

ORIGINAL ARTICLES

Infant Feeding Intentions of Scottish Adolescents

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Abstract

Despite its health benefits, only 63% of women in Scotland will attempt to breastfeed. Our aim was to investigate future feeding intentions and attitudes in adolescents in the south east of Scotland. Of the 757 adolescents questioned, 78.8% of girls (n=430) and 61.6% of boys (n=130) stated an intention to breastfeed or to encourage their partner to breastfeed. Knowledge of being breastfed as an infant was the only factor associated with a higher Iowa Infant Feeding Attitude Score and proportion that either intend to breastfeed or support breastfeeding in the future.

Introduction

Breastfeeding is a major public health issue, as it confers significant health benefits to both mother and infant.¹ Exclusive breastfeeding for four to six months reduces the number of respiratory infections and cases of gastroenteritis in the first year of life, the risk of otitis media, atopic diseases and urinary tract infections. Another postulated benefit is reduced risk of sudden infant death syndrome. In the mother, benefits include reduced risk of pre-menopausal breast and ovarian cancer. There are also economic benefits - it is cheaper and there is less absenteeism in breastfeeding compared with formula feeding mothers.²

Disappointingly, despite these benefits and extensive health promotion there has only been a small increase in the percentage of women who start breastfeeding in recent years.³ Scotland performs less well compared to the rest of the UK - about 63% of women in Scotland will initially breastfeed, compared with a UK average of 69%. Moreover, 30% of mothers in England and Wales, and an estimated 40% of mothers less than 24 years old will never attempt to breastfeed. This is disappointing when compared with the 2% of mothers in Sweden who do not breastfeed.

Many factors are known to influence a woman's infant feeding decision. In women of reproductive age these include socio-economic class, age, marital status, education, family and peer support with factors relating to social exclusion adversely affecting the feeding decision.^{4,5,6,7} However, evidence suggests more than 50% of women make their feeding decision pre-conception and that this is unlikely to be changed by education in the antenatal period.⁸ It may be that these feeding beliefs and decisions are made during adolescence. Adolescents could therefore be an important group to target with public health

initiatives and education aimed at improving breast-feeding rates. To date, there is a paucity of information regarding the opinions and future feeding intentions of adolescents. This information is essential to enable development of effective targeted public health education for adolescents. The primary aim of this study was therefore to investigate Scottish adolescents' future breastfeeding intentions. The secondary aim was to investigate which factors influence these intentions using the Iowa Infant Feeding Attitude Scale (IIFAS).

Methods

Study Design and Recruitment

A cross-sectional between subjects design was used in a sample of secondary school pupils in south east Scotland. Secondary schools with different socio-economic mix (n=16; seven fee-paying; nine state) were contacted by letter addressed to the head teacher. Those that failed to reply to the first letter within three weeks were sent a second letter giving them a further opportunity to take part in the study. Participants were from three academic year groups: Senior 4 (aged 14 - 15), Senior 5 (aged 15 - 16) and Senior 6 (aged 16 - 18) with class groups being selected by school timetable and class availability. Verbal informed consent was obtained from participants and the Edinburgh University Ethics Committee provided ethical approval.

Instrument Used

All participants completed a questionnaire which contained questions about demographics, breastfeeding intentions and the IIFAS. The IIFAS is a reliable and validated test used to assess breastfeeding attitudes in adults.⁹ It has previously been tested for reliability and validity in the United States and United Kingdom and has been shown to have good internal consistency, with a Cronbach's alpha of ≥ 0.85 . It consists of 17 attitude statements, to which the participants are asked to respond on a five-point Likert scale. A higher IIFAS score indicates a more pro-breastfeeding attitude and is associated with a greater chance of the woman breastfeeding. Questionnaires were administered and collected during social education classes. Pupils were encouraged not to discuss the questionnaires whilst completing them in an attempt to gain true opinions and minimise peer pressure.

Demographic Details and Breastfeeding Intentions

Basic demographics including age, school year, educational status, parental occupation and home situation were ascertained in all participants. Parental occupation was used as a proxy marker for socio-economic class.

Occupations were initially classified in accordance with National Office for Statistics Standard Occupational Classification 2000 and then sub-classified into health-care (occupational sub major codes 22 and 32), non-healthcare (all other health care classification codes), unemployed and other (including housewife, househusband, deceased and student). Home situation was categorised as both parents and parent with partner, single parent or other which included boarding house and foster care. Finally all respondents were asked whether they were breastfed as a baby, whether they had seen anyone breastfeeding and whether they would consider breastfeeding or, if male, would encourage their partner to breastfeed.

Statistics

Data was analysed using Statistical Package for Social Sciences for Windows, version 13 with significance $p \leq 0.05$. The median and interquartile ranges of total IIFAS score were calculated. Data were analysed by Mann Whitney - U, Kruskal - Wallis test and chi squared test of association. Fisher's exact chi squared technique was used where criteria for chi squared test of association could not be met.

Results

Demographic Data

Out of the original 16 secondary schools contacted, four agreed to participate in the study (two fee-paying; two state). Of the 770 pupils who participated, 13 did not complete the questionnaires fully. The final study population consisted of 757 adolescents comprising both girls ($n=546$; 72%) and boys ($n=211$; 28%). Overall, 43.2% of adolescents attended fee-paying school and 56.8% state school. However, 100% of boys who participated attended state schools because none of the three fee-paying boys' schools contacted agreed to take part in the study. Regarding the girls, the percentage attending fee-paying and state school were 59.9% and 40.1%, respectively. The percentage of adolescents in Senior 4, 5 and 6 were 40.7%, 37.6% and 21.7% respectively. The majority had both parents or parent and a partner at home (82.4%), with a minority having a single parent (14.3%) or other home circumstance (3.3%). Regarding maternal and paternal occupation, occupation was classified as non-health care (62.0%: 81.3%), health care (15.3%:7.8%), unemployed (18.4%:3.2%) and not known (4.3%:7.7%), respectively.

Future Breastfeeding Intentions

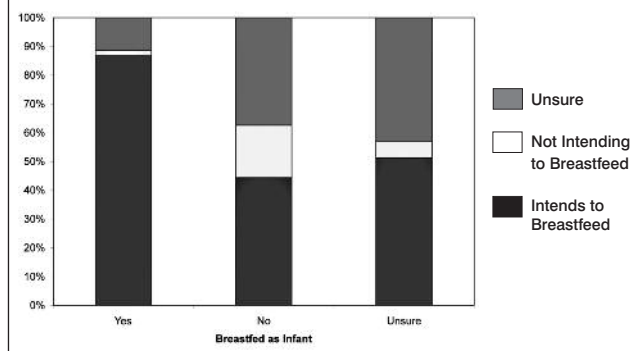
Overall 78.8% of girls intend to breastfeed in the future and 61.6% boys intend to encourage their partner to breastfeed. Only 4.8% of girls and 4.7% of boys do not intend to breastfeed or encourage their partner to do so in the future. The remaining 16.4% of girls and 33.7% of boys were unsure about future infant feeding intentions. These data were supported by the median IIFAS score which demonstrated that attitudes towards infant feeding were significantly different ($p < 0.0005$) between those who intend to breastfeed (IIFAS score; 59.0), those who do not intend to breastfeed (IIFAS score; 48.5) and those who were unsure (IIFAS score; 51.0).

Factors Affecting Intentions and Attitudes (IIFAS) to Breastfeeding

Knowledge of being breastfed as an infant was the only factor significantly ($p < 0.0005$) correlated with future intention to breastfeed with over 90% of those who were breastfed either intending to breastfeed or support a partner with breastfeeding in the future (Figure 1).

Figure 1: Future Feeding Intentions Analysed by How Fed as Infant

Of those breastfed as an infant 86.9% intend to breastfeed in the future, 1.8% intend to bottle-feed and 11.4% were unsure. Of those bottle-fed as an infant, 44.4% intend to breastfeed in the future, 18.2% intend to bottle feed and 37.4% were unsure. Finally amongst those unsure about how they were breastfed, 51.3% intend to breastfeed, 5.8% intend to bottle feed and 42.9% were unsure.



Moreover, median IIFAS score was significantly ($p < 0.0005$) influenced by knowledge of being breastfed as an infant with the median IIFAS scores of those who were breastfed, bottle-fed or who were unsure about how they were fed being 59.0, 53.0 and 54.0, respectively.

Neither parental occupation, including maternal and paternal health care occupation ($p=0.314$; $p=0.151$, respectively) nor home situation ($p=0.558$) affected the IIFAS score. Interestingly, the type of school that girls attended also had no effect on future feeding intentions ($p=0.296$) and attitudes ($p=0.335$). However, significantly more girls at fee-paying school were aware they had been breastfed when compared with those at state school ($p=0.019$). A comparable statement cannot be made about school type and boys. Exposure to breastfeeding did not influence future feeding intentions in either girls ($p=0.121$) or boys ($p=0.079$) but was associated in girls with a significantly ($p=0.006$) higher IIFAS score. This may be related to the observation that significantly more girls than boys had seen any breastfeeding (90.5% vs. 79.6%; $p < 0.0005$).

Discussion

The majority of adolescents questioned had strong views about whether they would or would not like to breastfeed or encourage their partner to do so in the future. It is not clear whether these intentions were long-standing, or had been made at the time of asking. The IIFAS scale was employed to investigate breastfeeding attitudes and to ascertain whether there was any basis to the participants' stated intentions.⁹ Although the IIFAS scale has been used in several studies in the UK and US it has not previously been used in adolescents. In this study, the IIFAS score did correspond to stated future feeding intentions and on no occasion was a mean higher score paradoxically associated with a stated intention to formula feed. We therefore believe that this scale may be a useful and valid tool to assess attitudes to feeding in an adolescent population.

The results from this study can not be generalised to the UK given that the schools involved were from a small area. In addition, there is potential sample bias with 66.2% of our study population being breastfed as an infant. In Scotland, the breastfeeding rate in 1990 was only 35.6%.

However, rates were slightly higher in the Edinburgh (39.1%) and the Scottish Borders (45.5%) regions from which our study population was taken.⁹ Despite the current proactive movement by the Scottish Breastfeeding Strategy Group to integrate breastfeeding into the education system we found gaining access to schools and adolescents difficult. This problem was also encountered by several of the studies referred to in the Department of Health Report which investigated Breastfeeding Practice Projects in England and Wales between 1999 - 2002.¹⁰ This report cited adverse teacher attitudes as a significant factor limiting access to schools, a problem we also encountered.¹¹

This bias should not distract from the study's important finding which is that adolescents who believe they were breastfed have more positive breastfeeding intentions and attitudes. Moreover factors which influence feeding decision in adults such as age, socio-economic status do not influence adolescents' attitudes towards future infant feeding. If the 16.4% of girls and 33.7% boys who were unsure of their infant feeding intentions are considered, there is the potential for over 95% of girls and boys to breastfeed or to encourage their partner to do so in the future. This is certainly possible given that the primary reason for being unsure about breastfeeding was lack of knowledge. These findings have implications for breastfeeding education in terms of the value of the current education and the development of education in the future. Questions that must be considered are how we should be educating adolescents and teachers about breastfeeding, or whether we should be educating couples at all as the attitudes towards breastfeeding are lower amongst those who have been educated than those who have not.

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