Oral health status of non-phobic and dentally phobic individuals; a secondary analysis of the 2009 Adult Dental Health Survey

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FULL PAPER DETAILS

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Introduction The aim of this study was to conduct an exploration of differences in oral health behaviour and outcome between dentally phobic and non-phobic participants in the UK Adult Dental Health Survey (ADHS, 2009). The null hypotheses for this study were that there are no differences in oral health status of non-phobic and dental phobic individuals. **Methods** The ADHS survey covered the adult population in England, Wales and Northern Ireland and was commissioned by the NHS Information Centre for Health and Social Care (NHS IC). Dental anxiety was defined using the Modified Dental Anxiety (MDAS) with the cut-off point set at 19 and above as indicating dental phobia. Descriptive statistics were calculated and the chi-square test was used to compare both groups in terms of their demographics, oral health, oral health-related behaviour and attitudes, and treatment. **Results** More women (16.8% [1,023]) than men (7% [344]) reported dental phobia. Generally, people with dental phobia were in routine occupations (648 [47.7%]), single (402 [29.4%]) and with lower educational attainment (858 [80.9%]). They were irregular attendees (798 [58.5%]), had a less restored dentition, increased numbers of one or more teeth with caries (292 [39.9%]), and were more likely to have PUFA (puss, ulceration, fistulae, abscess) scores of one or more (89 [12.2%]) in comparison to the non-phobic group (314 [5.6%]). However, people with and without dental phobia had similar numbers of sound and missing teeth (34.5% of the phobic group had 20 or more sound teeth in comparison to 31.7% of the non-phobic group). There were significant differences ($p < 0.001$) between the phobic group's and non-phobic group's Oral Health Impact Profile-14 (OHIP) and Oral Impacts on Daily Performance (OIDP) scores with phobic participants having generally higher scores. Additionally, the phobic group responded negatively more commonly about their most recent dental treatment in terms of dentists' ability to listen to their concerns, explaining the reasons for their dental care while paying full attention to their needs by treating them with respect and dignity. The difference between the two groups was statistically significant ($p < 0.001$). **Conclusions** Participants reporting dental phobia are mostly females, irregular attendees and have a greater treatment need with increased caries levels.

In this *BDJ* article, Heidari *et al*. report on a secondary analysis they have performed using the enormous data set provided by the 2009 Adult Dental Health Survey (ADHS). This type of analysis provides an opportunity for researchers to interrogate a large data set without using up large amounts of limited time and resources collecting the information themselves.

It is important to remember that the sample size for the 2009 ADHS was enormous: 13,400 households in England, Wales and Northern Ireland. A total of 11,380 individuals were interviewed and 6,469 adults were examined, which makes it the largest ever epidemiological survey of adult dental health in the British Isles and one of the biggest comprehensive oral health surveys in the world.[1]

Considering the enormity of the data set provided, secondary analysis is hugely important as it allows researchers to use their expertise in a specific field so that the data is interrogated to eek out as many answers about the state of the nation's oral health as possible. This then helps us to create a future direction for dentistry. As the survey coordinator himself Jimmy Steele (and his co-authors) states in one of a series of 2012 papers in this Journal discussing the ADHS:[1] 'The results of the survey are rich and have more to reveal but are an essential starting point for thinking about clinical care and dental policy for the future.'

The authors of this analysis use the data to investigate the differences between non-phobic and dentally phobic patients in relation to their oral health status and oral health-related quality of life. This shows up all sorts of connections relating to the demographic characteristics, social status and dissatisfaction with dental treatment – a good use of those rich survey results.

The full paper can be accessed form the *BDJ* website (www.bdj.co.uk), under 'Research' in the table of contents for Volume 219 issue 9.

Ruth Doherty
Managing Editor

1. Steele J G, Treasure E T, O'Sullivan I, Morris J, Murray J J. Adult Dental Health Survey 2009: transformations in British oral health 1968–2009. *Br Dent J* 2012; **213:** 523–527.

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IN BRIEF
- Highlights that dentate people with dental phobia have higher levels of active caries, higher PUFA scores and report poorer oral health-related quality of life in comparison to non-phobic adults.
- Reports that there were no differences in the number of sound and missing teeth and sugar intake.

COMMENTARY

This paper reports a secondary analysis of existing National Adult Dental Health Survey (2009) data, to identify differences between phobic and non-phobic adults. Many trends in oral health behaviours and outcomes identified will confirm the experience of individual practitioners. Phobic patients generally require longer treatment times and this paper helps quantify the extent of the problem which may be usefully considered by those involved in decisions about how NHS dentistry should be remunerated. Studies such as this one can be useful in using already existing data to provide quantitative evidence to inform future research and service provision.

Results are based on a clinical examination of 6,469 adults in England, Northern Ireland and Wales and an associated questionnaire. The study found that far more women (16.8%) than men (7%) reported dental phobia. Dental phobics had a lower educational attainment and were less likely to attend regularly.

In terms of oral health behaviours, those reporting dental phobia were less likely to report brushing twice daily, less likely to report interdental cleaning and less likely to use an electric toothbrush. Phobic participants exhibited higher plaque levels and bleeding scores. However, those with and without dental phobia were found to have very similar numbers of sound or missing teeth. Although the number of carious teeth was higher in those reporting dental phobia, perhaps surprisingly there was no difference between the two groups in periodontal pocket depth or loss of attachment. Those reporting dental phobia were over twice as likely (12.2%) to have clinically evident pus, ulceration, fistulae or abscesses associated with carious teeth than those not reporting phobia (5.6%).

The results confirmed a far greater impact on the Oral Health Related Quality of Life of those reporting dental phobia. Unsurprisingly, phobic patients perceived their visits to the dentist as more negative than non-phobics. Of note to clinicians dealing with phobic patients, however, is that they were also more likely to state that their dentist did not listen to their concerns and that they had insufficient time to time to discuss treatment needs. Dental phobics were also more likely to cite cost of care as a reason to avoid treatment.

The authors then relate their findings back to previous studies and discuss possible explanations, with the caveat that causation cannot be attributed in cross-sectional studies.

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AUTHOR QUESTIONS AND ANSWERS

1. Why did you undertake this research?

The incidence and prevalence of dental phobia has been relatively constant within the UK population despite the advanced techniques that have been introduced in modern dentistry. We were interested in finding out whether the presence of a dental phobia was associated with poorer oral health, and the inclusion for the first time of a standardised measure of dental anxiety in the most recent Adult Dental Health Survey provided the opportunity to characterise the oral health of individuals with dental phobia in comparison to their less anxious counterparts.

2. What would you like to do next in this area to follow on from this work?

We would like to explore in more detail why people with dental phobia have poorer oral health. One particular problem with the analysis presented here is that there are demographic differences (age and social class) between the individuals with and without phobia. We are planning to perform logistic regression analysis in order to control for the effects of demographic and behavioural variables. Ultimately, we are hoping to explore the use of non-invasive preventive strategies with people with dental phobia in order to ameliorate the most prevalent diseases presented in this group which include caries and periodontal disease. In this way we hope to help people maintain their oral health while they come to terms with their dental phobia.

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