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NEW ZEALAND RESEARCH

New Zealand Midwives and Tertiary Study

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Abstract

To elicit factors influencing practising midwives with regard to tertiary study, a national survey was distributed attracting 386 responses from midwives working in a variety of settings. Many midwives engaged in tertiary study, cited personal interest and practice development as motivational factors, with midwifery practice topics providing the most interest. However midwives' time restrictions, the cost of papers and lack of financial or other incentives inhibited study. Midwives preferred face-to-face delivery with other midwives rather than mixed classes, followed by distance delivery with paper-based materials. Mixed modes of face-to-face and distance, or Internet based delivery, were not favoured by the midwives. These factors should be considered when designing tertiary programmes for practising midwives, incorporating adequate information, interaction and communication.

Introduction

The landscape of maternity care has changed dramatically over the last 15 years and along with it the learning needs of midwives and the developmental needs of the profession. Midwifery education in New Zealand moved to the baccalaureate level in 1992 with the introduction of direct entry Bachelor of Midwifery programmes. This enabled the midwifery profession to better prepare graduates to meet the needs of the maternity care context post Nurses Amendment Act 1990.

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The educational needs of the profession are varied. The profession requires competent graduates to take up a variety of roles within the workforce and also needs to develop the knowledge and skills of registered midwives currently in practice. Midwives need to be able to: update or build on their practice knowledge and skills, respond to a changing healthcare context, provide leadership and contribute to the knowledge base of midwifery. Postgraduate midwifery education has an important part to play in developing the profession of midwifery for the future. This article presents and discusses the results of a national survey that explored midwives' engagement with postgraduate study.

What do we know about midwives and post registration tertiary study?

The Nursing Council of New Zealand (NCNZ), the body regulating midwives in New Zealand up until 2004, collected information about midwives who were applying for their annual practising certificate. This described the type of registration held by midwives in New Zealand but did not capture information about the tertiary qualifications gained post registration, or factors influencing tertiary study. In 2000 the NCNZ conducted a survey investigating the educational qualifications of nurses and midwives registered in New Zealand. A total of 1726 registered midwives actively working in midwifery responded, representing 85% of midwives holding annual practising certificates in 1999 (NCNZ, 2000). This survey did not explore what influences midwives to engage in tertiary study but it is useful for comparing specific information from 1999 with that of 2004.

The Midwifery Council of New Zealand (MCNZ) took responsibility for the regulation of the profession following the enactment of the Healthcare Practitioner's Competency Assurance Act 2003. A more comprehensive workforce survey was included with the invoices for annual practising certificates sent to 3510 midwives. Of these, 2828 midwives completed this survey and a selection of results is published on the MCNZ (2006) website. The MCNZ workforce data is useful in terms of establishing the demographics, role, work place, and qualifications of the midwifery workforce but this survey was not aimed at eliciting information regarding factors that influence midwives' decisions or preferences in relation to tertiary study. Additionally some of the categories used in the MCNZ initiative are different to those used in this survey making direct comparison of results difficult.

Little is known about either tertiary level post registration qualifications attained by midwives, or the factors that motivate or hinder their engagement with tertiary study. There is a dearth of literature specific to the midwifery profession that is useful for informing the decisions of educators involved with the design and delivery of tertiary level post registration midwifery programmes. This survey aims to address these issues.

Research aims

The aims of this research project were to:

- ascertain the formal tertiary qualifications registered midwives in New Zealand have gained post registration.
- describe the motivations of midwives who have undertaken tertiary level post registration studies.
- describe the main reasons midwives do not undertake tertiary level post registration study.
- describe the influence of specific factors in encouraging midwives to undertake tertiary study.
- ascertain the preferred paper delivery mode and class mix of potential midwifery tertiary students.

The landscape of maternity care has changed dramatically over the last 15 years and along with it, the learning needs of midwives and the developmental needs of the profession.

Survey development

This survey was developed towards the end of 2004. It contained an introduction, information regarding the research, and consisted of four major sections. Part A requested demographic information, Part B information on the midwife's experience, qualifications and (recent, current or planned) engagement with tertiary level post registration study. Respondents completed Part C if they had recently completed, were currently engaged in, or had definite plans to engage in, tertiary study (this group is referred to as 'engaged' in tertiary study). Part D was completed by respondents who had not recently completed, were not currently engaged in, nor planning to engage in, tertiary study (this group is referred to as 'not engaged' in tertiary study). The questions in Part A required a tick box response, while those in Part B consisted mostly of questions requiring a tick box response with some that required a short written answer. Parts C and D consisted mostly of questions that required a response on a Likert Scale, some required a tick box response and some required a short written response. The questions requiring responses on the Likert scale asked respondents about the significance of select factors (such as cost) in influencing their decisions to engage in tertiary study. Respondents were provided with four options ranging from 1 (very insignificant) to 4 (very significant). A mid point was omitted to force respondents to choose between the positive or negative pole on the scale.

The survey was available in two formats: hard copy and on-line. The hard copy when folded exposed a reply-paid postage section allowing for easy return. The on-line survey, developed using the commercial programme "Select Survey", consisted of the same sections and questions as the hard copy. Responses were required in similar formats to the hard copy survey (for example tick box, Likert scale or short written answers) though the on-line survey included questions that required the selection of an option from a drop down menu, where this would have been a tick box option on the hard copy.

The hard copy of the survey was pilot tested by six midwives, the on-line version by three, from a variety of practice settings in Otago. Minor changes were made to the layout of the questionnaire and to some response categories. We intended to alter four questions (two in Section C and the two corresponding questions in Section D) to provide an additional available response. However in the final draft only the change to Section C was made, the change in Section D was neglected.

Ethical issues

Ethical approval from the Otago Polytechnic Ethics Committee was obtained. Respondents were not personally identified thus in most cases preserving their anonymity. However in a small population such as New Zealand some responses to questions (for example, those responding that they had completed a PhD) could come from a small group of midwives only. To aid confidentiality, demographic data have not been linked with responses to any other survey questions. Completion and return (of the hard copy) or submission (of the on-line version) constituted consent.

Recruitment

Registered midwives were recruited in one of three ways. The hard copy survey was included as an 'insert' in the Midwifery News (2005) sent to all New Zealand College of Midwives (NZCOM) members, to which most self-employed midwives or midwives carrying a caseload belong. Midwives who staff maternity facilities as employed, core facility midwives, are less likely to be NZCOM members. For this reason, hard copies of the survey were also distributed to the 16 largest maternity facilities in New Zealand.

The on-line version of the survey was available through a website address. This address and an

information sheet were circulated by email to all District Health Boards (DHB) with a published email contact. Recipients were asked to forward the email to the relevant managers or departments within the DHB. The electronic survey highlighted that the same survey had been circulated in hard copy and respondents were asked to complete one version only, either the electronic or the hard copy.

Analysis of results

Two thousand eight hundred hard copies of the survey were circulated of which 326 were returned by post. One hard copy response was received after analysis was completed and was excluded. Sixty-one electronic responses were received. The final distribution of the electronic version of the survey is unknown, thus the response rate is undeterminable. With the hard copies and electronic format pooled, 386 responses were combined for analysis.

Responses to questions requiring a tick box or Likert scale response were encoded. Responses to short answer questions were recorded verbatim at initial data entry, categorised then encoded. All data were entered into the database and imported into the Statistical Package for the Social Sciences (SPSS), Version 14.0 (2005). Descriptive statistics and frequency tables were generated from the data.

Results

Demographics

The majority of respondents were female (98.7%, n=381) between the ages 40 and 54 (62.1%, n=204). Most respondents identified as NZ European (74.4%, n=287), other European representing the next largest category (13%, n=50), and 3.4% (n=13) identified as New Zealand Māori.

The majority of respondents (60.9%, n=235) identified their locality as a main urban centre (population >30 000). A large proportion of respondents resided in the Auckland region (19.4%, n=75), followed by Canterbury (15%, n=58), Waikato (11.9%, n=46) and Otago (10.6%, n=41).

Table 1. Type of work undertaken by respondents

Work category	Percentage
Caseload	46.1
Core facility	35.8
Other	6.5
Education	4.4
Administration/ management	2.1
Midwifery professional/ policy development	0.8
Midwifery research	0.3
Missing data	4.1

Most respondents were employed (57.3%, n=221), followed by 39.6% (n=153) self employed, and 0.8% (n=3) 'other'. Respondents were asked to identify the type of work they undertake. 'Case loading' was identified as the main type of work undertaken, followed by 'core facility'. Table 1 illustrates this.

Qualifications

Respondents were asked about their first midwifery qualification with the majority, 37% (n=143), selecting 'other or overseas qualification' followed by 25.6% (n=99) who selected 'Bachelors degree in midwifery'.

Table 2. Type of qualification completed post midwifery registration

	Bachelor's Degree	Postgrad. Cert.	Postgrad. Dip.	Master's	PhD	Other	Totals
Midwifery	27	11	17	16		2	73
Other health science	31	23	16	9		36	115
Admin./ management			3	2		1	6
Other	2	1	2			7	12
Not identified	3	2	3	1	1	4	14
Total	**63**	**37**	**41**	**28**	**1**	**50**	**220**

Note: The category "midwifery" above includes degrees in midwifery and health science (Midwifery) or Arts (Midwifery). "Other health sciences" include qualifications in nursing, social sciences, obstetrics, public health, sexual health, child or neonatal health, nutrition, and breast-feeding. Qualifications in administration of management include health service management and public policy management and the category "other" includes qualifications in the area of health law, education and counselling.

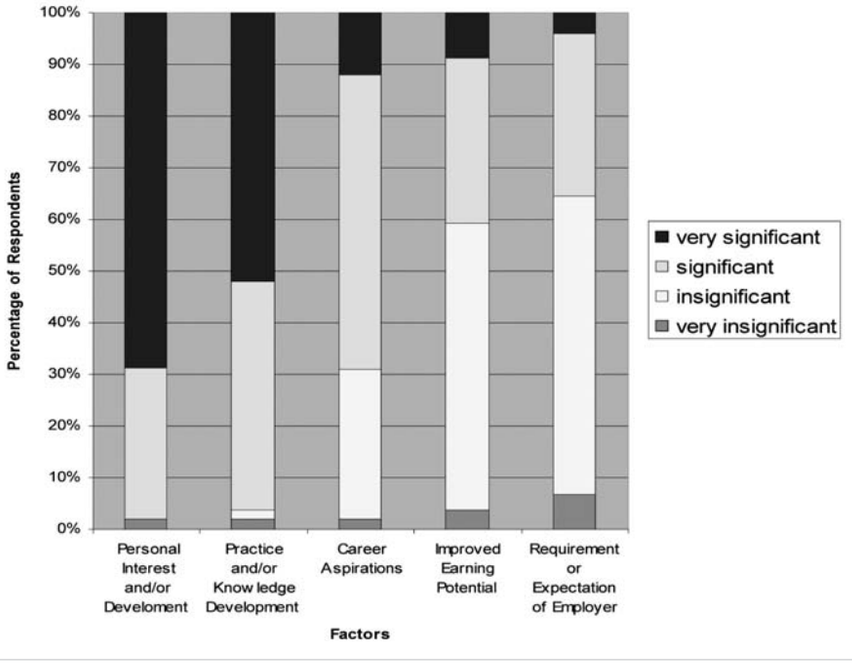
Just under half the respondents (40.7%, n=157) had completed a qualification since their initial midwifery registration, 17.9% (n=69) were currently engaged in tertiary study and 9.8% (n=38) had definite plans for tertiary study in the immediate future.

Midwives engaged in tertiary study

In total 157 respondents completed 220 post registration qualifications, indicating some respondents had completed more than one qualification. Table 2 illustrates the area of study showing the number and form of qualifications completed.

Respondents engaged in tertiary study were asked questions about the significance of select factors influencing the decision to study. Questions used a Likert scale with four options: very insignificant,

Figure 1. Influence of selected factors on decision to engage in tertiary study



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insignificant, significant and very significant. Responses are shown in Figure 1.

These respondents were clearly motivated toward tertiary study by personal interest and development and/or practice and knowledge development, rather than the potential for improved earnings, career aspirations, or the requirements of employers.

Table 3. Topics appealing to midwives engaged in tertiary study

Topics	Number of times stated
Midwifery	
Teenage pregnancy	
Neonatal issues	
Breastfeeding	
Midwifery theory	
Normal birth	
Post natal depression	55
Research	
Epidemiology	
Evidence based practice	18
Applied Science	
Nutrition	
Psychology	
Physiology	
Anthropology	
Bioscience	12
Social Science	
Sociology	
Sociology of health	
Understanding community and poverty	11
Business	
Small business management	6
Education	
Teaching	
Adult learning	4
Other	
Complementary therapies, Legal issues	3
Total	**109**

The preferred mode of presentation for the majority of respondents engaged in tertiary study was face-to-face delivery (44%, n=48) with 17% (n=18) preferring distance study with paper-based materials. These preferred modes of presentation are detailed in Figure 2.

Respondents engaged in tertiary study were also asked about the study topics that appealed to them. Eighty-one respondents identified 109 topics which are summarised in Table 3.

Most respondents engaged in tertiary study (54%, n=57) preferred classes with other midwives while 29% (n=31) preferred classes with a mix of midwives and other health professionals. Eight percent (n=9) elected both the categories 'midwives only' and 'mix of midwives and other health professionals'. Nine percent (n=10) cited 'other' as their preferred class mix.

Figure 2. Preferred modes of class presentation of midwives engaged in tertiary study

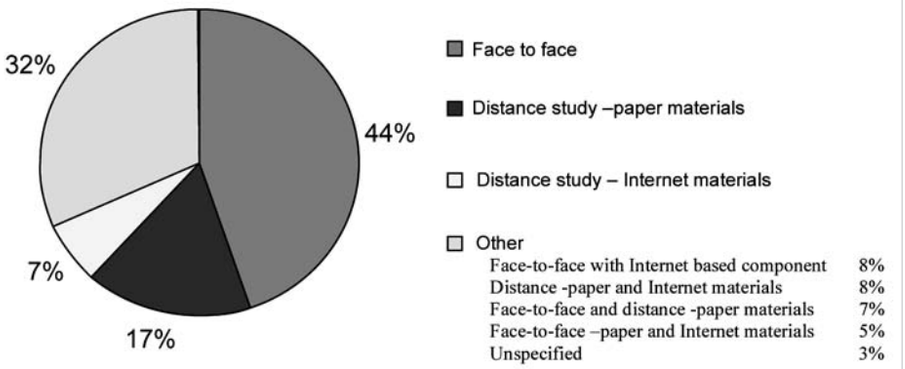
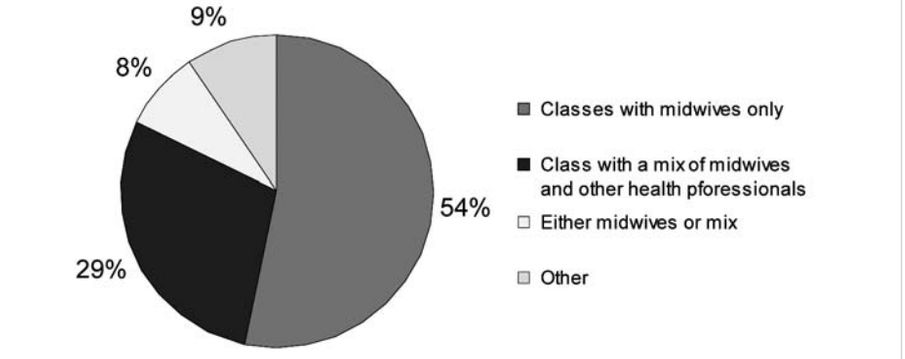


Figure 3. Preferred class mix of midwives engaged in tertiary study



Midwives not engaged in tertiary study

Respondents not engaged tertiary study, were asked to state the main reasons for not studying. The reasons stated by the 247 respondents who answered this question are shown in Table 4.

Respondents not engaged in tertiary study were asked questions to identify the significance of select factors that might influence them to consider future study. Respondents were presented with a Likert scale with four options: very insignificant, insignificant, significant and very significant. Figure 4 illustrates the responses for each of these categories expressed as a percentage of the total responses to that question.

The expense of tertiary papers was a significant factor in the decision-making concerning tertiary study for those respondents not engaged in tertiary study. This group of respondents was asked to state an affordable and reasonable cost for a tertiary paper; the results are illustrated in Figure 5.

Table 4. Reasons for not engaging in tertiary study

Reason	Number of times stated
Lack of time	73
Family commitments	54
Other*	54
No incentive or interest	45
Cost	45
Work commitments	36
Recent study	16
New midwife	11
Close to retirement	6
Total	**340**

** Includes too lazy, don't know what to do, stress involved, distance to tertiary institution, lack of computer skills, fear of failure and lack of programme or paper appeal.*

This group of respondents was also asked which paper topics appealed to them. Ninety-nine respondents identified 119 topics summarised in Table 5.

The majority of respondents not engaged in tertiary study would prefer face-to-face delivery of a tertiary course (39% n=86), with 13% (n=29)

Figure 4. Influence of select factors in consideration of tertiary study for respondents not engaged in tertiary study

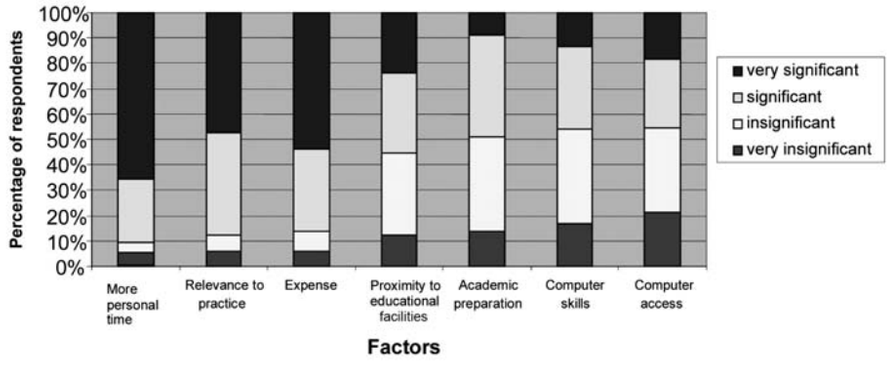


Figure 5. Reasonable and affordable cost of tertiary paper as suggested by respondents not engaged in tertiary study

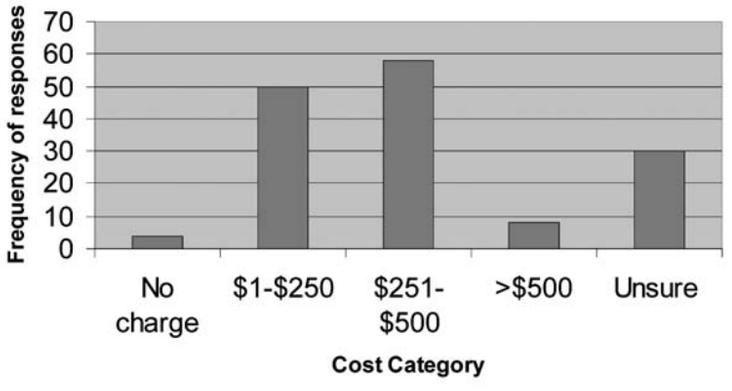
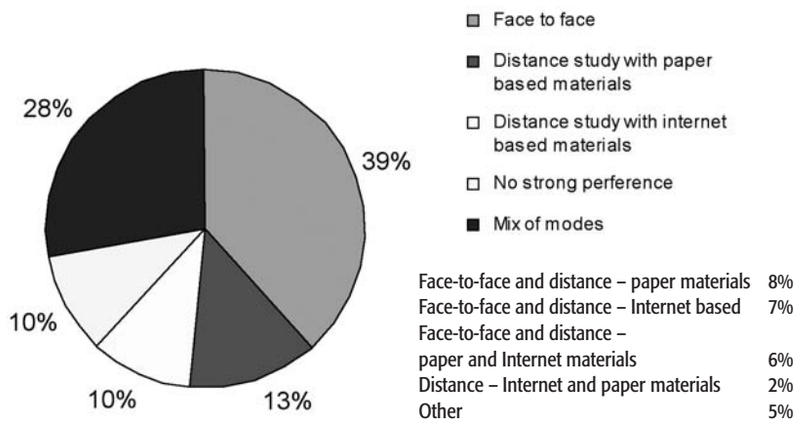


Figure 6. Preferred mode of presentation for midwives not engaged in tertiary study



preferring distance study with paper based materials. These results are illustrated in Figure 6.

As illustrated in Figure 7 the majority of those who had a preference (34%, n=76) preferred classes with other midwives only, while 44% (n=100) had no strong preference.

Discussion

The participants in this study comprised largely of mature women with age frequencies in peaking in the 40-49 age range (representing 45.4% of respondents). Midwives aged less than 40 comprised 24.4% of the sample and 75.4% were equal to or greater than 40 years of age. 30% were over 50 years of age. This age distribution has implications for post registration midwifery education as

Table 5. Paper topics appealing to midwives not engaged in tertiary study

Topics	Number of times stated
Midwifery	63
Applied Science	20
Other	11
Research	10
Social Science	9
Business	4
Education	2
Total	**110**

women in their mature years often have significant family commitments. These may include the care of children as well as older family members. Her children's educational needs are often given priority over those of the woman (Hill, MacGregor & Dewar, 1997). In addition, different modes of course material delivery offered in the digital age can further challenge older midwives with regard to their computer access and confidence in tackling the educational programmes on offer.

Sample representativeness

To gauge the representativeness of those midwives who participated in this survey, their demographics have been compared to those captured by the MCNZ workforce data (2006). Both sources revealed similar gender and age distributions, with MCNZ data demonstrating a peak age range between 40 and 54 years. This survey captured more midwives aged 40-54, and fewer midwives aged 55 years or more, than the MCNZ workforce data. The percentage of respondents that gained a Bachelor's degree in midwifery in this survey was slightly higher than that of the respondents of the MCNZ workforce data (26% and 20% respectively). Ethnicity categories in this survey were different to those used in the MCNZ workforce data, therefore comparisons cannot be made.

Challenges for midwives when undertaking postgraduate study

Degree programmes are educating an increasing proportion of midwives in New Zealand. In this study twenty six percent of respondents gained a Bachelor's degree as their initial midwifery qualification. This is a significant increase from the 7% identified in 2000 by the NCNZ. While many postgraduate midwifery programmes do not require a Bachelor's degree in their entry criteria, lack of academic experience may impact on the midwife's confidence or preparedness for tertiary study. While seasoned midwifery practitioners have considerable personal and clinical insights

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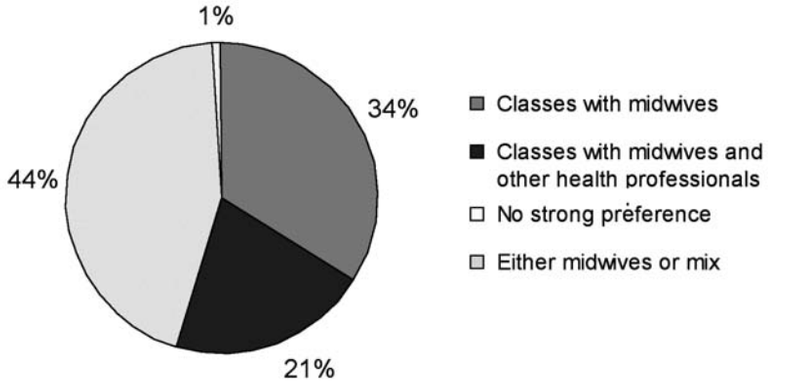
New Zealand Midwives and Tertiary Study

to bring to their post registration studies, in midwifery practice and particularly when studying at a postgraduate level there is an increasing expectation for practitioners to be able to read and understand research. Indeed Veeramah (2004) found that many midwives have difficulty in finding and understanding research reports, particularly the statistics in reports, having been inadequately prepared for this skill in their basic midwifery education. This was reflected in this study with 48.9% of respondents not engaged in tertiary study, citing preparedness for academic study as a significant or very significant factor influencing their decision-making in regards to tertiary study.

Figure 7. Preferred class mix of midwives not engaged in tertiary study



While tertiary study provides benefits for students, the commitment to study intrudes on their time and relationships. Significantly, 91% of midwives not engaged with tertiary study, rated lack of time as a significant or very significant factor influencing their decision-making surrounding tertiary study. 54 respondents also cited family commitments as a reason for not engaging in tertiary study.

Lore and Tait (2004) looked at time pressures in regard to expectations of lifelong learning, and suggest that organisations no longer provide the time nor place for formal education. Rather, the individual is required to fit study around their family and work lives. Competing with this expectation is the need for work/life balance with regard to health and wellbeing. Lore and Tait suggest women structure their time differently than men, and for both sexes *"the boundaries between private and public time are increasingly becoming blurred"* (p.3). Study is frequently undertaken at home, during weekends and evenings, with many committing holiday breaks to this purpose. This means social life is constrained and relationships are affected, particularly where the partner is unsupportive. The demands of study according to Hill, MacGregor and Dewar exposed deep prejudices from some partners and teenage children to the aspirations of the mature student and the impact on domestic arrangements (Hill et al, 1997). This is exacerbated in some instances by increased financial outlay. Despite the downsides, the majority of participants in this study reported a sense of personal achievement, confidence and satisfaction that made the sacrifices worthwhile (ibid).

What's in it for me? Rethinking traditional postgraduate course delivery

A large proportion of respondents engaged in tertiary study cited 'personal interest and /or development' (95%) and 'practice and /or knowledge development' (95%) as very significant or significant factors influencing their decision to engage in tertiary study. Less influential factors included 'career aspirations' where 66% of respondents cited this factor as very significant or significant, 'earning potential' cited by only 32% and 'employer expectations' by 27%. The respondents (both engaged in, and not engaged in, tertiary study) were clearly interested in subject areas directly related to midwifery, with 88% of respondents not engaged in tertiary study rating 'relevance to practice' as a very significant or significant factor in influencing them to consider tertiary study.

In a qualitative New Zealand study involving twenty nurses, Spence (2004a, 2004b) explored the impact of postgraduate education on advancing nursing practice. Spence found that postgraduate nurse education contributed significantly to the personal and professional development and clinical practice of nurses in her study. Like the midwives participating in this study, these nurses were challenged by family commitments and by a lack of time. They were similarly motivated by more intrinsic than extrinsic factors because they were not rewarded financially for postgraduate study, their career pathway did not depend on it, and often their employers and colleagues were unsupportive.

The clinical career pathway for many midwives in New Zealand is not directly related to tertiary qualifications. For many practising midwives (whether employed or self employed) additional tertiary qualifications do little to improve their financial situation or advance their careers. It is not surprising that 'personal interest and/ or development', and 'practice knowledge' are the most significant motivational factors for tertiary study. Tempting midwives to dip their toe into post registration tertiary study is the first challenge for educators, thus it is important to know what motivates midwives to make this important first move. In 2005 the Midwifery Council (in response to the Health Practitioner's Competency Assurance Act, 2003) introduced the recertification programme for midwives. This requires that midwives provide evidence of ongoing educational activities in order to maintain an Annual Practising Certificate. These activities need not be at the tertiary level but tertiary studies will contribute significantly to the number of points required over three years. This may prove in the future to be a factor motivating midwives toward tertiary study.

In the United Kingdom, where tertiary education was promoted as a way of improving the quality of health services, Hill et al (1997) looked at motivating factors for health practitioners to engage in tertiary study. They reported that more mature nurses and midwives felt threatened by newer graduates who were more familiar with the academic environment. In addition when these mature nurses and midwives returned to study there were domestic and financial challenges. To mitigate these problems a blended programme mixing distance and college based tutorials was devised. The courses were adapted to meet the practical issues encountered in a work environment by incorporating scenarios as an initial focus.

Bankert and Kozel (2005) concur suggesting that adult learners have specific needs that require educators to rethink the traditional teacher/ learner roles with regard to material presentation and assessment within courses. Adult students have a higher level of motivation, commitment to the programme and life experience (Bankert & Kozel, 2005). This does not preclude their feeling apprehensive about the academic environment. Thus these students benefit most from a *"collaborative pedagogy where the teacher is sensitive to the individuality of all learners and engaged in their educational experience"* (ibid, p.227). This can occur when there is collaborative development of course requirements with the option for students to pursue a topic of particular interest.

Whyte, Lugton and Tonks evaluated how the current Masters courses offered in Edinburgh met student needs. The respondents suggested that the higher qualification had opened up opportunities for them and contributed to their work whether in clinical, management or education. In addition there was a sense of satisfaction with Masters status and personal growth. The latter concept was thought to contribute to a *"broadening of perspectives and the development of advanced powers of reasoning"* (Whyte et al, 2000, p.1073). Thus there was a benefit across their lifestyles and not just related to their work. Of particular interest was that 50% of the graduates were working in education, thus the challenge is to provide Masters preparation that keeps midwives in practice.

To influence midwives to consider tertiary study, creative course design and the vital elements of information, interaction and communication need to be incorporated.

In New Zealand, midwifery undergraduate education has been a focus for midwifery to this point. Although post registration midwifery education may play an important role in the retention of midwives and development of the profession, to date this area has received little research attention. This survey provides a useful starting point while a number of future lines of inquiry would be beneficial. This could include a study similar to that carried out by Whyte, Lugton and Tonks (2000) in Edinburgh, which explored the relevance of Masters level education for participants over the long term.

Webber (2004) also looked at what motivated mature practising managers to study. Webber suggested motivations for study were not simply due to personality factors but a complex cognitive process that focused on their personal intentions as a learner. This motivation was not simply to progress their career but also to increase their confidence and self esteem.

The use of digital technology in tertiary education

Advances in computer and Internet technology have changed the landscape of tertiary education. However 46% of respondents not engaged in tertiary study stated difficulty in gaining access to a computer and lack of computer skills as very significant or significant influences on their decision surrounding tertiary study. Thus midwives returning to study, who have not kept pace with technological changes, may be less likely to enrol in a course delivered online. To attract midwives to tertiary study creative course design is essential. Of the 107 respondents engaged with tertiary study, 44% preferred face-to-face delivery. Additionally 39% of those not engaged with tertiary study expressed a preference for face-to-face course delivery.

To design an effective online course Brown (1997) suggests the course must meet both the informational needs as well as the interactional communication needs of the student. Martyn (2003) outlines a hybrid model of online education, which proved successful for a cohort of non-traditional students. This hybrid model places the student at the centre of the model and aims for the *"best characteristics of online education and the interactivity that typically characterizes face-to-face classroom instruction"* (ibid, p.18). The course developed by Martyn begins with a face-to-face first class orientation where all the online components are worked through with the students completing some online quizzes. Throughout the course a mix of contact methods, such as email, chat groups, and online threaded discussions, is engaged with by the individual, tutor and fellow students. These sessions are a mix of synchronous and asynchronous discussion. The contact is frequent throughout. Finally the last class is face-to-face and includes any final examinations required. This model appears to have the range of elements that would offer the option of distance learning with the additional communication and interactive components that might engage midwifery practitioners in tertiary study.

The limitations of this study

While the midwife respondents appeared to represent a cross section of the New Zealand midwifery population we are unable to assume this to be the case. For example while all members of NZCOM had easy access to the survey, midwives working in employed situations had a limited opportunity to hear about the study, or to receive a survey form. At best this study provides some insights into the content and delivery modes of postgraduate courses that might attract those currently not engaged in postgraduate study and what strategies educators might employ to encourage participation.

Conclusion

Midwives in New Zealand are a mature group of women who have much to offer from personal and practice experience. Most of these practitioners need to fit the demands of study around busy family and practice lives within which there is competition for time, money and study space. The main incentives for undertaking tertiary study are related to personal and practice development, but participation may be impeded by a perceived lack of academic ability and/ or lack of adequate computer access. The move to more online courses means that this group may be reluctant to engage in tertiary study. Thus to influence midwives to consider tertiary study, creative course design and the vital elements of information, interaction and communication need to be incorporated.

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