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Breastfeeding knowledge

The experiences of Australian general practice registrars

Background

Breastfeeding is an important public health measure. General practitioners are in an ideal position to provide information, support and encouragement for breastfeeding women but require up to date knowledge and skills. Overseas studies indicate that doctors often have significant breastfeeding knowledge deficits. This article examines the sources of information about breastfeeding available to general practice registrars and the perceived adequacy of this knowledge for their work in the general practice setting.

Methods

A 90 item questionnaire covering demographics, breastfeeding training, knowledge, attitudes, confidence and effectiveness was distributed to 483 subsequent term general practice registrars between February and May 2007 via regional training providers.

Results

The questionnaire response rate was 33%. The most common avenue for learning about breastfeeding was at medical school (49.4%), while the most useful source of breastfeeding information was personal breastfeeding experience for registrars who were parents (62.2%), and during hospital terms after graduation for registrars who were not parents (35.5%). Only 23.6% of the participants thought they did not require further breastfeeding information.

Discussion

Breastfeeding training opportunities in medical schools and postgraduation are limited. There is a clear need for a breastfeeding training program for both general practice registrars and GPs.

■ In Australia, the National Health and Medical Research Council and The Royal Australian College of General Practitioners recommend breastfeeding for at least the first 12 months of an infant's life,^{1,2} based on the known disadvantages of not breastfeeding for the mother and child.^{3,4} A Victorian study found that the mean number of visits by mothers to a general practitioner in the first 6 months postpartum was 7.7.⁵ General practitioners are therefore in an ideal position to assist and support breastfeeding women.

General practice registrars believe that their professional responsibilities with regard to breastfeeding include providing breastfeeding information, supporting mothers' infant feeding decisions, offering support and encouragement, asking about infant feeding, and referring appropriately.⁶ Registrars therefore need knowledge and skills that are up to date, evidence based and appropriate to the general practice setting.

Overseas studies indicate that doctors often have significant breastfeeding knowledge deficits,⁷⁻¹⁰ with a majority of surveyed doctors thinking that breastfeeding education undertaken during medical school and vocational training was inadequate.¹¹⁻¹⁴

No previous studies have considered the adequacy of Australian doctors' breastfeeding learning experiences. This article, as part of a larger mixed methods study, describes the perceived adequacy of breastfeeding training.

Methods

A 90 item questionnaire, developed specifically for this study, included three items relating to breastfeeding training and other items designed to gather information on demographics, breastfeeding



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attitudes, knowledge, confidence and perceived effectiveness. A knowledge score (minimum = 1, maximum = 5) was derived from 36 individual items and is described in more detail elsewhere.¹⁵

One item rated participants' self reported confidence assisting breastfeeding women (1 = not very confident, 5 = very confident) and one item rated participants' perceived effectiveness assisting breastfeeding women (1 = not very effective, 5 = very effective).

The definition of personal breastfeeding experience was the participant or the participant's partner having breastfed. Three GPs with breastfeeding expertise and a researcher with breastfeeding education experience assessed the questionnaire for content and face validity. It was pilot tested by 10 registrars and took approximately 15 minutes to complete.

Data were analysed using SPSS for Windows (Version 14). Training and demographic data were presented as descriptive statistics and chi-squared and t-tests were used to compare these data with demographic data from all subsequent term registrars obtained from General Practice Education and Training Ltd. Analysis of variance with Bonferroni post hoc comparisons was used to evaluate the relationship between the rating of previous breastfeeding training and knowledge, confidence, and perceived effectiveness. An alpha level of 0.05 was used throughout the analysis.

Questionnaires were distributed to 483 subsequent term registrars Australia wide through regional training providers (RTPs) between February and May 2007. All but two RTPs agreed to participate. The registrars received at least three email reminders to complete and return the questionnaire, which was deemed informed consent.

Ethics approval was granted from the Behavioural and Social Sciences Ethical Review Committee of the University of Queensland (clearance no. 2005000456).

Results

Completed questionnaires were received from 161 subsequent term general practice registrars (response rate 33%). Not all registrars answered all questions.

Age, gender, place of training and parental status

Participants were of a similar age to the cohort of subsequent term registrars (registrar mean age 35.9 years, SD: 6.4, range 27–63; participant mean age 35.3, SD: 6.1, range 27–54, $t(504)=0.98$, $p=0.33$). However, participants were more likely to be women (registrars 58.8%, participants 71.1%, $\chi^2(1)=9.88$, $p=0.002$) and to have been born in Australia (registrars 49.6%, participants 59.6%, $\chi^2(1)=6.26$, $p=.01$). A similar proportion of male and female participants were parents (male $n=26$, 60.5%, female $n=62$, 55.9%, $\chi^2(1)=0.269$, $p=0.604$).

Adequacy of knowledge about breastfeeding

Of the total, 35.7% ($n=56$) of participants thought their previous training was inadequate for their present needs, and 40.8% ($n=64$) wanted to know more about breastfeeding. Only 23.6% ($n=37$) thought they had sufficient knowledge for their present needs and required no further breastfeeding information. Gender and place of training produced no significant difference in these responses, although registrars who were parents were more likely to think they had adequate knowledge than registrars who were not (*Table 1*).

Analysis of variance with Bonferroni post hoc comparisons showed that participants who thought their training was inadequate had lower knowledge scores, were less confident, and perceived they were less effective assisting breastfeeding women than participants who thought their training was adequate (*Table 2*).

Fewer than 50% of participants remembered some breastfeeding training during their undergraduate medical program, and 46.9% remembered learning about breastfeeding in hospitals postgraduation. The fourth and fifth most common sources of information were nonprofessional breastfeeding experiences – either personal experiences or experiences of family and friends (*Table 3*).

Of the participants who were parents, 62.2%, as well as 27.5% male and 38.1% female participants, thought personal breastfeeding experience was the most useful source of information for learning about breastfeeding (*Table 4*). Participants who were not parents most commonly stated that education provided in a hospital postgraduation was the most useful. Some participants thought that general practice (7.5%) or medical school (4.8%) were the most useful source of breastfeeding education. Only 3.4% ranked local education sessions (eg. education sessions provided by RTPs or divisions of general practice) as being the most useful.

Table 1. Differences in rating of previous training with gender, parental status and place of training

Participants' rating of previous breastfeeding training	Gender (n=155)		Parental status (n=152)		Place of training (n=153)	
	Male (%)	Female (%)	Parent (%)	Nonparent (%)	Australia (%)	Overseas (%)
Adequate for what I need now	9 (20)	27 (24.5)	28 (32.9)	8 (11.9)	29 (23.6)	7 (23.3)
Adequate but I would like to know more	15 (33.3)	48 (43.6)	31 (36.5)	31 (46.3)	46 (37.4)	16 (53.3)
Inadequate for what I need now	21 (46.7)	35 (31.8)	26 (30.6)	28 (41.8)	48 (39.0)	7 (23.3)
Chi-squared test	$\chi^2(2)=3.07$, $p=0.22$		$\chi^2(2)=9.18$, $p=0.01$		$\chi^2(2)=3.16$, $p=0.21$	



Table 2. Relationship between rating of previous training with confidence, perceived effectiveness and breastfeeding knowledge

Participants' rating of previous breastfeeding training	Confidence		Effectiveness		Knowledge	
	Mean	ANOVA*	Mean	ANOVA	Mean	ANOVA
Adequate for what I need now	3.92**	$f=20.52$	3.87**	$f=8.94$	3.48**	$f=4.02$
Adequate but I would like to know more	3.16**	$df=2, 154$	3.21**	$df=2, 154$	3.43	$df=2, 154$
Inadequate for what I need now	2.70**	$p=0.000$	2.71**	$p=0.000$	3.32**	$p=0.020$

* Analysis of variance
** Significant difference ($p<0.05$)

Discussion

The findings of this study corroborate similar findings in overseas studies,^{7,13,14} which found that >60% of the doctors sampled did not think they had sufficient breastfeeding training for the level of knowledge and skills expected of them. Additionally, obstetricians who thought they had adequate training also thought they were more competent to manage breastfeeding problems.¹⁶ However, in contrast to the present study, there was no relationship between the obstetricians' perceived training adequacy and their breastfeeding knowledge.¹⁶

Nearly all Australian medical schools reported including breastfeeding in their medical program curricula in 2006.¹⁷ However, fewer than 50% of the study cohort remembered learning about breastfeeding during their medical program, and only seven (4.8%) participants thought that their medical program was the most important source of breastfeeding knowledge. While the participants of the present study may not have undertaken the programs described in the 2006 study, this discrepancy may relate to breastfeeding not being viewed as an important aspect of medical student education, or information not being presented in an interesting or relevant and hence, not memorable, manner.

Table 3. Where breastfeeding information was learnt

Learning avenue (n=160)	N	%
Medical school	79	49.4
Within a hospital, postgraduation	75	46.9
General practice	71	44.4
Personal experience	67	41.9
Family and friends	64	40.0
Other independent reading	43	26.9
Books intended for lay audience	29	18.1
Journals	23	14.4
Local education sessions (eg. RTPs)	21	13.1
Other	21	13.1
Australian Breastfeeding Association	19	11.9
Internet sites	17	10.6
Conferences	8	5.0

The most useful source of breastfeeding knowledge for nonparent participants was postgraduate hospital experiences. However, there are reports of resistance within hospitals to teaching medical students and junior doctors about breastfeeding,¹⁸ especially if breastfeeding is considered the responsibility of the midwife or lactation consultant. Doctors need these skills outside the hospital environment, especially in rural areas where GPs are often the first point of contact for women with breastfeeding difficulties.¹⁹

Similar to other studies,^{12,20} personal breastfeeding experience was the primary and most useful source of breastfeeding information for both parents and male and female participants. However, in another part of this mixed methods study, the authors found that personal breastfeeding experience did not guarantee improved breastfeeding knowledge or positive breastfeeding attitudes.¹⁵ Personal experiences cannot necessarily be generalised to patients and should not be relied upon. Formal breastfeeding training reduces the reliance on personal breastfeeding experience to provide the required knowledge and skills.^{21,22}

Breastfeeding training should be clinically relevant and include essential background information and practical instruction. This includes learning what is normal, being able to identify problems, and intervening and assisting if necessary. The results of this study indicate that prevocational breastfeeding knowledge acquisition is heterogenous and often includes personal experience. Study participants also felt that the training they received from vocational or local divisional educational activities was not adequate.

Training is required at both a prevocational and vocational level. Ideally, medical students and prevocational doctors should be trained in hospitals where there is frequent exposure to women with breastfeeding problems. However, the context and type of breastfeeding issues encountered in general practice is different. A targeted structured breastfeeding learning program is necessary in vocational training so that general practice registrars can develop the breastfeeding knowledge and skills that they require as GPs.

Implications for general practice

- GPs have a responsibility to breastfeeding women and their infants, however there are limited opportunities to gain appropriate breastfeeding knowledge and skills.
- Personal breastfeeding experience – the most useful source of



Table 4. The most useful avenue for learning about breastfeeding

Sources of information	Total (n=147)		Parents (n=82)		Nonparents (n=63)		Male (n=40)		Female (n=104)	
	N	%	N	%	N	%	N	%	N	%
Personal experience	51	34.7	51	62.2	0	0	11	27.5	40	38.1
Within a hospital, postgraduation	27	18.4	4	4.9	22	35.5	6	15	21	20.0
Family and friends	13	8.8	7	8.5	6	9.7	7	17.5	6	5.7
Other	12	8.2	2	2.4	9	14.5	3	7.5	8	7.6
General practice	11	7.5	3	3.7	8	12.9	2	5.0	9	8.6
Medical school	7	4.8	3	3.7	4	6.5	2	5.0	5	4.8
Other independent reading	7	4.8	4	4.9	3	4.8	5	12.5	2	1.9
Local education sessions	5	3.4	2	2.4	3	4.8	1	2.5	4	3.8
Journals	4	2.7	1	1.2	2	3.2	1	2.5	3	2.9
Books intended for lay audience	3	2.0	0	0	3	4.8	0	0	2	1.9
Internet sites	3	2.0	2	2.4	1	1.6	1	2.5	2	1.9
Australian Breastfeeding Association	2	1.4	1	1.6	2	1.4	0	0	2	1.9
Conferences	2	1.4	2	2.4	0	0	1	2.5	0	0

breastfeeding knowledge when formal training is lacking – should not be a prerequisite for competent practice.

- Formal and clinical breastfeeding training should be included within medical school curricula, during postgraduation hospital terms and especially as part of the general practice vocational training program.

Conflict of interest: none declared.

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