A qualitative study of trends in patient preferences for the management of the partially dentate state

Mary Cronin[1], Sarah Meaney[1], Nicholas JA Jepson[2], P Finbarr Allen[3]

[1]Department of Public Health and Epidemiology, Brookfield, College Road, Cork, Ireland
[2]School of Dental Sciences, Framlington Place, Newcastle upon Tyne, UK
[3]University Dental School & Hospital, Wilton, Cork, Ireland

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Address for Correspondence:

Dr. Finbarr Allen
University Dental School & Hospital
Wilton
Cork
Ireland

e-mail: f.allen@ucc.ie
Fax No. 353 21 434 5737
Tel. No. 353 21 4901186

Abstract

Objective

To identify factors influencing attitudes of partially dentate adults towards dental treatment, in the Republic of Ireland.

Subjects and methods

Subjects A purposive sample of 24 partially dentate patients was assembled; 12 women and 12 men, ranging in age from 45 – 75 years.

Data Collection Semi-structured individual interviews

Results

Dental patients have increasing expectations in relation to (i) a more sophisticated approach to the management of missing teeth and (ii) their right to actively participate in decision making regarding the management of their tooth loss. There is some evidence of an age cohort effect with younger patients (45- 64 years) having higher expectations.

Conclusions

The evidence of an age cohort effect within this study in relation to higher patient expectations indicates that both contemporary and future patients are likely to seek a service based on conservation and restoration of missing teeth by fixed prostheses, rather than extraction and removable replacements, for the management of diseased and / or missing teeth.

INTRODUCTION

Changing patterns in age profile and oral health status in western countries have prompted much discussion in both academic and popular media regarding their likely impact on health and dental services .[1-3]

The Republic of Ireland (RoI) has for ten years been experiencing significant and profound demographic changes of an unprecedented nature. Similar to many other European countries it faces the challenges of an aging population; however, unlike most other European countries, it is simultaneously experiencing rapid population growth due to immigration. This pace of change is such that it is necessary to begin to anticipate future demands on dental services. While there are undoubtedly differences in the demographic profiles of the UK and the RoI, it is, nonetheless, reasonable to anticipate that Irish dental services will in the future deal with an increasing number of partially dentate patients, as was identified in the 1998 UK Adult Dental Health Survey.[4] The recently published survey of Irish adults oral health[5] mirrors trends in the UK, although differences in data collection methodology complicate direct comparison of the two surveys.

In the RoI there are three mechanisms for delivery of oral healthcare, namely (i) the Medical Card scheme (DTSS) (open to all adults over 70 years of age and in reduced socio-economic circumstances), (ii) the DTBS scheme (open to all insured workers) and (iii) under private contract. The co-existence of these three mechanisms reflects the mixed economy of welfare model in the RoI. In excess of €2.7m was spent on providing

Removable Partial Dentures (RPDs) to over 14,000 patients in the DTSS in 2002 and in excess of €1.2m for over 11,000 patients, excluding the patients' contributions, was spent in the DTBS. Information regarding the outcome of RPD provision to partially dentate adults in the RoI is currently lacking, and little is known about the effectiveness of tooth replacement strategies employed by dentists working in the RoI. Data from the most recently published oral health of Irish adults' survey, indicated that approximately 50% of adults over the age of 45 years in the Republic of Ireland required some form of denture. The survey also showed that 56% of adults over the age of 65 years need some kind of denture treatment, including repairs. Although this information is based on objective data collection criteria, it gives an indication of the potential scale of treatment need for adult patients in this jurisdiction.

While many adults have missing teeth, not all will necessarily seek treatment to replace them, or, use removable prostheses provided for them. Use of removable partial dentures is highly variable, and compliance has been reported as low as 60%.[6] This latter phenomenon has clear implications for public spending and, as with the UK, may represent a considerable waste of resources if subjective treatment need is not accurately identified.

The aim of this study was to identify factors which influence attitudes of partially dentate adults in the RoI towards dental treatment and to consider possible implications.

METHODOLOGY AND METHOD

Qualitative research is appropriate for the exploration of newly emerging trends within society.[7] Bower and Scrambler[8] have recently discussed the merits of qualitative

research in dental public health for understanding patients (and dentists) perspectives, motivations and frames of reference. This study employs an interpretive methodology to access the meaning attached by partially dentate people to tooth loss and its management. One-to-one semi-structured interviews were the chosen method of data collection. Ethical approval was secured from the Clinical Research Ethics Committee of the Cork Teaching Hospitals.

Due to the mixed economy of welfare in the RoI it is likely that during their lifetime many adult patients have received care from both public and private providers; therefore the study included both public and private patients. A purposive sample of partially dentate adults over the age of 45 years was assembled; tooth loss could have occurred because of disease, trauma or both. An initial attempt to recruit a random sample of participants from the Cork region via the national dental database was made using a letter of invitation; this process produced a very poor response rate (6%) and was abandoned. Subsequently, participants were recruited via dental clinics and through advertising to all staff grades within the researchers' university. The combined processes yielded a sample of twenty four people; each participant provided written consent and was given a voucher to the value of €30 on completion of the interview as acknowledgement of her / his contribution. Within the sample three age groups were defined: 45-54 years; 55-64 years and 65-75 years, to provide an opportunity to identify any trends across the full age range. We also attempted to ensure that the sample reflected variety in experience with dental treatment, and included a range of patients who had experience with fixed and removable prostheses.

Two researchers carried out the data collection, using an agreed topic guide, which drew from the work of Graham et al.[9] Each interview was digitally audio-recorded and contemporaneous notes were taken. Recordings were professionally transcribed in full; each transcript was checked for accuracy and any corrections required were made. Two interview recordings failed and these two participants were omitted; the analysis was based on the transcripts and notes of the other twenty two interviewees, 11 women and 11 men. This final number included a majority of Irish nationality and three people of other nationalities; some of the Irish interviewees had resided for a time in other countries. This is a useful feature of the study reflecting as it does the changing nature of the population in the RoI which will make future demands on the dental service.

DATA ANALYSIS

An inductive process of data analysis was undertaken involving both researchers, who identified emerging areas of interest and developed a coding framework while data collection was underway. As transcripts became available they were imported into NVivo7 software and coded on a line by line basis; the coding framework was altered as necessary to support the analytical process. Five key themes emerged with related sub-themes.

RESULTS

The five key themes were:

1. The importance attached by patients to tooth loss and its emotional impact
2. Motivation to seek treatment
3. Influences on type of treatment obtained
4. Levels of satisfaction with the use of Removable Partial Dentures
5. Expectations and Preferences for current / future treatment for self and others

The first four themes have been reported in recent literature [9]; therefore this paper focuses on the final, fifth theme which may be more novel and informative for dental practitioners and policy makers looking to the future. Within this theme 'Expectations and Preferences for current / future treatment for self and others', two sub-themes are discussed:

1) Patient's Rising Aspirations and Expectations regarding the Nature of Treatment
2) Patient's Rising Expectations regarding their Role in Decision Making

(It is important to note that the issues of importance of tooth loss and satisfaction with previous forms of treatment are linked with and influence these themes).

Responses based on these sub-themes are presented below, with illustrative quotes drawn as examples from the raw data. To preserve interviewee's anonymity each was designated a pseudonym; an age category, rather than the participant's age, is provided.

1) Patient's Rising Aspirations and Expectations regarding the Nature of Treatment

Within this theme a number of strands were evident:

a) The Influence of Changing Social Norms

b) The Importance attached to conservation of teeth

c) Aspirations for Future Management of Damaged / Lost Teeth

(1a) The Influence of Changing Social Norms

Participants identified that removal of diseased / damaged teeth was previously the norm in the RoI but is no longer the case. For example:

"Well, when I got the denture first day there was more a sort of an emphasis then on pulling really than filling, you know what I mean" (James, 65-75yrs).

"Sure it was the norm at that stage" (Joanie, 55-64yrs).

"*…when I grew up missing teeth were kind of the norm really and both my parents had dentures when I was a child and I thought, you know, that was the future, I don't think there was an understanding that you could have your teeth til you died"* (Andrew, 45-54yrs).

Interviewees identified the importance which they personally attach to having teeth, and which they perceive others to also attach, as being part of an increased concern within society regarding appearance and oral health. For example

"I mean for nowadays, and a … the world is so different you have to have your teeth you know and, but as I said I went for six months to school with no teeth" (Joanie, 55-64yrs).

"…my father and mother both had dentures. So maybe they weren't as careful about saving teeth as I became in my time with my children. They had a sweet tooth but I would always get them to clean their teeth after eating sweets. So they all have their teeth now, a generational thing I think, it has improved, teeth consciousness has increased" (Anne, 65-75yrs).

(1b) The Importance attached to Conservation of Teeth

Participants in the study, particularly (but not exclusively), those in the 45–54 and 55–64 year age groups, attached a high level of importance to the conservation of their own teeth which, as earlier quotes indicate, was less evident in previous generations in the RoI.

"I mean everything should be done before you talk extraction, I think, everything should be done" . …. I'll do everything to retain what I have now, rather than get them added to a denture, you know I'd go to any lengths" (Annette, 55-64yrs).

"I didn't really want to get rid of the last couple of teeth I had left like and I was saying is there anything you can do? I know they're a bit loose but like they were determined to take them out like, whereas I kind of wanted to hold on to them even though I know one of them, like they were really loose, but I didn't want to get rid of them, I had my last four teeth and I didn't want, I was hoping that they would be able to do something, to, to, so that I would keep on to them, you know ……. they're a part of me and they have to be there and I can't take them out you know" (Claire, 55-64yrs).

Extractions were described by many as a *"last resort".*

The level of importance attached to conservation was evidenced by a willingness to suffer physical pain and / or financial hardship. For example:

"I went back into the dental hospital to have my gum reduced, cut down and I don't know what else he did, you'd have to talk to him, but it was more, you know he was doing a lot of scraping, it took about half an hour or 45 minutes of work, so that there would be enough depth, height, you know, to have the crown attached" (Esther, 55-64yrs).

"I wouldn't go through the rest of my life with these teeth missing. By hook or by crook I'd get, I'd get them done no matter how much inconvenience or even if I had a bit of pain or suffering, I would put them back in" (Mark, 45-54yrs).

"And I have to say the first, the very first part of it when he started going into the jaw bone, I actually thought I would never have done this if I knew what I was going to experience, it was horrible, a horrible feeling and all that. But you know, like everything you get over it and will I do it again? Yes, if I have to" (Emily, 45-54yrs).

One patient rationalised having painful treatment on the basis that *"it means you don't have to have any other damage to your other teeth. The surrounding two teeth, so I thought that sounded like a good idea"* (Esther, 55-64yrs).

Two female participants expressed a willingness to accept treatment over a long period of time in order to achieve their preferred outcome. Some were willing to endure financial hardship:

"No, with teeth, with eyes, we go for the best. If we have to scrimp and save for a while we'll do it" (Anthony, 55-64yrs).

"I'm paying for this myself, well I'm taking a loan out through the credit union, just to pay it off monthly rather than try and pay it in full, but I'm taking this route because it is so important to me" (Emily, 45-54yrs).

"I think I would probably be quite aggressive about you know finding a solution for it, I'd try to save the tooth as much as possible, and I, I don't know what the expense of it would be but I'd have to cope with that anyway you know. I certainly wish I had held on

to this one a bit better and if it happens again I'm sure that I could come up with the finances, to save it if needs be, unless it's a whole lot or something" (Andrew, 45-54yrs).

However, for some, finance continues to impose limitations.

You know, if it had cost a lot of money I wouldn't have been able to afford to get it done, simple as that" (Claire, 55-64yrs).

"You know somebody might say they look like dentures, but sure if they do what can I do? This is as much as I can afford" (Nora, 65-75yrs).

(1c) Aspirations for Future Management of Damaged / Lost Teeth

Participants were asked to consider what advice they would give to family or friends about the management of damaged and / or lost teeth. Responses indicated high aspirations / expectations of treatment; for example:

"…in relation to missing front teeth, that they should be treated with, not given a denture but they should be allowed to have a bridge or a crown or whatever's necessary"(Emily, 45-54yrs).

"Oh heaven I would be going every other route apart from a denture, nowadays, this is what I'm trying to say, there is a big difference to the current thinking than in our time,

oh I'd do everything to tell them, but anyway they'd probably want it themselves, anyway, because they'd all, any of them, but themselves they would want to anyway, but, I'd certainly say to anyone, try everything else first, oh heavens I would" (Annette, 55-64yrs).

"I'd suggest to them that they think very carefully before they have a tooth extracted. And try to, if at all possible, if circumstances were that they could avoid it, ummm, you know, try to make sure there's another way" (Kieran, 55-64yrs).

There was also evidence that aspirations are accompanied by significant levels of knowledge:

"I suggested that he go and get the implants, so he's at present, presently he's having bone construction done to fit the implants in. So I would recommend the same treatment for other people" (Emily, 45-54yrs).

"....we are in the internet age as well so. I would have looked, done much more research into the whole thing myself" (Mark, 45-54yrs).

One participant said she'd advise a person who'd lost a tooth to ask their dentist if the root could be retained in the jaw even if the top had to be removed, so the jaw wouldn't recede and it might be possible to insert an implant at a later stage.

(2) Patient's Rising Expectations regarding their Role in Decision Making

Two strands were evident under this theme:

a) Satisfaction with, and expectation of, openness to discussion among dentists in contemporary practice
b) Increased assertiveness among dental patients

2a) Across all age groups interviewees described dentists as more open to discussion now than in the past, a feature which is regarded very positively.

"..... and dentists are more open now, they are more inclined to tell you that there is an option this or that" (Pauline, 45-54yrs).

"Yeah, I mean it's a very personal thing but some, you have a greater belief in some people, you feel they are better professionals. Very often the more they suggest the more you are impressed. If a dentist is simply on one track and inclined to pull teeth you don't have the same faith in them and you may find that you will move from them in that case" (Anne, 65-75yrs).

2b) There is clear evidence of an increased level of assertiveness and agency among patients in relation to making decisions about their oral health. This is apparent in quotes presented in sections 1(b) and 1 (c) and also below:

"I don't know, pick a good dentist and make sure they give you all your options and think through it and weigh up the expense against the thirty years or forty or fifty years that you're going to be missing that tooth for the rest of your life, you know, and having to have a denture in there, you know, and if you calculate it out it's probably going to be a small price to pay really, you know, if you can save the tooth" (Andrew, 45-54yrs).

"I was willing to go back and say to him, "Look this is annoying me," you know, "What are you going to do with it?" Whereas the first time around, I just hid! I might have stayed away from him for two years or something, you know, and say rather than go back and say, it's not working" (Mark, 45-54yrs).

DISCUSSION

The findings of this study reveal higher expectations and aspirations among all participants regarding future dental treatment for tooth loss and patient participation in decision making. There's evidence of an age cohort effect with those in the 45-64 years age group expressing higher expectations both for the present and the future; there is no evidence of gender difference. These findings of higher expectations echo those of the 2001 European Commission report on 'The Future of Health Care and Care of the Elderly: Guaranteeing Accessibility, Quality and Financial Viability'.[1] They also mirror a well documented social trend of the emergence of a more assertive and better educated general population, which is more likely to challenge historically authoritative knowledge

and professions and to seek a role in discussions and decision making related to their health[10-14]. According to Adshead and Thorpe[15] "We are engaging with a more articulate, educated, consumer society, with a keen interest in their own health, and an increasingly active media".

On that basis it is reasonable to consider these findings to be reliable and plausible. Attention shifts, therefore, to consideration of the implications for dentistry and public spending.

Social norms have changed. Patients who have experienced tooth disease and/or loss are no longer satisfied with extractions and the provision of Removable Partial Dentures. In this study, while older patients experienced in the use of RPDs seemed reasonably favorably disposed toward them for their personal use, they did not consider them ideal and would not recommend them to others. The younger participants (45-65 years) rejected extraction and RPD's as modes of treatment, mirroring findings reported elsewhere. They appear to aspire, above all, to conservation of their own teeth; if this is not possible, they would like fixed replacements which look 'natural' and do not damage proximate teeth. This suggests the need for increasing provision of conservative dental procedures and fixed prosthodontics. Demand for conventional fixed bridgework and implant retained restorations is likely to increase, as patients become better informed about the possibility of these options through the media and the Internet. In turn, this will have to be considered by policy makers in publicly funded healthcare systems.

Whilst this change in attitude to conservation of teeth is to be welcomed, it also may have implications for the training of dentists and oral healthcare professionals. According to Espelid et al[16] "Knowledge of the patients' view is necessary as patients' rights are an issue of increasing importance in dental practice" . Increasing patient assertiveness and knowledge suggests the emergence of a more complex dentist – patient relationship. Dentists and dental educators must now consider how best to develop skills and attitudes appropriate to working with, as opposed to simply 'treating', patients. Dentists need to be cognisant of the patient's knowledge, willingness to endure hardships and right to participate in the decision making process. It will be important that dentists consider participatory discussion as a legitimate aspect of their work. While it is well established that dentists take time to present options to patients, in the past this may have been motivated by the desire to minimise the risk of litigation; a participatory process of decision making, in contrast, is based on the concept of mutual respect. Discussion of this nature has obvious time implications and may necessitate alterations in the scheduling of appointments. Furthermore, continuing professional development initiatives need to recognise these changing trends. It is likely that many dentists will need to develop further skills in treatment planning for an aging population and in further aspects of fixed prosthodontics. The changing role of removable partial dentures must also be considered by the profession, as evidence indicates varying patient compliance with this form of treatment .

At the same time it is essential that dentists retain confidence in their professional knowledge, skills and experience and adhere to standards of best practice. Changing

social norms, increasing affluence and popular pressures regarding appearance are such that patients may present to dentists with unrealistic aspirations and / or demands. In this context dentists' professionalism and ethical standards may at times be placed under increased pressure, requiring them to possess effective negotiation and communication skills in order to secure patient agreement for appropriate treatment.

Conclusion

Changes in dental patients' attitudes clearly signal changes for dentistry and policy makers. If patient demand is influential these changes will include an increased emphasis on conservation and restorative dentistry. It is necessary that oral health is effectively promoted to ensure that public spending is not over burdened; it is equally important that public dental services take account of patients subjective treatment needs, in order to ensure effective spending of public funds and avoidance of mismanagement of resources. This study provides insights into changes regarding the management of tooth loss among patients in the RoI, a small, newly affluent, western society. It is possible that findings of this Irish study are reflective of changes occurring in many societies, based as they are on shared social phenomena such as an increasingly educated population, with a high level of exposure to the mass media and rising levels of access to dental information via the internet.

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