The relationship between personal breastfeeding experience and the breastfeeding attitudes, knowledge, confidence and effectiveness of Australian GP registrars

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Abstract

In conjunction with other health professionals, doctors believe they play an important role in promoting breastfeeding to women. Although many have positive breastfeeding attitudes, significant knowledge deficits often limit their capacity to effectively encourage, support and assist breastfeeding women and their infants. Personal breastfeeding experience (of self or partner) may be the main source of breastfeeding knowledge and skill development and is related to improved knowledge, more positive attitudes and greater confidence. This paper describes the relationship between the cumulative length of personal breastfeeding experience and the breastfeeding knowledge and attitudes of a cohort of Australian general practice (GP) registrars, as well as their confidence and perceived effectiveness assisting breastfeeding women. The Australian Breastfeeding Knowledge and Attitude Questionnaire containing demographic items, a 20-item attitude scale and a 40-item knowledge scale was distributed between February and May 2007 to Australian GP registrars in their final year of training. Participants with more than 52-week cumulative personal (self or partner) breastfeeding experience had the highest mean knowledge score, had more positive attitudes, and were more confident and effective than all other participants. Parents with limited personal experience (≤ 26 weeks) had the poorest breast-feeding attitudes and their knowledge base was similar to participants with no personal experience. Confidence and perceived effectiveness when assisting breastfeeding women rose with increasing cumulative breastfeeding experience. Personal breastfeeding experience *per se* does not guarantee better breastfeeding knowledge or attitudes although increasing length of experience is related to higher knowledge, attitude, confidence and perceived effectiveness scores.

Keywords: Australia, breastfeeding attitudes, personal breastfeeding experience, breastfeeding confidence, breastfeeding knowledge, general practitioner

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Introduction

The decision a mother makes to initiate and continue to breastfeed is not just a life style choice (Moore & Coty 2006), but a public health issue. There is strong evidence indicating that infants who are not breastfed suffer more illness and have a greater chance of dying than those who are exclusively breastfed (Ip *et al.* 2007). Additionally, there are both short-and long-term consequences of early weaning for the mother and infant (National Health & Medical Research Council 2003; Gartner *et al.* 2005; Horta *et al.* 2007). The National Health & Medical Research Council in Australia recommends exclusive breastfeeding for the first 6 months of life and continued breastfeeding for at least 12 months, with a target of 80% of women breastfeeding 6 months postpartum (National Health & Medical Research Council 2003).

In conjunction with other health professionals, doctors believe they play an important role in promoting breastfeeding to women (Freed *et al.* 1995c; Power *et al.* 2003; Finneran & Murphy 2004; Nakar *et al.* 2007). Furthermore, breastfeeding initiation (Bentley *et al.* 1999; Lu *et al.* 2001; Li *et al.* 2004) and duration (Taveras *et al.* 2003; Li *et al.* 2004) increase when doctors provide information, support and encouragement to women.Although studies indicate that doctors have positive attitudes to breastfeeding (Williams & Hammer 1995; Ingram 2006; Nakar *et al.* 2007), significant knowledge deficits often limit their capacity to assist breastfeeding women and their infants (Freed *et al.* 1995a; Williams & Hammer 1995; Burglehaus *et al.* 1997; Guise & Freed 2000; Finneran & Murphy 2004). Training for doctors about breastfeeding is frequently described as inadequate (Freed *et al.* 1995c; Schanler *et al.* 1999; Pascoe *et al.* 2002; Finneran & Murphy 2004), with many relying on personal breastfeeding experience (of self or partner) as a main source of breastfeeding knowledge and skill development (Freed *et al.* 1995c; Finneran & Murphy 2004).

In a recent small qualitative study of Australian GP registrars, participants who lacked personal experience with breastfeeding felt insecure with their breastfeeding knowledge and skills and thought personal experience was necessary for them to become effective practitioners (Brodribb *et al.* 2007). Quantitative studies also show that personal experience with breastfeeding (either ever breastfed or breastfed for more than 2 weeks) or being a parent is related to higher breastfeeding knowledge (Freed *et al.* 1995a; Ingram 2006), confidence (Freed *et al.* 1995c; Schanler *et al.* 1999; Power *et al.* 2003) and attitudes (Barnett *et al.* 1995; Chen *et al.* 2001; Ingram 2006). The relationship between breastfeeding attitudes and being a parent, however, is not consistent with one study finding no difference in attitudes between parents and non-parents (Williams & Hammer 1995), and another study finding parents had poorer breastfeeding attitudes (Kim 1996).

The issue of breastfeeding often becomes more important for doctors when they become parents- to-be or parents and, for many, further information and knowledge will be gained during the antenatal period by attending antenatal classes and reading lay pregnancy and breastfeeding books (Brodribb *et al.* 2007) regardless of the final infant feeding decision. The act of breastfeeding and common and uncommon difficulties faced during this period also provides a wealth of learning opportunities for both mothers and fathers. However, not all doctors with personal breastfeeding experience encounter the same issues and nor do they all learn information that can effectively assist other breastfeeding women. Similar to women in the general population, many may wean early because of insurmountable breastfeeding difficulties (Australian Bureau of Statistics 2003), affecting their perception of breastfeeding and the breadth of the breastfeeding knowledge learnt. Conversely, others will breastfeed without problems resulting in a different set of perceptions and knowledge. Consequently, assuming that a doctor who is a parent or who has some (albeit limited) personal breastfeeding experience is more knowledgeable and competent to assist breastfeeding women than others may not be correct. There is no research documenting whether longer breastfeeding experiences have a more significant effect on breastfeeding attitudes and knowledge than more limited experience with breastfeeding.

This paper describes the relationship between the cumulative length of personal breastfeeding experience and the breastfeeding attitudes, knowledge, confidence and perceived effectiveness of a cohort of Australian GP registrars. It is part of a larger mixed method study investigating the breastfeeding knowledge and attitudes of Australian GP registrars.

Method

Participants

GP training in Australia consists of 3 or 4 years of hospital-based and supervised GP practice terms after completion of at least 12-month working in an approved hospital post-graduation. GP registrars are enrolled with one of 21 Regional Training Providers (RTPs) Australia-wide who conduct and oversee their training. All but two RTPs agreed to assist with the study by distributing a questionnaire and participant information sheet by email or another appropriate method to all the GP registrars in their final year of training enrolled with them.

Ethics approval

Ethics approval was obtained from the Behavioural and Social Sciences Ethical Review Committee, University of Queensland, Australia (Clearance No. 2005000456).

Materials

The 90-item Australian Breastfeeding Knowledge and Attitude Questionnaire included items relating to demographics, breastfeeding attitudes and breastfeeding knowledge. It took approximately 15 minutes to complete. Demographic information requested included gender, year of birth, year of medical graduation, place of birth and medical training and whether they were a parent. If they were parents, participants were asked whether any of their children were breastfed and if so, what the cumulative length of breastfeeding experience was. Personal breastfeeding experience, defined as either breastfeeding by the participant or their partner, was then collapsed into four categories: no experience (no children or no attempt to breastfeed); ≤ 26 weeks experience; 27–52 weeks experience; and >52 weeks experience. Twenty-six weeks was chosen as the first cut point for those initiating breastfeeding as it is the minimum time recommended for exclusive breastfeeding. Participants with personal breastfeeding experience were also asked if their experiences were positive, negative or neutral. Negative and neutral responses were combined to form a dichotomous variable: positive and not positive breastfeeding experiences.

Twenty attitude items using a 5-point Likert scale (*strongly disagree, agree, neither agree nor disagree, agree, strongly agree*) were selected for inclusion from 33 attitude items used by Scott *et al.* (2003) studying midwives in Scotland. Negatively worded items were reverse scored so that higher attitude scores always represented more positive attitudes. Cronbach's alpha for the 20-items used in the present study was 0.83. Following the removal of two items that had a corrected item-total correlation of <0.2, the final Cronbach's alpha for the 18 attitude item scale was 0.84 indicating good internal consistency (Streiner 2003). This was a similar figure to that found by Scott *et al.* (2003).

Following review of previously used and validated questionnaires and qualitative data obtained earlier in this research project, 40 items were developed for the knowledge scale. Responses were on a 5-point Likert scale with the addition of a 'don't know' response. Again, negatively worded items were reverse scored so that '5' represented the correct response. 'Don't know' responses were coded as *neither agree nor disagree* as both responses indicated an inability or unwillingness by the

participant to give a definitive answer to the item. Seven items had corrected item-total correlations of <0.2. Three of these items – (1) *It is normal for an adequately breastfed 2-week-old infant to only pass a bowel motion every 3 daysorso.* (2) *Amoxycillin is the drug of choice to treat mastitis in a woman 3 months postpartum.* (3) *Increasing her fluid intake will increase a mother's milk supply.* – were retained in the scale to maintain content validity. The final Cronbach's alpha for the 36-item knowledge scale was 0.83 again indicating good internal consistency. The attitude and knowledge scores for each participant were calculated by summing the score for each question and dividing by the number of items in the scale so that 1.0 represented the poorest attitudes and knowledge while 5.0 represented the most positive attitudes and the highest knowledge score.

Five-point Likert scales were used by participants to rate how confident they were in their ability to assist women who presented with breastfeeding problems and how effective they thought they were in meeting the needs of the breastfeeding women they saw. A score of '5' indicated a rating of very confident or very effective respectively.

To ensure face validity the questionnaire was reviewed by three doctors with breastfeeding expertise working in primary care and a researcher with a background in breastfeeding education. Following refinements, the questionnaire was pilot tested with 10 GP registrars who had previously expressed an interest in the present study but were ineligible to participate.

Data analysis

Data analysis was conducted using SPSS for Windows (version 14) (SPSS 2005). Demographic data were presented as numbers and frequencies or means, standard deviations (SD) and range. *t*-test for independent samples was used to compare the mean age of the study cohort with the mean age of the final year GP registrar population (personal communication, General Practice Education and Training Ltd 2007). Attitude, knowledge, confidence and perceived effectiveness scores were described with means and 95% confidence intervals. ANOVA was used to evaluate differences between group means for continuous dependent variables with a normal distribution. An alpha level of 0.05 was used in all omnibus tests, with sequential Bonferroni *post hoc* comparisons being used to determine the location of significant differences between groups.

Procedure

Four hundred and eighty-three eligible registrars, in all Australian states except Tasmania, received an electronic and/or hard copy of the questionnaire between February and May 2007. All registrars received at least three reminders to complete and return the questionnaire. Return of the completed questionnaire was deemed to imply informed consent.

Results

Demographics

The response rate from RTPs varied from 100% to 11.4% with 161 completed questionnaires being returned by eligible registrars to give an overall response rate of 33%. The mean age of the cohort (35.3 years, SD = 6.1, range = 27–54) was similar to the average age of all final year registrars (35.9 years, SD = 6.4, range = 27–63, *t*-test for independent samples $t_{504} = 0.98$,*P* = 0.33) while the mean number of years since graduation was 8.7 years (SD = 5.4, range = 2–32).The study cohort is further described in Table 1. There was a greater proportion of women in the study cohort (71.1%) than in the registrar population (57%; chi-squared: $\chi_1^2 = 7.99$, *P* = 0.005), although similar proportions of male and female participants were parents (male = 60.5%, female = 55.9%; $\chi_1^2 = 0.269$, *P* = 0.60). There

were no differences in cumulative length of personal breastfeeding experience between male (none 40.5%, ≤ 26 weeks 7.1%, 27–52 weeks 21.4%, >52 weeks 31%) and female registrars (none 43.1%, ≤ 26 weeks 15.3%, 27–52 weeks 18.9%, >52 weeks 21.6%; chi-squared: $\chi_3^2 = 2.85$, P = 0.42). Only one parent had no personal breastfeeding experience. Eight of the 11 participants who had not had positive breastfeeding experiences accounted for 40% of those who had breastfed for less than 26 weeks in total while the remaining three had breastfed for between 27 and 52 weeks in total.

Mean attitude, knowledge, confidence and perceived effectiveness scores with their 95% confidence intervals and the results of ANOVA are presented in Table 2.

Table 1. Socio-demographic characteristics of the sample

Variable	Participants	
	n	%
Gender (*n* = 159)		
Male	46	28.9
Female	113	71.1
Parental status (*n* = 156)		
Parent	89	57.1
Non-parent	67	42.9
Cumulative length of breastfeeding (*n* = 155)		
No breastfeeding	67	43.2
≤ 26 weeks	20	12.9
27-52 weeks	31	20.0
>52 weeks	37	23.9
Type of breastfeeding experiences (*n* = 88)		
Positive	77	87.5
Not positive	11	12.5

Attitude score

Participants with cumulative personal breastfeeding experience of ≤ 26 weeks had the lowest mean attitude score. This score was significantly lower than the mean score for those who had no experience and for those with >52 weeks cumulative experience with breastfeeding while the mean attitude score for participants with >52 weeks cumulative experience was significantly higher than for every other group (see Table 2).

Table 2. Mean attitude, knowledge, confidence and effectiveness scores by length of cumulative breastfeeding experience

	Mean score (95% confidence interval)				ANOVA
	No breastfeeding experience (*n* = 67)	≤ 26 weeks cumulative experience (*n* = 20)	27–52 weeks cumulative experience (*n* = 31)	>52 weeks cumulative experience (*n* = 37)	
Attitudes	4.00*† (3.90, 4.11)	3.65*‡ (3.51, 3.80)	3.94§ (3.79, 4.09)	4.23†‡§ (4.09, 4.38)	$F_{3,151} = 16.83$ $P < 0.001$
Knowledge	3.36* (3.30, 3.41)	3.23†‡ (3.07, 3.39)	3.45† (3.34, 3.56)	3.55*‡ (3.45, 3.65)	$F_{3,151} = 16.33$ $P < 0.001$
Confidence	2.65*†‡ (2.41, 2.88)	3.30* (2.99, 3.61)	3.61† (3.28, 3.95)	3.73‡ (3.49, 3.97)	$F_{3,151} = 8.99$ $P < 0.001$
Perceived effectiveness	2.70*† (2.49, 2.92)	3.10‡ (2.73, 3.47)	3.55* (3.18, 3.91)	3.87†‡ (3.64, 4.09)	$F_{3,151} = 6.73$ $P < 0.001$

*,†,‡,§ Means followed by the same symbols in the same row indicate significant differences (P < 0.05)

Knowledge score

Participants with ≤ 26-week cumulative personal breastfeeding experience also had the lowest mean knowledge score although it was not significantly lower than participants with no experience. The mean knowledge score of participants with no breastfeeding experience was lower than that for participants with >52-week cumulative experience (see Table 2).

Confidence

Mean confidence levels gradually rose with increasing cumulative personal breastfeeding experience. However, the only statistically significant differences were between participants with no personal experience and each cumulative breastfeeding experience group (see Table 2).

Perceived effectiveness

Perceived effectiveness also rose with increasing cumulative personal breastfeeding experience. There was a significant difference in means between those with no experience and those with 27–52-week and >52-week cumulative experience. There was also a significant difference in perceived effectiveness between those with ≤ 26-week cumulative experience and those with >52-week cumulative experience (see Table 2).

Discussion

The response rate of 33% for this questionnaire is similar to that obtained for a breastfeeding questionnaire sent to Australian midwives (Cantrill *et al.* 2003) and a postal questionnaire investigating learning needs of Australian rural and urban general practitioners (Allan & Schaefer 2005). Even so there is a risk that the respondents had a greater interest or more experience with breastfeeding than non-respondents. In this cohort of GP registrars over half were parents and the infants of all but one had been breastfed initially. Additionally, of the 88 registrars (or their partners) who initiated breastfeeding only 20 (22.7%) had ≤ 26-week cumulative experience while 42% had more than 52-week cumulative experience. No comparable data are available for the whole final year GP registrar population. However, Australian breastfeeding initiation rates in general are high, especially for women with more education and higher socioeconomic status (Blyth *et al.* 2004; Hegney *et al.* 2004; Graham *et al.* 2005), suggesting that breastfeeding rates in the present study are not unexpected in this population. Most previous studies have not asked for cumulative breastfeeding duration but rather the longest breastfeeding duration for an individual child or the average duration of breastfeeding per child. It is, therefore, uncertain whether the length of breastfeeding for the participants in this study is similar to that experienced by participants in other studies such as an Australian study where doctors enrolled in a breastfeeding education course breastfed each child for 9.1 months on average (McIntyre & Lawlor-Smith 1996), and a sample of Israeli doctors who had breastfed for an average of 7 months (Nakar *et al.* 2007).

While a greater proportion of female than male registrars completed the questionnaire, there were no differences in length of cumulative personal breastfeeding experience with gender. This is at odds with a small study of doctors-in-training conducted in the USA, where 50% of partners of male doctors were breastfeeding at 12 months compared with only 8% of female doctors (Kacmar *et al.* 2006), many female doctors citing difficulties combining work and breastfeeding as the main reason for weaning (Miller Miller *et al.* 1996).

No distinction has been made between female registrars who breastfed their own infants and male registrars whose partners had breastfed. While it would seem the two experiences would be very different, results not presented in this paper indicated that women and men with breastfeeding experience had similar breastfeeding attitudes and knowledge scores.

Attitudes

The mean attitude score for registrars with more than 52 weeks of cumulative personal breastfeeding experience was higher than for all other cumulative personal breastfeeding experience groups. However, there was not a linear increase in attitude scores with increasing breastfeeding experience. Mean attitude scores for participants with ≤ 26-week cumulative experience were significantly lower than for those with no breastfeeding experience, while mean scores for those with no experience and with 27–52-week cumulative experience were very similar.

One explanation for these results may be a need for the registrars with ≤ 26-week cumulative personal breastfeeding experience to normalize and defend their decision to stop breastfeeding before the recommended time, regardless of their reason for weaning. For example, 25% of participants with ≤ 26-week cumulative breastfeeding experience agreed with the item – *Breastfeeding and formula feeding are both equally acceptable methods of feeding infants.* – compared with less than 5% of participants from the other three groups. Similarly, 80% of participants with ≤ 26 week cumulative breastfeeding experience agreed that – *Breastfeeding is incompatible with working outside the home.* – compared with less than 50% of other participants. Agreeing that infant formula and breastfeeding are equivalent and that it is not possible to breastfeed and work outside the home enables these participants to justify decisions they may have already made regarding infant feeding (Murphy 1999). Conversely, those who have more than 26-week cumulative experience with breastfeeding also have a need to justify their decision to continue to breastfeed, while participants without children may have an idealistic view of breastfeeding, not recognizing or understanding the difficulties that often arise.

Alternatively, the group of participants with ≤ 26 week cumulative experience may have had lower breastfeeding attitudes before they became parents. Prospective studies in Scotland, the USA and Australia found that women with lower breastfeeding attitude scores antenatally were less likely to initiate breastfeeding (Scott *et al.* 2004) and breastfed for a shorter time (de la Mora *et al.* 1999; Scott *et al.* 2006).

Similarly, there was a relationship between higher breastfeeding attitudes and a longer duration of breastfeeding (de la Mora *et al.* 1999; Scott *et al.* 2006). There was a moderate correlation between the infant feeding attitudes of mothers and their partners (Scott *et al.* 2004) suggesting that these results are applicable to the present study where the definition of breastfeeding experience includes the breastfeeding duration of a participant or their partner. Breastfeeding attitudes, therefore, may be affected by the cumulative length of breastfeeding experience or the length of breastfeeding may reflect long held attitudes.

Additionally, as most of the registrars who did not have a positive breastfeeding experience breastfed for 26 weeks or less in total, these experiences may have had a negative effect on their breastfeeding attitudes.

Groups of parents and non-parents may each contain people with a range of breastfeeding attitudes. For example, the range of attitude scores of the participants without breastfeeding experience (similar to non-parents) in this study was '3–5'. The breadth of the range of attitudes may help explain the inconsistencies in the results of previous studies investigating doctors' breastfeeding attitudes and parental status. While two studies indicate that parents have higher attitudes than non-parents (Chen *et al.* 2001; Ingram 2006), one found no relationship (Williams & Hammer 1995), and another found parents to have lower breastfeeding attitudes than non-parents (Kim 1996).

Overall it appears that there is a complex relationship between attitudes and cumulative personal breastfeeding experience with the possibility of breastfeeding behaviour both being affected by and altering breastfeeding attitudes.

Knowledge

There was a trend suggesting that as the cumulative length of breastfeeding increased, so did breastfeeding knowledge. Nevertheless, the group of participants with ≤ 26-week cumulative personal breastfeeding experience had the lowest mean knowledge score, although it was not significantly different to those with no experience. There are a number of potential explanations for these findings. Participants with ≤ 26-week cumulative experience may have had inadequate breastfeeding knowledge initially and relied on this knowledge when breastfeeding their own infant, resulting in early weaning. Alternatively, they may have encountered few breastfeeding issues or problems, or been given inappropriate or incorrect information or advice during the time their infant was breastfed. In contrast, participants with longer cumulative experience are more likely to encounter a wide variety of problems, issues and information about breastfeeding that are not always included in undergraduate or vocational training. In particular, personal breastfeeding experience appears to be valuable for learning about practical, day-to-day management issues (Brodribb *et al.* 2007).

In addition, differences in knowledge scores may relate to different types of breastfeeding experiences. Forty per cent of the participants with ≤ 26-week cumulative breastfeeding experience did not feel positive about these experiences. Lowe (1990) found that women with negative breastfeeding experiences had lower knowledge scores than men, and women who had either not breastfed or had had positive breastfeeding experiences.

While other studies have not explored the relationship between negative experiences and breastfeeding knowledge, Schanler (1999) found that the knowledge scores of paediatricians who were parents without breastfed children and those without children were similar while those with breastfeeding experience had higher scores. Two studies comparing parents with non-parents found no difference in breastfeeding knowledge (Williams & Hammer 1995; Kim 1996), while a third found a significant difference (Chen *et al.* 2001). A recent UK study of doctors and other health professionals working in a primary care setting also found a significant difference in breastfeeding knowledge between parents and non-parents prior to an educational intervention. This difference was no longer apparent 4- to 6-week post-intervention, suggesting that personal breastfeeding experience is important when formal education is lacking (Ingram 2006). Other doctors and mixed groups of health professionals with some breastfeeding experience (not defined or more than 2 weeks) were more knowledgeable (Barnett *et al.* 1995; McIntyre & Lawlor-Smith 1996), more likely to give correct responses for breastfeeding management scenarios (Freed *et al.* 1995a) and were more likely to know that breastfed babies and formula fed babies grow differently (Guise & Freed 2000) from those with no breastfeeding experience, suggesting that there is a connection between personal experiences and breastfeeding knowledge.

Confidence and perceived effectiveness

There is a clear linear relationship between cumulative length of personal breastfeeding experience and confidence and perceived effectiveness. Participants with no experience were significantly less confident and felt they were less effective assisting breastfeeding women than all other participants. Rather than an increase in expertise with breastfeeding issues for all parent participants, however, this increase in confidence may in part be due to more frequent handling of small infants and managing their day-to-day problems.

Qualitative data supports the notion that doctors with personal breastfeeding experience are more confident when managing breastfeeding problems, while doctors without personal experience admit

not feeling confident in this area (Brodribb *et al.* 2007). Personal breastfeeding experience has also been associated with higher confidence in a number of studies (Freed *et al.* 1995a; Williams & Hammer 1995; Burglehaus *et al.* 1997; Schanler *et al.* 1999; Pascoe *et al.* 2002) while Freed *et al.* (1995a) also found an impact on perceived effectiveness.

Limitations

As mentioned previously with a response rate of 33%, there is the risk of responder bias with registrars having a greater interest in breastfeeding completing the questionnaire. Additionally, the questionnaire contained 90 items and registrars may have thought that they did not have time to complete and return it considering their work load and study commitments leading up to their final examination. The results, therefore, may not be indicative of the whole GP registrar population but may be skewed towards those with better knowledge and more positive attitudes, and with greater breastfeeding experience.

The participants of this study were doctors-in-training, many having limited professional experience in general practice, so their knowledge and skills may not reflect those of doctors with longer experience. However, this cohort was chosen to assess the breastfeeding attitudes and knowledge of doctors nearing completion of their formal training before the influence of professional experience had an impact.

Conclusion

Personal experience with breastfeeding is often quoted as an important source of breastfeeding information and skill development for doctors, especially if other learning avenues provide little formal training at an undergraduate or vocational level (Freed *et al.* 1995b). Additionally, there is often an assumption that doctors with personal breastfeeding experience will be more knowledgeable, be more positive about breastfeeding and will be more confident and effective when assisting breastfeeding women. Many studies investigating the relationship between being a parent and having breastfeeding experiences have supported these assumptions.

However, the findings of this study question whether these assumptions can be applied universally to all doctors who are parents, or have breastfeeding experience. In particular, it appears that doctors who have had a relatively short experience with breastfeeding have poorer breastfeeding attitudes than all other groups, and that their breastfeeding knowledge is similar to doctors who have no breastfeeding experience. It also suggests that doctors with limited breastfeeding experience are more confident and perceive they are more effective than their knowledge and attitudes would indicate. As a consequence they may convey to a mother a negative or neutral view about breastfeeding and an impression that it doesn't really matter if they breastfeed or not: views that negatively affect breastfeeding initiation and duration rates (Counsilmann *et al.* 1983; DiGirolamo *et al.* 2003). Additionally, they may provide mothers with inaccurate and outdated advice based on their own personal experiences.

Although there are other health professionals and lay counsellors to assist with breastfeeding, women still attend their GP with breastfeeding problems and concerns expecting to receive appropriate advice and encouragement. As a general principle, to be effective practitioners doctors must be able to apply the theoretical knowledge that they have learnt to solve practical problems within a specific context. There are often limited opportunities for this to happen with breastfeeding issues during medical programmes and vocational training. Therefore, personal breastfeeding experience provides an avenue for doctors to acquire breastfeeding problem solving skills within a social and emotional context not otherwise readily available to them. However, appropriate clinical teaching could reduce the reliance placed on successful breastfeeding experiences by registrars to provide them with the knowledge and skills they need (Ingram 2006). Information learnt from personal experience is not unique but

appropriate information and learning opportunities can be provided to all, regardless of their parenting or breastfeeding status.

It is inevitable that becoming a parent and having personal experience with breastfeeding will alter the professional relationship a doctor has with a breastfeeding woman. However, this study suggests that the relationship between personal breastfeeding experience and breastfeeding knowledge, attitudes, confidence and perceived effectiveness is not straightforward. Relying on personal experience with breastfeeding to improve breastfeeding knowledge and attitudes may not be an appropriate way to encourage best practice within the general practice community.

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Conflicts of interest

None declared.

Key messages

- Doctors who have personal experience with breastfeeding do not always have more positive breastfeeding attitudes than those who do not have children.
- Breastfeeding knowledge increases with increasing length of experience with breastfeeding.
- Becoming a parent increases confidence and perceived effectiveness with breastfeeding consultations.
- Personal experience with breastfeeding cannot be relied upon to encourage breast-feeding best practice for general practitioners.

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