article

Student Attrition in the Ontario Midwifery Education Program: A Qualitative Analysis - 1. Personal Issues

Attrition des étudiantes au sein du programme ontarien de formation en pratique sage-femme : Une analyse qualitative -- I. Problèmes personnels

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Abstract

This study identifies some of the factors associated with student withdrawal from the Ontario Midwifery Education Program (OMEP). An Internet-based survey was used to collect data and written comments. Participation was requested from senior-level students, graduates of the program, and students who withdrew prior to graduation. In this qualitative study, we found that commuting and relocation, support and guidance, and the stress of one-on-one preceptor mentorships are areas in which the OMEP could develop interventions to improve student retention.

Keywords

student retention, attrition, midwifery education

This article has been peer reviewed.

Résumé

Cette étude identifie certains des facteurs qui sont associés à l'attrition des étudiantes au sein du programme ontarien de formation en pratique sage-femme (POFPSF). Un sondage mené sur Internet a été utilisé pour recueillir des données et des commentaires écrits. Nous avons sollicité la participation des étudiantes en fin de programme, des diplômées du programme et des étudiantes ayant abandonné leurs études avant l'obtention du diplôme. Dans le cadre de cette étude qualitative, nous avons constaté que le navettage et la nécessité de déménager, le soutien et l'orientation, et le stress associé aux relations de mentorat personnalisé avec une préceptrice constituaient des domaines au sujet desquels le POFPSF pourrait mettre sur pied des interventions visant l'amélioration de la persévérance scolaire.

Mots-Clés

Persévérance scolaire, attrition, formation en pratique sage-femme

Cet article a été évalué par des pairs.

INTRODUCTION

The Ontario Midwifery Education Program (OMEP), is a consortium between Laurentian University, McMaster University, and Ryerson University. From 1993 through 2010, across the three institutions, the MEP reported that 159 midwifery students left the program during their course of study. This number includes those who withdrew in good standing and returned within five years. Midwifery student attrition is costly for everyone. It is financially costly for the withdrawing student, who leaves with no degree and likely with substantial student debt. For the university, tuition revenue loss can be significant. There is also the loss to taxpayers as the Ministry's contribution per student is not realized. Furthermore, hospital-based midwife deliveries are reported to save the health care system $800 per birth, and home deliveries are reported to save $1,800.[1] Midwifery students who have withdrawn could have delivered quality care to thousands of mothers and newborns over this time.

The number of births in Canada continues to grow, but the number of trained maternity care providers is not keeping up. The 2006 Ontario Maternity Care Expert Panel report,[2] based on Ministry of Finance data, estimated Ontario births to be increasing by 27,000 per year beyond 2014. It called for an increase of all maternity care providers and specifically recommended an increase in the size of midwifery programs. However, if additional resources for expanding the programs are to be effectively used, steps to improve the student retention rate should also be taken.

The goal of this study was to identify the factors that contribute to a student's decision to withdraw from the program. Relying on the qualitative content analysis of an Internet-based survey, we examined the challenges that students face while in training and their perceptions of how the OMEP affects the decision to withdraw.

BACKGROUND

Student Attrition In Canadian Universities

Canadian post-secondary institutions report an approximate 20% rate of student withdrawal after the first year of study.[3] If the data are adjusted for students who switch universities or programs or who take some time off and return, the attrition rate is lower. Finnie and Qiu analyzed data from Statistics Canada's longitudinal Youth in Transition Survey cohort B (YITS-B) and found that 69.4% of students graduated after five years and that 20.4% were still enrolled; giving a retention value of 89.2%.[4] The MEP's reported retention was 83.2% in 2010. We set out to determine the reasons for this so that strategies to address this trend could be developed.

Based on his studies of large American schools, Tinto developed theories on student attrition at institutes of higher learning.[5,6] He proposed that student retention is influenced by both academic and nonacademic factors. Both the students' pre-entry attributes and the interaction between academic and social systems on campus can be influential. The pre-entry factors include family background, ethnicity, and high-school grades. Tinto concluded that the better the academic and social interaction on a campus, the greater the likelihood that students will persist.[5,6] Bean's model is similar but includes finances and peer effects as well as academic performance.[7] Both Tinto and Bean emphasized that pre-entry and first-year factors influence retention going into year two (the time of the highest attrition). Wells, however, argued that Tinto's model may not be appropriate for explaining attrition among undergraduate students who are older, have family responsibilities, and may possess previous college experience and degrees.[8]

The literature on retention among health sciences students is mostly from the nursing field. It indicates that the cause of attrition is multifactorial, including academic difficulties, family problems, travel, stress, health, and finance. For example, White et al.[9] compared student nurses who withdrew with nurses who were still enrolled or who had graduated. They found that disillusionment with the profession, family problems, travel concerns, and financial difficulties were factors in a student's decision to leave. They concluded that efforts to reduce attrition should be developed around an individual student rather than on a broad program basis.[9]

In a study that interviewed only nursing students who had withdrawn, Glossop[10] found that academic difficulties and wrong career choice were the most common reasons for leaving; family demands, health, and financial concerns were also cited. She also found that almost half of the students had two reasons for leaving.

Green and Baird[11] recently received feedback from 9 of 36 individuals who left a United Kingdom midwifery program. They found, similar to the nursing studies results, that there was rarely one overriding reason for students' withdrawing. They concluded that reasons for leaving were a complex of personal issues combined with clinical demands that contributed to students' decisions to leave.

OMEP students do not typically leave between the first and second years; only 5 of 72 in this study's population did so. It is therefore difficult to apply Tinto's models to Ontario midwifery education. These theories were developed around entry-level students at large institutions where students live in dormitories. Refinements in the models made for nontraditional students are slightly more applicable to the present study group. Bean and Metzner[12] described "non-traditional" students as mature students who do not live in college residences and who commute to class, may be part-time students, are not interested in the social interactions on campus, and are more concerned with academic offerings and programs. The students in this study are closer to this demographic, hence the need for a tailored midwifery-oriented questionnaire and a qualitative analysis.

The extensive study of Statistics Canada Youth in Transition Survey B (YITS-B) data by Finnie and Qiu[4,13] and by Parkin and Baldwin[14] followed an entry-level cohort of university students. It tracked more than 20,000 students aged 18 to 20 years at two-year intervals now for four cycles. Only 6.1% of respondents in our survey were in that age category, and 70.5% had a prior baccalaureate degree,[15] indicating again that a study specific to midwifery students is needed if retention rates are to be improved. The present study aims to overcome this problem by comparing the opinions of senior in-course students and graduates with those who withdrew from the MEP.

METHODS

Questionnaire Survey

Our survey was designed to be as inclusive as possible and adapted approaches from the nursing[16,17] and education and retention literature.[17,18] In planning the questionnaire, we also consulted with OMEP faculty and with midwives and experts from the Program for Educational Research and Development at McMaster University. The survey encompassed academic and social aspects of the program and students' lives that fell into four broad categories: student background, classroom experiences, study habits, and challenges students experienced while in the program, including placements. Questions on student background included questions about previous education, admissions qualifications, and demographics. Questions about classroom experiences covered grades achieved, the extent to which students felt supported by faculty, and whether students felt prepared by their prerequisites. Questions about study habits focused on collaborative activities and general engagement as indicated by the number of hours students spent studying alone or in groups. Finally, questions about the challenges students experienced were broad in scope, including health concerns, midwifery lifestyle, financial difficulty, and the need to take a leave of absence from the program. The survey contained approximately 50 questions, most of which can be viewed in an earlier publication.[15] The protocol and all survey questions were approved by the Research Ethics Boards at both McMaster University and Ryerson University.

Recruitment and Analysis

To request participation in the survey, three groups of individuals who had been enrolled in the midwifery program at either McMaster University or Ryerson University were recruited. These included graduates (through the class of 2007), students who left the program, and, because the survey covered aspects of both the classroom and placement issues, senior students who had completed a placement. The survey was conducted from September 2007 to January 2008.

Senior students currently enrolled were contacted through their respective university e-mail addresses. (E-mail is the OMEP's main method of communication; thus, students are expected to check their e-mail messages regularly). Graduates were contacted via their practices as listed on the Association of Ontario Midwives (AOM) website and similar sites from other provinces. The AOM sent out an e-mail message on behalf of the authors, asking for participants. A number of approaches were used to find students who withdrew from the program and graduates who were no longer practicing. To contact students who had withdrawn, the OMEP sent letters to the students' last known addresses. Web resources such as Google and Facebook were also used, and former classmates and instructors were asked if they knew how to contact those persons who had not yet been found.

The website SurveyMonkey.com was used to administer the survey, which was conducted anonymously. One reminder e-mail message was sent to nonresponders. As of September 2007, we determined there were 425 eligible candidates for the survey. We were able to contact 274 individuals (64.5%); of these, 215 responded to the survey, giving an overall response rate of 78.4%. Of the 72 Ryerson University and McMaster University students who had left, 28 (38.9%) were located and contacted, and 96% of this group completed the questionnaire. Of those who had graduated, 119 of 222 were located, and 85% of this group completed the survey.

The survey inquired into the experiences of OMEP students and covered areas such as demographic profile, academic environment, learning experiences, social and academic support, placements, and (when applicable) reasons for taking a leave of absence or withdrawing. In addition to multiple-choice questions, the respondents were provided opportunity to explain their answers or add additional information in an open-ended format. About two-thirds of the respondents chose this option and provided detailed descriptions of their experiences. These data were analyzed with NVivo 8 software (QSR International, Doncaster, Victoria, Australia) for the management of qualitative data.

The content analysis was performed after the quantitative analysis of the survey results and was therefore influenced to some degree by the findings of the quantitative study.[15] However, to allow the development of new analytical themes, it was conducted separately, with no predetermined coding scheme. First, the written answers were read and analyzed for emerging themes, using unstructured (free) coding. Whereas the answers usually reflected the questions asked (e.g., "Please describe why you decided to leave the program"), on many occasions, the open responses touched upon issues not discussed in the survey. Issues such as family problems, difficulties in the program, illness of a partner, feelings of social isolation, or lack of support arose in the qualitative responses of the participants.

The initial, unstructured coding was later reorganized into structured (tree) coding based on the analytical links between different themes raised by respondents. For instance, all comments pertaining to financial difficulties were coded under the category "financial difficulties." Upon the completion of the initial stage of coding, the content analysis within each category was generated. Specifically, we analyzed the similarities and differences between the responses within each category and identified the themes that cut across categories. The demographic profiles of participants also allowed identification of the themes that were most prevalent among particular groups of respondents. Specifically, we found that family responsibilities and pre-entrance academic background played pivotal roles in some students' adaptation to program requirements. The following presents a number of themes that were identified as central to students' decisions to stay in the program.

FINDINGS

Of those who responded to the survey, 87 were senior students, 28 had withdrawn, and 100 were graduates (92 of whom were practicing midwives at the time of the survey). Seventy-five percent of respondents were 24 years old or older at the time of admission to the program. Although having children at the time of admission is not associated with an increased risk of withdrawing from the program,[15] we found that 36.9% were mothers when they started their coursework. Of this group, 40.2% had one child, 47.6% had two or three children, and 8.5% had four or more children.

Analyzing the responses of students that commented on the program set-up, we found that one out of five participants made comments that pertained to this category. The majority of responses were related to admission standards and instructional format.

Entrance Requirements

One issue generating much commentary was the fact that applicants to the MEP can do so directly from high school, albeit only a minority of MEP students admitted are in this category. For example 70.5% of respondents had a baccalaureate degree and a further 23.8% had some undergraduate courses. There was a general suggestion that the program should require at least some undergraduate work or some life experience prior to admission. The complexity of the midwifery curriculum and the degree of required responsibility were seen as major reasons for challenging the early entrance route. Even students who entered the program directly from high school agreed with this view. One such student wrote, *"I still have some sadness about the way things turned out . . . People should need some sort of experience. . . They should need at least*

some undergrad experience . . . and/or lots of work in the community. . . I wasn't sure I was ready for it."

Prior academic experience was largely seen as beneficial for two reasons: (1) it would help students succeed academically and provide them with university-style experiences before they entered a midwifery program, and (2) it would also help students achieve some "maturity," as many saw midwifery practice as entailing a great deal of responsibility that can be successfully handled only when one is mentally and socially ready to take on this task. Therefore, although there was general agreement that early entrance to the program was important in terms of access, many students believed that prior education or life experience was essential for successful completion of the program.

Social Support in the Program

As noted in the literature, the perceived availability of social support affects the attrition rate of students. A few respondents indicated that the OMEP often conveyed the notion of "sink or swim" in its communications with students. Some students claimed that this approach did not offer much support or guidance: *"I always got the sense from faculty and preceptors that being a midwife involved a bit of martyrdom—'it's hard, there's a lot of sacrifice, and you better learn to deal with it.' There wasn't a lot of discussion about how to achieve balance—'Ya, well, being a midwife is hard. Get used to it.' While I realize this is true, a little help problem solving would have been much appreciated."*

While students recognized that the life of a midwife is hectic and challenging, some of them craved information about how to balance the demands of practice and a personal life. The approach of a "boot camp" (as one respondent called the OMEP) was not always seen as helping to solve this dilemma. Hence, the majority of these respondents used terms such as "hectic" and "challenging" when describing their OMEP placement experience. Some students saw this approach as less than helpful and unnecessarily difficult and sought guidance and support.

Academic Difficulty

Despite numerous assertions in the literature that academic difficulties have a negative effect on student retention,[6,10] very few (5%) of the written comments were categorized as reflecting academic struggles in the program. Moreover, although lower academic performance is associated with an increased withdrawal rate in the wider university population, [7,12] it is not a significant cause of withdrawal by midwifery students.[15] Our qualitative data reflect the quantitative findings. Most students saw academic requirements as challenging but also as necessary for successful future practice. According to one respondent, *"The academic challenges were huge, to be sure, but I feel the rigour is necessary to prepare us to be competent care providers. . . "* Another wrote, "*I think it is like any other degree where there are high expectations of students. . . You are definitely expected to keep up with the academic rigour of the program.*" Reflective of the sense of responsibility students felt necessary for practicing midwifery, the academic requirements of the program were also seen as the opportunity to learn more. People had different views of whether "adult learner" was a positive or negative term.

> *We were pretty much on our own to learn. The catch phrase was "adult learner," and that meant we were to take responsibility and teach ourselves, go find the answers to the questions we had. We got some direction but were often on our own to find learning opportunities.*

> *Professors were helpful and direct, made it clear what was expected of us, and fostered a comfortable and respectful learning environment. We were treated like adults instead of students, and it was nice to feel respected.*

> *I was 30 when I started the program and found it difficult to have many of my "adult rights" stripped when I became a student and often felt powerless and unable to advocate comfortably for myself in areas such as OSAP [Ontario Student Assistance Program] funding, personal autonomy while with a preceptor, etc.*

To summarize, in contrast to the literature on attrition among undergraduate students, our study indicated that academic struggles were not central to the decision to withdraw from the midwifery program. For the most part, respondents had prior university experience and were from a different demographic than the entry-level students referred to in Tinto's research.[5,6] Thus, our study did not find a significant impact of academics on student retention.

Instead, it found that the nature of the profession, entailing a great deal of responsibility as well as lack of social support during training, was of concern to the students.

Two other components of the OMEP (that are not components of other undergraduate programs) became significant barriers for some students. The first was the relocation requirement; the other was clinical placements—specifically, conflict with preceptors during clinical placements.

Commuting and Relocation

The course of study in the OMEP includes both theoretical and clinical components. Students may be required to relocate for clinical placements. Twenty percent of respondents commented about the difficulties of commuting or relocating for the program. Overall, students had more issues with placement relocation than with commuting for the academic portion of the program. These findings are not surprising. Although commuting to university is pre-planned, the need to relocate is determined when a student is already in the program and has less time for organization.

Among the difficulties associated with relocation, students mentioned the logistic problems of leaving their family, packing up, and moving, as well as having feelings of isolation and loneliness in a new community. As one respondent wrote, "T*he lottery is set up to be random and fair to all students. This is not ideal for supporting students with young children. There is a much greater financial and psychological impact for moving a whole family than a single person.*" While family responsibilities (especially the responsibilities of caring for young children) were central to the challenges of relocation, students without children also expressed concerns about relocation: "I *would hate to see the program begin to prioritize/stratify life situations. Being childless or single does not automatically mean that one is more readily and easily mobile.*"

Although the relocation requirement was transparent to students prior to beginning the program, the actual difficulties this requirement can create in the lives of students were often realized only when the placement location became known. One student wrote, "*Being theoretically prepared for the relocation requirements of the program and then facing the realities of the lottery. . . were two very different things.*" Another student wrote, "*My preparedness for relocation changed dramatically after the birth of my child.*"

Relocation was seen as a challenge for many students. Relocation may not necessarily have been a direct cause of leaving the program for most students, but not knowing when and where they will be required to relocate, the balancing of family demands, the logistics of moving, and a lack of social support all contributed to students' negative attitudes.

Preceptors and Clinical Practice

In the final year, there are usually three clinical placements in one midwifery practice. The student is assigned one preceptor. In some instances, depending on the call schedule of the clinic, the student will have more than one preceptor due to call arrangements. In our quantitative analysis of the survey data, the within-group logistic regression showed preceptor issues to be statistically predictive of withdrawal.[15] In content analysis, the issue of preceptors also dominated students' comments; about 25% of the written responses were coded under this category. Clinical placements were often described in negative terms. Anxiety, feelings of powerlessness, and vulnerability were common themes. Because preceptors simultaneously taught and evaluated students, the relationship between a student and a preceptor was often perceived to be based on an imbalance of power. According to one respondent, "*During clinical placement, all of the power lies in the hands of the preceptor.*" Another wrote, "*I was honestly afraid at the time that if my preceptor was confronted, she would retaliate in other ways, making my placement even more unbearable or, worse yet, not passing me. After all, she held all the power of my future career of midwifery in her hands.*" The perception of a lack of support from the OMEP and particularly when there was a conflict with preceptors was often voiced by students who felt that they were left at the beneficence of their preceptors.

> *There is minimal support from staff, and students are afraid to complain.. . . I myself had difficulties in one placement, but I would never have complained formally because I wanted to pass my placement and also wanted to work as a midwife.*

I left because the difficulties I experienced with my preceptor had reverberated across midwifery practices in . . . , thereby branding me amongst future possible practice partners.

I never understood why the MEP kept sending students to preceptors who were lousy teachers or mean to students.

The MEP should strongly listen to how students evaluate their preceptors because some preceptors have similar issues with every student they have.

It seemed to me that students always seemed to have the same issues with the same preceptors time and time again, and yet the MEP continued to send students into these toxic environments . . . and the MEP really needs to accept more responsibility in this area. . . . [They] seem really passive in this respect.

Reflecting on the difficulties that they had with their preceptors, students identified a number of factors. First, the stress of clinical placement, the intense on-call schedule, and lack of sleep made many students feel vulnerable. Some students also explained the conflict in terms of personality clashes, in which they could not find a "common ground" with their preceptor. Most commonly, however, students perceived the sources of the conflict as their preceptors' poor teaching skills, ineffective communications (termed by some respondents as "offensive language"), and difficulty in providing positive and constructive feedback.

[I am] not sure that because you are a midwife you can necessarily teach."

Some preceptors, despite the lack of them, should never accept students; I would love to see the future bring an intensive "preceptor training" workshop where preceptors learn how to treat students with respect, dignity, and compassion.

I experienced verbal and physically abusive behaviour from a preceptor and received no support from the university or program, I think due to the limited number of preceptors. The advice given to me was to address it directly with my preceptor.

The clinical placement phase of midwifery training is reported to be a stressful period for some students. Personal difficulties between student and preceptor may compound the stress and lead some students to consider withdrawal from the program.

DISCUSSION AND CONCLUSIONS

The goal of this study was to determine if there are common factors contributing to a student's decision to withdraw from the OMEP. If these can be identified, it is hoped that educators will be able to design interventions to increase retention and graduation. The first study to analyze student attrition in the OMEP found that students who left reported the need for more academic support during the program.[15] Students who left also claimed that the time commitment was onerous. Interestingly, Carolan and Kruger arrived at similar conclusions in 2011. They asked first-year midwifery students what they thought would make their experiences better. Their thematic content analysis found that students wanted greater opportunities to prepare, more time to study, and more support mechanisms put into place.[19]

In our study, a qualitative content analysis of students' written responses was conducted to analyze their experiences in the OMEP and offer new insights into factors that concern the students and influence their decisions to stay in the program or leave it. Respondents felt that admission from high school was inadequate, given the amount of responsibility borne by midwifery students and practitioners. Some students who entered the program directly after high school admitted feeling overwhelmed by assignments, academic rigour, and the prospects of future practice. These students might have benefited from additional support from OMEP faculty.

Comparing these findings to those of other studies on student attrition, it was apparent that academic grades played an insignificant role in students' decisions about withdrawing. The respondents who withdrew or contemplated resigning reported not feeling academically supported and not being prepared for the time commitment required.[10] Earlier studies on educational stressors for midwifery students noted that lack of time to finish assignments and lack of direction regarding expectations were specific stressors.[20] However, the OMEP students we surveyed accepted this as a means to an end. Our qualitative analysis demonstrated that one in five of those we surveyed

found relocation to be a stressful requirement; not only an organizational disruption, it also created emotional turmoil due to separation from family, especially among those with young children.

Clinical placements are an essential part of the program, and the lottery mechanism for deciding the location of these placements is perceived as equitable. However, many students complained that the placement was arranged on short notice, giving them only a couple of weeks to organize the move. What seems the most urgent issue found in this study is the students' perception of inadequate support during their clinical placements. Although some students found their preceptors supportive, many felt that they did not provide fair evaluation. Students also reported that they had little or no means of protecting themselves from unfair treatment. Many students commented on a power discrepancy with their clinical placement preceptor. They expressed a fear that this person made the pass/fail decision. Although the tutor has the same purview, comments of this nature were made only about clinical preceptors. An earlier study on power relationships in midwifery training found that students felt that preceptors used coercive power more than reward power; however, the students expected them to use "expert" power. The students defined "coercive" power as the ability of the person with the power base to punish them, whereas "expert" power is based on the instructor's having special knowledge.[21] Some of our respondents had similar perceptions of the power base during placement. The nursing literature indicates that a difficult clinical placement can be the tipping point that influences some students to resign.[22] Likewise, among midwifery students, a less-than-optimal clinical experience can influence career decision making.[23,24] Preceptors, although not "full-time" faculty members, are a vital component of midwifery education and have an ongoing relationship with faculty and trainees. An open line of communication among all involved with respect to resolving difficulties between preceptors and students was deemed important.

Up to 40% of midwifery students have reported high levels of stress during their training.[25] Reflecting on the responses of our participants, we suggest that understanding the sources of stress among midwifery students is central to managing attrition in the OMEP. The stresses that are related to students' experiences in the program include not only the stress of professional practice (where students need to learn to accept the responsibilities of being midwives and where they need to learn practical skills during clinical placement) but also the stress of combining personal life with a professional life. In this environment, increased social support provided while in the program could prove essential to the students' management of their stress levels and to their success in the OMEP.

REFERENCES

1. Association of Ontario Midwives [Internet]. Solving Ontario's maternity care crisis. Submission to the Standing Committee on Finance and Economic Affairs. Toronto: Association of Ontario Midwives; 2003. Available from: http://www.aom.on.ca/files/Communications/Government_Relations/Submission_to_the_Finance_Commitee2.pdf
2. Canadian Association of Midwives. 2006. Available from: http://www.canadianmidwives.org/province/Ontario.html?prov=10
3. Grayson JP, Grayson K. Research on retention and attrition. Millennium Research Series No. 6 [Internet]. Montreal: Canada Millennium Scholarship Foundation; 2003. Available from: http://www2.library.carleton.ca/ssdata/surveys/doc/pdf_files/millennium_rs-6B_2003-12_en.pdf
4. Finnie R, Qiu HT. The patterns of persistence in post-secondary education in Canada: evidence from the YITS-B dataset. A MESA Project Research Paper [Internet]. Toronto, ON: Educational Policy Institute; 2008. Available from: http://www.mesa-project.org/research.php
5. Tinto V. Dropout from higher education: a theoretical synthesis of recent research. Rev Educ Res. 1975; 45:89–125.
6. Tinto V. 1987. Leaving college: rethinking the causes and cures of student attrition. Chicago: University of Chicago Press; 1987.
7. Bean JP. Dropouts and turnover: the synthesis and test of a causal model of student attrition. Res Higher Educ. 1980; 12:155–87.
8. Wells MI. An epidemiologic approach to addressing student attrition in nursing programs. J Prof Nurs. 2003; 19:230–6.
9. White J, Williams WR, Green BF. Discontinuation, leaving reasons and course evaluation comments of students on the common foundation programme. Nurse Educ Today. 1999; 19:142–50.
10. Glossop C. Student nurse attrition: use of an exit-interview procedure to determine students' leaving reasons. Nurse Educ Today. 2002; 22:375–86.
11. Green S, Baird K. An exploratory, comparative study investigating attrition and retention of student midwives. Midwifery. 2009; 25:79–87.
12. Bean JP, Metzner BS. A conceptual model of nontraditional

undergraduate student attrition. Rev Educ Res. 1985; 55:485–540.
13. Finnie R, Qiu HT. Is the glass (or classroom) half-empty or nearly full? New evidence on persistence in post-secondary education in Canada. In: Finnie R, Mueller RE, Sweetman A, Usher A, editors. Who goes? Who stays? What matters? Accessing and persisting in post-secondary education in Canada. Montreal and Kingston: McGill-Queen's University Press; 2008. p. 179–207.
14. Parkin A, Baldwin N. Persistence in post-secondary education in Canada: the latest research. Millennium Research Note No. 8 [Internet]. Montreal: Canada Millennium Scholarship Foundation; 2008. Available from: http://www.gostudy.ca/docs/Post_Secondary.pdf
15. Wilson R, Eva K, Lobb DK. Student attrition in the Ontario Midwifery Education Programme. Midwifery [Internet]. 2012. Available from: http:// dx.doi.org/10.1016/j.midw.2012.04.015
16. Glossop C. Student nurse attrition from pre-registration courses: investigating methodological issues. Nurse Educ Today. 2001; 21:170–80.
17. Last L, Fulbrook P. Why do student nurses leave? Suggestions from a Delphi study. Nurse Educ Today. 2003; 23:449–58.
18. Mamchur C, Myrick F. Preceptorship and interpersonal conflict: a multidisciplinary study. J Adv Nurs. 2003; 43:188–96.
19. Carolan MC, Kruger GB. Concerns among first year midwifery students: towards addressing attrition rates. Contemp Nurse. 2011; 38:139–47.
20. Cavanagh SJ, Snape J. Educational sources of stress in midwifery students. Nurse Educ Today. 1997; 17:128–34.
21. Kantek F, Gezer N. Faculty members' use of power: midwifery students' perceptions and expectations. Midwifery. 2010; 26:475–9.
22. Hamshire C, Willgoss TG, Wibberley C. 'The placement was probably the tipping point' – the narratives of recently discontinued students. Nurse Educ Pract. 2012; 12(4):182–6.
23. Seibold C. The experience of a first cohort of bachelor of midwifery students, Victoria, Australia. Aust Midwifery J. 2005; 18:9–16.
24. McCall L, Wray N, McKenna L. Influence of clinical placement on undergraduate midwifery students' career intentions. Midwifery. 2009; 25:403–10.
25. Pryjmachuk S, Richards DA. Predicting stress in pre-registration midwifery students attending a university in Northern England. Midwifery. 2008; 24:108–22.

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