

ORIGINAL ARTICLE

Are single mothers in Britain failing to monitor their oral health?

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Objectives: This study was designed to identify association between self reported dental attendance patterns and family structure in the UK.

Design: A national study involving 666 women with dependent children.

Setting: Home interviews were undertaken exploring time and reason for last dental visit. In addition, numerous sociodemographic and service related characteristics were collected.

Results: Bivariate analysis identified that family structure was associated with respondents' self reported dental attendance patterns: marital status ($p < 0.01$), number of children ($p < 0.05$), and age of children ($p < 0.05$). When the combined effects of age, family structure, income, educational attainment, working status, and service factors (difficulty obtaining a NHS dentist and time taken to get an appointment) on dental attendance were explored, family structure emerged as a very important predictor of service use. Notably, young (age 16-34) single mothers and those with more than two children were less likely to have attended the dentist within the past year for reasons other than a dental emergency compared with older (age 35 or more), mothers from a two parent family and those with one or two children.

Conclusion: Family structure is associated with self reported dental attendance patterns. Young single mothers with more than two children may be failing to monitor their oral health appropriately.

The structure of the family is changing globally with an increase in the number of single parent families.¹⁻³ This has demanded special attention in terms of health because families play a crucial part in emotional support, behavioural adaptation needed to adjust to a disease or treatment, and to the financial cost of health care.³ Consequently the influences of family structure on general health have been collected for some time now. Early work focused on the influence of family structure on the health of the children, reporting poorer health status and poorer health behaviour practices among children from lone parent families.⁴⁻⁵ More recently the health of the single parent has been investigated and findings have suggested that single parents have poor health status, particularly psychologically, and moreover that they may be neglecting to monitor their health status by failing to utilise health services appropriately.⁶⁻⁸

The influence of family structure on oral health by comparison has received relatively little attention despite the growing consensus of the significance of the family in the sociopsychological processes underlying oral health related behaviour.⁹ That aside, there have been reports that children from single parent families have a higher presence of caries and utilise dental services less often.¹⁰⁻¹² There is a dearth of information about oral health status and oral health behaviour practices of the single parents themselves. Moreover, there is a lack of information on the likely influence of family size or the impact of the age of the child on parents' use of dental services.

The aims of this study were to identify associations between self reported dental attendance patterns and family structure and disparities in attendance patterns between a single mother compared with a mother of a two parent family. In addition, to explore the influences of family size (number of children) and age of the child on the reported dental attendance pattern of the parent. Furthermore, to determine whether the influence of family structure was still apparent having controlled for numerous sociodemographic factors and service related factors.

SUBJECTS AND METHODS

Study population

This study was carried out with the assistance of the Office for National Statistics of Great Britain utilising as a vehicle two "omnibus surveys", which were carried out over a two month period in 1999. The sampling frame in both cases was the British Postcode Address File, the most complete list of household addresses in Britain. A random probability sample of 6000 addresses was selected in a multistage sampling technique whereby 200 postal sectors were selected and within each sector 30 addresses were selected randomly. Of the 6000 selected addresses, 5385 were eligible addresses. Ineligible addresses included new and empty premises at which no private households were dwelling. Trained interviewers sought to carry out face-to-face interviews with an adult respondent (aged 16 or older) at eligible addresses. Women head the majority of single parent families in Britain and thus the decision was to focus on a subgroup of the main study—mothers with dependent children (aged < 16)—rather than include all parents because of the relatively small number of male single parents for analysis.

Data collection

Respondents were interviewed about their use of dental services, reason for their last dental visit, difficulty experienced in obtaining a NHS dentist, and perceived time taken to get a dental appointment. In addition, sociodemographic characteristics of the respondent were collected: age, marital status, number and age of children, employment status, educational attainment, and household income.

Data analysis

Response rate and frequency distribution of responses to the items relating to dental attendance pattern were explored.

Abbreviations: CI, confidence interval; OR, odds ratio

Table 1 Profile of study group

	No (%) [*]
Age group	
≤34	343 (52)
≥35	323 (49)
Age completed education	
Up to 16	347 (52)
≥16	319 (48)
Marital status	
Single, never married	154 (23)
Married, living with spouse	352 (53)
Married, separated from spouse	58 (9)
Divorced	94 (14)
Widowed	8 (1)
No of children	
1 or 2	538 (81)
≥3	128 (19)
Children under the age of 5	
Yes	283 (43)
No	383 (58)
Employment status	
Working outside the home	362 (54)
Not working outside the home	304 (46)
Income band (per year)	
<£6240	342 (51)
>£6240	313 (47)
Declined to answer	11 (2)
Difficulty in accessing a NHS dentist	
No difficulty/some difficulty	530 (80)
Great difficulty/found it impossible	133 (20)
Declined to answer	3 (1)
Perceived time taken to get a dental appointment (non-emergency in months)	
<1	555 (83)
≥1	92 (14)
Don't know/declined to answer	19 (3)

^{*}Rounded up to nearest whole per cent.

Table 2 Self reported dental attendance patterns

	No (%)
Time since last dental visit	
Within the past 12 months	537 (81)
More than one year ago	128 (19)
Declined to answer/don't know	1 (<1)
Reason for last dental visit	
Pain or emergency	86 (13)
Check up	422 (63)
Pain/treatment/referred	155 (23)
Declined to answer/don't know/never attended	3 (1)
Dental attendance category	
Regular	483 (73)
(Attended within past year for reason other than emergency)	
Irregular	180 (27)
(Attended over one year ago/within past year for an emergency)	
Declined to answer	3 (1)

Table 3 Variation in dental attendance by family structure

Family structure	No (%) of regular attenders	No (%) of irregular attenders
Marital status [*]		
Married, living with spouse	273 (78)	77 (22)
Single/separated/divorced or widowed	210 (67)	103 (33)
No of children ^{**}		
1 or 2	400 (75)	136 (25)
≥3	83 (65)	44 (35)
Child under 5 years old ^{**}		
Yes	193 (69)	88 (31)
No	290 (76)	92 (24)

^{*}Two sided χ^2 test, $p<0.01$.

^{**}Two sided χ^2 test, $p<0.05$.

Respondents were categorised into "regular" and "irregular" dental attenders based on time and reason for last dental visit. "Regular" attenders were those who claimed they attended the dentist within the past year for a reason other than a dental emergency. "Irregular" attenders were those who claimed they attended the dentist over a year ago or reported attending the dentist in the past year for a dental emergency. Association between self reported dental attendance patterns and family structure variables were explored through bivariate analysis using χ^2 statistics. Further analysis utilising logistic regression analysis was carried out to investigate the combined effect of the variables (sociodemographic and service related) on dental attendance pattern to identify most important predictors of service utilisation.

RESULTS

The overall response rate for the omnibus surveys was 69% with 3739 people participating in the study. Of the 5385 eligible addresses selected, 22% refused to take part in the omnibus study. Nine per cent of respondents could not be contacted despite three separate home visits by the interviewers. The subgroup of women with dependent children was 666; their profile is presented in table 1.

Eighty one per cent (537) claimed they visited the dentist within the past year (table 2). Thirteen per cent (86) claimed that the reason for their last dental visit was because of pain or other dental emergency. Seventy three per cent (483) were categorised as being "regular" attenders, reporting that they attended the dentist within the past year for a reason other than a dental emergency.

Bivariate analysis identified that "regular" dental attendance was associated with family structure (table 3). Mothers who were married and living with their spouse more frequently claimed they attended the dentist within the past

year for a reason other than a dental emergency compared with single mothers ($p<0.01$). Variations in attendance patterns were also apparent in relation number and age of children. Those who had a greater number of children (three or more) were more frequently categorised as "irregular" attenders compared with those who had one or two children ($p<0.05$). Furthermore, those with a child under the age of 5 (preschool children) were less frequently categorised as "regular" attenders compared with mothers with older children ($p<0.05$).

After further analysis (logistic regression) it was evident that family structure remained an important predictor of dental attendance, having accounted for sociodemographic and dental service related factors (table 4). Mothers who were married and living with their spouse were 58% more likely to claim they attended the dentist within the past year for a reason other than a dental emergency (odds ratio (OR) 1.58, 95% confidence interval (CI) 1.09 to 2.30). In addition, mothers with more than two children were 40% less likely to be "regular" attendees compared with mothers with one or two children (OR 0.60, 95% CI 0.39 to 0.92). Among the sociodemographic variables, age was evident as an important predictor of dental service utilisation; those aged 35 or more (above the median age of the group) were more likely to have been "regular" dental attenders compared with the younger age group (age 16–34) (OR 1.48, 95% CI 1.02 to 2.16).

DISCUSSION

Regular dental attendance enables the early detection of disease, conservative intervention to be provided when treatment is necessary, monitoring of the health of the whole mouth, and appropriate dental health advice to be provided.¹³ Thus the recommendation for all to have an oral examination

Table 4 Findings from the logistic regression analysis

Dependent variable: regular attender	Regression coefficient	SE	Odds ratio	95% CI for Exp (B)	p Value
Constant	0.747	0.146			<0.001
No of children 0 = 1 or 2 1 = ≥3	-0.515	0.219	0.598	(0.389 to 0.919)	0.019
Age group of parent 0 = 16-34 1 = ≥35	0.392	0.193	1.481	(1.015 to 2.160)	0.042
Marital status 0 = No 1 = Yes	0.459	0.191	1.582	(1.087 to 2.302)	0.017
Children under age 5 0 = No 1 = Yes					0.537
Employment status (work outside home) 1 = Yes 2 = No					0.532
Income band (per year) 0 = <£6240 1 = >£6240					0.320
Age completed education 0 = Up to 16 1 = ≥16					0.549
Difficulty in accessing a NHS dentist 0 = No difficulty/some difficulty 1 = Great difficulty/found it impossible					0.563
Perceived time taken to get a dental appointment (non-emergency) (months) 0 = <1 1 = ≥1					0.893

once a year remains a key message in promoting oral health.¹⁴ This study is one of the first national studies to explore associations with family structure and self reported dental attendance. The large sample size and national perspective provides a major strength to this research. However, it is important to note that self reported dental attendance patterns and "actual" dental attendance patterns may vary considerably, as has been reported in several studies.^{15, 16}

Three quarters of the study group were categorised as "regular" dental attenders, reporting that they attended the dentist in the past year for reasons other than a toothache or dental emergency. This provided further evidence of the increase in dental service utilisation in Britain over the past few decades and identifies that women have remained high consumers of dental services, as highlighted in the 1998 UK adult dental health survey.¹⁷

That aside, bivariate analysis identified disparities in self reported dental attendance patterns by family structure in relation to marital status, age of child and number of children, suggesting that family structure influences parents' oral health behaviour practices. Moreover, findings from the regression analysis demonstrated that family structure remained an important predictor of service utilisation (self reported) having accounted for known sociodemographic and service predictors of dental attendance. Single mothers were considerably less likely to have attended the dentist within the past year for a reason other than a dental emergency compared with mothers from a two parent family. This suggests that single parents are a high risk group in relation to dental service utilisation and may be neglecting to monitor their oral health appropriately, as has been suggested about their use of medical services.⁷ This is likely to have consequences for the oral health of women in Britain given the rapid changes in the family structure.

It is of note that the number of children was also an important predictor of service use; those who had more than two children were less likely to be categorised as regular attenders compared with those with one or two children. This draws attention to the demands experienced by many mothers in car-

ing for their children, where their own health may be neglected, as has been suggested in the medical literature.⁶ Interestingly the younger women (16-34) were less likely to have visited the dentist compared with those 35 and over; this age variation is in keeping with the findings of others that suggest people in their 30s and 40s are high users of dental services.¹⁷

Thus, it appears that young single mothers with a number of children are at particular risk of failing to monitor their oral health appropriately. This is of importance for all health care workers who work with parents of young children, particularly health visitors and family doctors, who have already played an important part in promoting oral health.^{18, 19} Their oral health promotion activities may now need to be extended to the lone parents with dependent children to ensure that they are monitoring their oral health appropriately. Moreover, it is important that dental care providers identify and overcome access barriers for single mothers to enable them to utilise services regularly.

CONCLUSION

The study concludes that family structure is associated with dental attendance patterns and that young single mothers with a number of children are at particular risk of failing to monitor their oral health appropriately. This has implications for all those involved in promoting oral health and highlights the influence of the family in oral health; this warrants further investigations given the rapid changes in family structure globally.

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REFERENCES

- 1 **Department of Health and Social Security.** *Report of the committee on one-parent families (10 per cent) Great Britain.* London: DHSS, 1974.
- 2 **Haskey J.** One parent families and their dependent children in Great Britain. *Popul Trends* 1998;**91**:5–14.
- 3 **Mayo NE, Wood-Dauphinee S, Cote R, et al.** There's no place like home: an evaluation of early supported discharge for stroke. *Stroke* 2000;**31**:1016–23.
- 4 **Friede A, Baldwin W, Rhodes PH, et al.** Young maternal age and infant mortality: the role of low birth weight. *Public Health Rep* 1987;**102**:192–9.
- 5 **Resnick MD, Wattenberg E, Brewer R.** The fate of the non-marital child: a challenge to the health system. *J Community Health* 1994;**19**:285–301.
- 6 **Macran S, Clarke L, Joshi H.** Women's health: dimensions and differentials. *Soc Sci Med* 1996;**42**:1203–16.
- 7 **Benzeval M.** The self-reported health status of lone parents. *Soc Sci Med* 1998;**46**:1337–53.
- 8 **Hope S, Power C, Rodgers B.** Does financial hardship account for elevated psychological distress in lone mothers? *Soc Sci Med* 1999;**49**:1637–49.
- 9 **Inglehart MR, Tedesco LA.** The role of the family in preventing oral diseases. In: Cohen LK, Gift HC, eds. *Disease prevention and oral health promotion.* Copenhagen: Munksgaard; 1995: 271–305.
- 10 **Waldman HB.** Changes in families and getting youngsters to the dentist. *J Dent Child* 1997;**64**:212–17.
- 11 **Whittle JG.** Attendance patterns and dental health of parents and children. *Community Dental Health* 1993;**10**:235–42.
- 12 **Bolin A-K, Bolin A, Jansson L, et al.** Children's dental health in Europe. *Swed Dent J* 1997;**21**:25–40.
- 13 **Murray JJ.** Attendance patterns and oral health. *Br Dent J* 1996;**181**:339–42.
- 14 **Health Education Authority.** *The scientific basis of dental health education: a policy document.* 4th Ed. London: HEA, 1996.
- 15 **Nuttall NM, Davies JA.** The frequency of dental attendance of Scottish dentate adults between 1978–1988. *Br Dent J* 1991;**171**:161–5.
- 16 **Sjostrom O, Lind SO, Holst D.** Pattern of attendance to dentists and hygienists in the County of Goteborgs and Bohus lan during 1990–1992. *Community Dental Health* 1998;**15**:77–81.
- 17 **Kelly M, Steele J, Nuttall N, et al.** *Adult Dental Health Survey—oral health in the United Kingdom 1998.* London: Stationery Office, 2000.
- 18 **McGrath C, Moles DR, Bedi R, et al.** Oral Health promotion training for health visitors and school nurses in the UK. *International Journal of Health Education.* 1998;**36**:43–5.
- 19 **Evans DJ, Howe D, Maguire A, et al.** Development and evaluation of a sugar-free medicines campaign in north east England: analysis of findings from questionnaires. *Community Dental Health* 1999;**16**:131–7.