.2%)	34 (30.1%)
Surgery's resources for special needs patients (N=109)	39 (35.8%)	30 (27.5%)	17 (15.6%)	23 (21.1%)
Funds/reimbursement (N=112)	38 (33.9%)	21 (18.8%)	18 (16.0%)	35 (31.3%)
Current level of training (N=112)	24 (21.4%)	35 (31.3%)	29 (25.9%)	24 (21.4%)
Clinical experience in management of patients with special needs. (N=113)	23 (20.4%)	43 (38.0%)	24 (21.2%)	23 (20.4%)
Practice/local policies (N=100)	7 (7.0%)	17 (17.0%)	27 (27.0%)	49 (49.0%)

3% had combined roles. Fifty eight percent of respondents practised in urban areas, 24% in sub-urban areas, 12% in rural areas, and 6% in both urban and rural areas. Many PSD and HD practised in more than one location, usually a combination of urban, sub-urban, and rural areas. Twenty two percent of respondents had postgraduate training in the management of patients with special health care needs. Eighty five percent of respondents desired further training on the management of patients with special health care needs.

Table 1 shows the various issues considered as affecting respondents' willingness to treat patients with special health care needs. The most common patient factors that had a high level of effect on the willingness to treat, were behaviour management issues (51.2%) and the degree of disability (49.6%) while the levels of oral disease was cited less frequently (24.8%). Surgery resources for patients with special needs were cited by 35.8% and funding issues by 33.9%, as factors having a high effect on them. Further factors having a high effect on practitioners were their current level of training (21.4%) and relevant clinical experience (20.4%) while only 7% cited practice or local policies as having a high effect in this regard. The details of the degree to which the issues were considered as barriers to respondents' willingness to treat these patients are presented in the table.

A comparison of the effects of these issues between GDP and PSD revealed no significant differences, with the

Figure 1: Categories of patients with special health care needs that responding dentists reported finding difficult to manage in the dental surgery

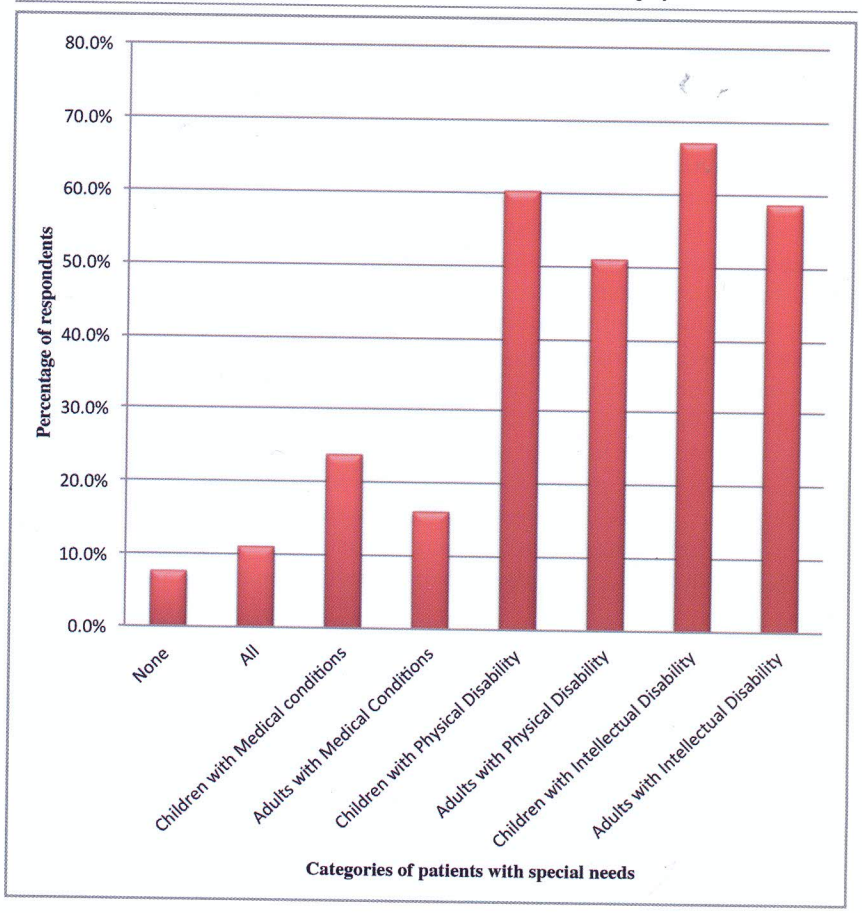

Table 2: Relationship between postgraduate training in care of patients with special health care needs and the frequency of treating such patients.

Frequency of treating patients with special needs	Postgraduate training in special needs		
	Yes	No	Total
Often	20	33	53
%	37.7%	62.3%	100.0%
Sometimes	5	42	47
%	10.6%	89.4%	100.0%
Rarely	1	20	21
%	4.8%	95.2%	100.0%
Total	26	95	121
%	21.5%	78.5%	100.0%

χ^2=15.055, df =2, p=0.001.

exception of the effect of funds/reimbursement. As expected, the impact of this factor was higher for the GDP with 45.3% reporting a high level of effect for remuneration as opposed to 6.9% of PSD.

Figure 1 gives further details of the categories of patients with special health care needs listed and the proportion of respondents who experienced some challenges managing their care in the dental surgery. Children with intellectual (67%) and physical (60%) disabilities presented challenges to the greatest proportion of respondents, followed by adults with intellectual (58%) and physical (51%) disabilities. Children (24%) and adults (16%) with medical conditions posed a difficulty for a lower proportion of the practitioners. All the stated groups were considered as challenging by 11%, while 8% of respondents felt none of these groups were a problem for them to manage in the surgery.

Table 2 shows the relationship between postgraduate training in care of patients with special health care needs and the frequency of treating patients with special health care needs. Thirty eight percent of dentists who regularly treat patients with special healthcare needs had postgraduate training in this aspect of care, while the equivalent proportion for those treating sometimes, or rarely were 10.6% and 4.8% respectively.

There was a significant positive association between how often dentists treated patients with special needs and having postgraduate training in the management of such patients (p=0.001). *Table 3* shows the relationship between the frequency of treating patients with special health care needs and practitioners' desire for additional training in their management. Ninety percent of dentists who regularly treat patients with special needs and 89.4%, who treat sometimes, wanted further training in this aspect of care as opposed to 60.0% of those who rarely provide such care. There was a significant positive association between how often practitioners treated special needs patients and their desire for additional training in the management of patients with special needs (p=0.003).

Discussion

The response rate in the present study was 38% and similar studies have recorded even lower response rates. For example, Casamassimo *et al.* (2004) in their study on 'General Dentists' perceptions of educational and treatment issues affecting access to care for children with special health care needs recorded a response rate of 24%. The study by Smith *et al.* (2009) on 'Provision of dental care for special care patients: the view of Irish dentists in the Republic of Ireland' had a response rate of 30%.

The year of graduation of respondents to the survey was between 1956 and 2009. This gave a good mix of respondents as well as years of experience in clinical dentistry with many (34%) having 20 to 29 years of clinical dental experience. The sample was not stratified by gender or year of graduation, so

Table 3: Relationship between frequency of treating patients with special health care needs and practitioners' desire for additional training in the management of this group of patients.

Frequency of treating patients with special needs	Desire for additional training in special needs		
	Desirable	Not Desirable	Total
Often	46	5	51
%	90.2%	9.8%	100.0%
Sometimes	42	5	47
%	89.4%	10.6%	100.0%
Rarely	12	8	20
%	60.0%	40.0%	100.0%
Total	100	18	118
%	84.7%	15.3%	100.0%

χ^2=11.420, df =2, p=0.003.

these factors could not be compared for the respondent group and the total number of dentists selected for the survey. Most of the respondents to this survey were GDP (66%) while PSD constituted about 27%. The majority of respondents (58%) practised in urban areas while a few practised in rural areas (12%).

Approximately half of the respondents perceived behaviour management issues and the degree of disability as factors that would have high effects on their willingness to provide treatment for patients with special health care needs. About a third identified availability of surgery resources such as disabled access, toilets, and availability of equipment for sedation as having high effect on practitioners' willingness to care for patients with special health care needs and a similar number identified reimbursement for treatment as having high effect on their willingness to care for this group of patients. Funding is an important issue as dental treatment for many patients with special health care needs in Ireland is funded by the Dental Treatment Service Scheme a scheme on which many GDPs are contracted by the government. Many of these patients require much more of the dentists' time, effort, and surgery resources. Steinberg (2005) noted that low compensation rates combined with the complex management issues and additional time and staffing that are required to serve special needs patients explain in part the limit on the numbers of dental professionals currently working with this needy population.

The results presented above suggest that more dentists would find children with intellectual disability as well as those with physical disability difficult to manage in the dental surgery as compared to the other categories of patients with special health care needs. These groups of patients are also treated by fewer dentists when compared to the other groups. Owens et al. (2006) in a review of the literature on visual and oral health needs of individuals with intellectual disabilities also found that their unmet oral health needs were greater than amongst the general population.

This study shows a strong relationship between practitioners having postgraduate training in the management of patients with special health care needs and how often they treat this group of patients ($p=0.001$). Hence, practitioners who have postgraduate training on the management of patients with special health care needs are more likely to provide treatment frequently for this group of patients than practitioners who have no such training. The study also revealed that only about one in five dentists in the respondent group has some postgraduate training in the management of patients with special health care needs. Practitioners who treat patients with special health care needs are often more likely to desire additional training on the management of these patients as opposed to practitioners who do not provide treatment often ($p=0.003$).

Limitations to this study include the response rate, which might not have given a very accurate perspective of dentists in Ireland. It is however a higher response rate than similar studies in Ireland and abroad (Casamassimo et al., 2004; Smith et al., 2009). The level of non-response bias for this study could not be determined due to its completely anonymous nature which made it impracticable for non-respondents to be followed up. Therefore, it has to be acknowledged that there is a possibility of non-response bias as their views could be quite different from those of the respondents. On this basis, it is likely that respondents to this study have a higher interest in the issue than non-respondents.

Conclusion

Despite its limitations, this study showed that the groups of patients with special health care needs which practitioners find most challenging to manage in the dental surgery were children with intellectual disability as well as those with physical disability. The study also noted that issues such as behaviour management, the degree of disability, and surgery resources such as disabled access, toilets, and availability of equipment for sedation as well as reimbursement for treatment were considered as barriers to the provision of care to patients with special health care needs by dentists. This study revealed that dentists who have some postgraduate training in the care of patients with special health care needs are more likely to treat this group of patients often and they in turn would value additional training in this area of dentistry.

Declaration of interest

The authors declare no conflict of interest.

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