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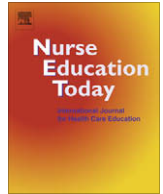
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Bachelor of Nursing students career choices: A three-year longitudinal study

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SUMMARY

This paper presents the findings of a survey which explored the career preferences of Australian Bachelor of Nursing students for certain clinical specialities. A convenience sample was recruited, with data collected three times between 2005 and 2007. With first-year students, acute care nursing of the adult and child and midwifery were the most popular career choices, whereas considerably less were interested in mental health or aged care nursing, and nearly two-fifths were undecided. By third-year, there was a shift in career preferences, with acute care of the adult and mental health being the most popular choices. In contrast, midwifery and aged care were the least preferred careers. The study provides some evidence students commence their course with a predominantly lay-informed image of nursing, but this may be tempered by favourable curricular influences towards the mental health field. However, the curriculum discourages students from pursuing a career in aged care and midwifery.

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Introduction

Similar to many other countries, Australia is experiencing a shortage of nurses, which is more pronounced in less popular specialities such as aged care, mental health, and midwifery, and the situation is predicted to worsen (Department of Education Science and Training, 2002). While there is no single 'magic bullet' to resolve this situation (Buchan and Aiken, 2008), the majority of new graduates complete generic nursing courses, so it is important to assess the influence of these curricula on students' career preferences for certain clinical specialities. Generic models are advocated because they promote flexible use of nurses across a range of health care settings (Department of Education Science and Training, 2002), but are criticised for inadequately preparing students for, and, at times, discouraging them from, practice in specialist fields (Younge and Boschma, 2006), such as aged care (Nay and Pearson, 2001), mental health (Australian Health Workforce Advisory Committee, 2003), and midwifery (Australian Health Workforce Advisory Committee, 2002).

Literature review

One consideration is to examine commencing students' conceptualisation of nursing, as many begin with distinct images, resistant to change, which influence career choices in certain specialities (Spouse, 2000). This finding is consistent with the Ginzberg et al. (1951) model of career choice, which hypothesises

school leavers possess robust images of what to expect when they begin work. Media portrayals of nursing, which frequently present favourable stereotypes of acute care, can influence commencing students' images of nursing (Kiger, 1993). Images can also be developed from perceptions about the technical complexity of practice. Acute care of adults and babies can be conceived as being more glamorous and technologically advanced than mental health and aged care (Happell, 1999). Images can also originate from other influences (Spouse, 2000), such as personal experiences of hospitalisation. In contrast, the stigmata of mental illness (Hinschaw, 2007) and old age (Fagerberg et al., 2000) adversely influence images of, and subsequent recruitment into, these fields (Nay and Pearson, 2001).

The issue of preconceived beliefs about people with mental illness, and their implications for career preferences in certain specialist fields, was highlighted by Happell (2001), in a longitudinal study of Australian nursing students' career preferences, which found mental health nursing was the second least favoured career choice (out of nine) at the beginning and end of their course. Students' preferences for a career caring for older people also rated unfavourably, as it was perceived as low status (Fagerberg et al., 2000) and technologically simple (Happell, 1999) work. Happell and Brooker's study (2001) also reported aged care was the least popular career choice at the beginning and end of students' courses.

A second consideration is to examine the effect of curricula on career choices in some specialist areas. The overall quality of curricula can have contrasting effects on students and can influence their career choices as new graduates (Happell et al., 2008; Stuhlmueller, 2006). For instance, the disproportionate amount of acute care in generic programs adversely affects new graduate recruitment into specialist areas (An Bord Altranais and University of

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Dublin, 2005), such as aged care, mental health, and midwifery. This is also shown in the findings of Happell's (2001) longitudinal study, where midwifery is ranked the second most popular career (out of nine) at the commencement but is ranked lower (fourth) by the end of the course. Midwifery was designated as a post-registration qualification when generic pre-registration courses were introduced in Australia. The implications of this are pre-registration courses provided students with limited clinical exposure to midwifery, which discouraged them from choosing a career in this field, and, as a consequence, may have contributed indirectly to the national shortage of midwives. In light of this situation, *The Midwifery Workforce in Australia 2002–2012* report recommended universities increase student numbers in direct entry midwifery courses (Australian Health Workforce Advisory Committee, 2002).

Another aspect of the quality of curricula is the socialisation process students encounter (e.g. the influence of school and workplace cultures, and key individuals), which may affect career choices in some specialist fields. These influences can lead them to adopt the perspectives of qualified and other staff, such as clinical teachers (McParland et al., 2003), good professional role models (Stuhlmiller, 2006), mental health service users (hereafter service users), and lecturers (Happell and Roper, 2003), and have contrasting effects on their career preferences. A further dimension of the socialisation process is the quality of students' clinical experiences, which can influence attitudes towards, and willingness to care for, particular groups of patients and, ultimately, their career choices. Several studies have noted how clinical education can have favourable effects on students' attitudes towards patients (e.g. Evagelou et al., 2005; Stuhlmiller, 2006). Not all clinical experiences contribute to favourable attitudes, however. For example, Haight et al. (1994), in a study of students' attitudes toward ageing, found the degree and type of association with older people influenced attitudes. Students who encountered well elderly early in their course, generally held positive attitudes, but later held fewer positive attitudes after caring for sick elderly. There are also claims students are ill-prepared to care for older adults, and this contributes to negative attitudes (McLafferty and Morrison, 2004). This was also reported in a review of Australian aged care nursing, which recommended improvements in aged care content of pre-registration curricula and greater use of suitably qualified aged care teachers (Nay and Pearson, 2001).

Overall, most countries have adopted generic curricula, but there are criticisms of these programs for failing to prepare students adequately for, and, at times, discouraging them from, practice in less popular specialities, such as aged care, mental health, and midwifery, and contributing indirectly to shortfalls in numbers of new graduates electing to work in these fields. Few studies have been carried out into students' career intentions in generic programs in Australia, and of these, only Happell's (2001) was a longitudinal study. The present study of future career choices, which was taken from a larger study of generic Bachelor of Nursing student's attitudes towards people with mental illness, aimed to explore career choices for certain specialities and to assess if preferences changed during the course. Knowledge gained from the study can, potentially, contribute to strengthening the focus on, and support for, specialist fields, such as aged care, mental health, and midwifery, in generic curricula, which, in turn, may lead indirectly to more new graduates choosing to work in these areas.

Methods

Participants and procedure

A convenience sample of generic Bachelor of Nursing students, who commenced their three-year course in 2005, was recruited

from a school of nursing in a large Australian city. Access to students was negotiated through academic coordinators, and students were recruited in lectures. A researcher informed students about the aims of the study, answered questions, and emphasised participation was voluntary. Students were asked to deposit completed questionnaires in a box, which was then sealed.

The research used a repeated measures survey design, with data collected three times from this single cohort of students between 2005 and 2007, in their first, second and third years of study. This design was chosen because it provided data about whether career preferences changed as students progressed through their studies.

There were theoretical and clinical subjects in all years of study, but most clinical placement took place in the second and final years. These were separate subjects, compromising, for example, a mental health nursing theory subject and a related clinical subject. The on campus component comprised lectures, tutorials, science and clinical learning laboratories. Clinical subjects took place in a range of inpatient (e.g. medical, acute psychiatry) and community-based settings (e.g. community generalist and psychiatry).

The course duration was approximately 1800 h (theory 58%, clinical 42%), and apart from one theoretical and linked clinical elective subject (from a choice of several) in the final semester, students completed the same subjects. Acute care nursing accounted for the major proportion of theory and clinical, followed by mental health, and then aged care and care of the child. There were no discrete midwifery subjects.

Most academic staff taught acute care or mental health as their primary focus. Because only one staff member had aged care as a primary focus, others were required to teach this as a secondary focus.

Instrument

The Jorm et al. (1999) 'Attitudes and Beliefs about Mental Health Problems: Professional and Public Views' questionnaire was used. The instrument's reliability has been determined in national studies of the Australian public and health professionals (Jorm et al., 2006). It contained 53 closed response items: demographic features, including questions about career preferences (6 items); attitudes in response to a vignette of 'Mary' with schizophrenia (47 items); plus 3 open response items. The career options included a choice of one of the following: acute care adult, acute care child, midwifery, mental health, aged care, other, and unsure.

Ethical considerations

Ethics approval was obtained from the University's ethics committee. The researchers took account of Clark and McCann's (2005) ethical guidelines for doing research with students, including addressing unequal power relationships and coercion, obtaining informed consent, anonymity and confidentiality, and ensuring fair treatment.

Data analysis

Data were analysed using SPSS, Version 15.0 (SPSS Inc., Chicago, IL). The students' demographic features were assessed by Chi-squared analyses to determine comparability across each year of study. Prior to further analyses, the Shapiro–Wilk test and Levene tests were used to assess the data for normality and homogeneity, respectively. As the assumptions for using parametric statistics were not fulfilled, non-parametric testing was undertaken to assess for differences across each year of study (Pallant, 2005). For the purpose of establishing if students in each year differed in their career choices, data were constructed in contingency tables show-

ing the observed frequencies of data, and the Chi-square test of independence was subsequently conducted with the categorical variables. Statistical significance was set at $p < 0.05$ and was 2-tailed.

Results

Demographic characteristics

Based on student enrolment data, the estimated response rate at each data collection point was: first year, 49% ($n = 90$); second year, 31% ($n = 46$); and third year, 71% ($n = 96$), with an overall response rate of 50%. Across all three data sets, most respondents were female, aged below 30 years, and living in the metropolitan area. Chi-square tests indicated the students were comparable across all years of data collection on age, gender, and area of residence (Table 1, $p > 0.05$).

First year of data collection

Eighty-eight first-year students responded to the question about career intentions, with almost two-fifths being unsure about future plans (Table 2). Further analyses were conducted to determine if students who were unsure about career intentions had different demographic profiles from those who indicated a particular career path in nursing. The results showed no significant difference between students who had left high school within the past two years (under 20 years old) and mature-aged students (20 years and older), regarding certainty or uncertainty about career intentions ($p = 0.16$). There were no significant differences between students based on residential area ($p = 0.54$) or gender ($p = 0.64$) concerning certainty or uncertainty about career plans ($p = 0.64$).

For students who indicated career intentions, around one-fifth chose either acute care adult (21%, $n = 18$) or child (18%, $n = 16$), making these the most popular career preferences (Tables 3 and 4). The next most popular choice was midwifery (17%, $n = 15$) (Tables 3 and 4). In contrast, few selected mental health or aged care as career paths (2%, $n = 2$) and (1%, $n = 1$), respectively (Table 3).

Second year of data collection

Forty-five second-year students responded to the question about career choices. Analysis showed the proportion unsure about

Table 2

Comparison of demographic characteristics between first year students who were sure and unsure about their career intentions.

First year students	Sure <i>n</i> (%)	Unsure <i>n</i> (%)	Chi-square	
			<i>P</i> value	d.f.
<i>Maturity</i>				
School leaver (<20 yrs) (<i>n</i> = 34)	24 (44)	10 (30)	0.16	1
Mature-aged (≥ 20 yrs) (<i>n</i> = 54)	30 (56)	24 (70)		
<i>Residence</i>				
Metropolitan (<i>n</i> = 71)	43 (80)	28 (85)	0.54	1
Regional/rural (<i>n</i> = 16)	11 (20)	5 (15)		
<i>Gender</i>				
Male (<i>n</i> = 15)	10 (19)	5 (15)	0.64	1
Female (<i>n</i> = 73)	44 (81)	29 (85)		

career intentions halved from the previous year (from approximately two-fifths (39%, $n = 34$) to one-fifth (18%, $n = 8$), Table 3). Although acute care of the adult and child remained the most frequently chosen career paths, 38% ($n = 17$) indicated a preference for acute care of the adult compared to 22% ($n = 10$) of those opting for acute care of the child (Table 3), while midwifery remained the third most popular career choice (Table 4). Mental health and aged care were the least preferred career options, with only a small proportion indicating a preference for either (Tables 3 and 4).

Third year of data collection

Ninety-five third-year students responded to the question about career choices. Analysis showed the proportion undecided had again dropped significantly from the previous phase of data collection (Table 3). While acute care of the adult was now the dominant career choice with 59% ($n = 56$) of students, acute care of the child remained a relatively stable option, attracting 15% ($n = 14$) of preferences (Tables 3 and 4). Interestingly, there was a significant increase in the number who opted for mental health nursing (Table 3), making it the second most desirable career option (21%, $n = 20$) (Tables 3 and 4). In contrast, there was a significant decrease in the proportion who indicated a preference for midwifery, making it one of the least attractive career choices, with only 1% ($n = 1$) of students selecting it in their final year of study (Tables 3 and 4). Moreover, aged care remained unattractive and was the least favoured career pathway (Tables 3 and 4).

Table 1
Demographic characteristics.

Variables	Stage in course			Chi-square	
	First year <i>n</i> (%)	Second year <i>n</i> (%)	Third year <i>n</i> (%)	<i>P</i> values	d.f.
<i>Gender</i>					
Female	74 (82)	41 (89)	75 (78)	0.28	2
Male	16 (18)	5 (11)	21 (22)		
Total <i>N</i>	90	46	96		
<i>Age (Years)</i>					
Younger (<30)	70 (78)	36 (78)	61 (64)	0.07	2
Older (≥30)	20 (22)	10 (22)	34 (36)		
Total <i>N</i>	90	46	95		
<i>Place of residence</i>					
Metropolitan	71 (82)	36 (86)	83 (89)	0.35	2
Regional/rural	16 (18)	6 (14)	10 (11)		
Total <i>N</i>	87	42	93		
<i>Contact with people like Mary</i>					
Frequent	27 (30)	14 (30)	25 (26)	0.42	4
Less frequent	24 (27)	11 (24)	36 (38)		
None	38 (43)	21 (46)	34 (36)		
Total <i>N</i>	89	46	95		

Table 3

Frequency and percentage distribution of students' career preferences in nursing across the three years of study.

Year of study	Career preferences in nursing N (%)							Chi-square (Overall)	
	Acute care adult	Acute care child	Midwifery	Mental health	Aged care	Unspecified others	Unsure	P value	d.f.
First (n = 88)	18 (21)	16 (18)	15 (17)	2 (2)	1 (1)	2 (2)	34 (39)	0.001*	12
Second (n = 45)	17 (38)	10 (22)	6 (13)	1 (2)	1 (2)	2 (4)	8 (18)		
Third (n = 95)	56 (59)	14 (15)	1 (1)	20 (21)	0 (0)	1 (1)	3 (3)		

* P < 0.05.

Table 4

Relative popularity of nursing/midwifery career preferences across the three years of study.

Ranking of career preferences	Year of study		
	First	Second	Third
1	Acute care adult	Acute care adult	Acute care adult
2	Acute care child	Acute care adult	Mental health
3	Midwifery	Midwifery	Acute care child
4	Mental health/others	Unspecified others	Midwifery/others
5	Aged care	Mental health/aged care	Aged care

Discussion

There are four main findings of this study of students' career preferences for certain specialities. First, the findings suggest many commenced studying with a predominantly lay-informed conceptualisation of nursing (Spouse, 2000), consistent with the Ginzberg et al. (1951) model of career choice. Acute care nursing of the adult and child and midwifery were the most popular choices with first-year students. These findings may be explained by the dominant lay image, reinforced through positive media and other representations (Kiger, 1993; Spouse, 2000), of nursing being conceived, primarily, as the care of adults and children and mothers having babies. These fields may also have been perceived as more glamorous and technologically advanced than others, such as mental health and aged care (Happell, 1999). Alternatively, considerably fewer first-year students were interested in a career in mental health or aged care. This may have been attributable to misconceptions and the stigmata of mental illness (Hinshaw, 2007) and old age (Fagerberg et al., 2000) respectively, reinforced by unfavourable media representations (Kiger, 1993).

Second, despite lay and media representations of nursing (Happell, 1999), the findings suggest a considerable proportion of first-year students were undecided about career pathways. However, there is some evidence to indicate uncertainty declined markedly in subsequent years of study. It may be inferred that a combination of theoretical and clinical experience (Evagelou et al., 2005; Haight et al., 1994; Spouse, 2000; Stuhlmiller, 2006), and the socialisation process (Happell and Roper, 2003; Stuhlmiller, 2006) helped them choose career paths. This finding suggests that, for many students, career choices are not predetermined when they commence studies, but may be affected by broader curricular influences.

Third, the findings suggest career preferences for some specialities are not static. Choices may be influenced by a range of theoretical and clinical experiences (Evagelou et al., 2005; Haight et al., 1994; Spouse, 2000; Stuhlmiller, 2006). It is also possible their views may be affected somewhat by having contact with student peers, new graduate and other registered nurses, academic staff, and service users (Happell and Roper, 2003; McParland et al., 2003; Stuhlmiller, 2006). Regarding the preference for acute care of the adult, there is some evidence that not only did the level of preference for this field progressively increase (almost three-fold) throughout the course, it remained the students' first career preference. This may be attributable to the overall quality of theo-

retical and clinical experiences (Happell et al., 2008; Stuhlmiller, 2006), and the glamorous and technological nature of acute care nursing (Happell, 1999). It is noteworthy acute care of the adult accounted for more theory and clinical subjects than any other area, and this may have affected views somewhat.

From a mental health perspective, more third-year students chose this path, in comparison to first and second years. This finding contrasted with that of Happell (2001), who reported mental health nursing was among the least desired careers at the beginning and end of courses. The contrast may have been due to the different settings and timeframes for data collection, and the type of generic curricula being used in these studies. Furthermore, the current study's findings may have been due to the theoretical and clinical subjects in mental health nursing being taught in second and third years, with students having direct contact with mental health service users in both years. It may also have been attributable to the school using experienced mental health academics, clinicians and consumers to teach the discrete mental health subjects.

From a midwifery standpoint, the findings suggest that while 17% (n = 15) of commencing students indicated a career preference for this field, the proportion decreased markedly in each succeeding year of study, especially between second and third years. This finding has similarities to Happell (2001), who found commencing student's ranked midwifery highly but its popularity declined, somewhat by the end of courses. In the current study, however, the decline in interest in midwifery was much more marked than in Happell's (2001) study. The reduction may be attributable to the greater attraction of acute care of the adult and mental health nursing, the limited amount of theoretical and clinical experience in this field, and considerably less contact with midwifery academics in comparison to acute care and mental health academics (An Bord Altranais and University of Dublin, 2005), implying, overall, this generic curriculum discourages students from pursuing a career in midwifery. This finding suggests that, from a workforce planning perspective, post-registration pathways into midwifery via generic Bachelor of Nursing courses may be less successful than direct entry Bachelor of Midwifery courses, consistent with claims by Younge and Boschma (2006). The results also support the initiatives of increasing numbers of Australian schools to offer direct entry midwifery pre-registration courses, in accordance with the recommendation of the Australian Health Workforce Advisory Committee (2002).

Finally, there is some evidence students commence and complete their course with little interest in pursuing a career in aged

care, a finding similar to Happell and Brooker (2001) and Nay and Pearson (2001). Extrapolating, students' lack of interest in aged care may be attributable to several curricular influences, such as limited theoretical and clinical experience with elderly people in a range of inpatient and community settings, in comparison to acute care of the adult and mental health subjects. This is consistent with the Haight et al. (1994) finding that the degree and type of association with elderly people affects attitudes. It may also be attributable to insufficient preparation due to limited contact with academics with a primary focus on aged care (McLafferty and Morrison, 2004), the less glamorous, technologically simple and physical nature of this field (Happell, 1999), and its low status (Fagerberg et al., 2000). Overall, it suggests this generic curriculum reinforces negative images of aged care by discouraging students from seeking a career in the specialty.

Limitations

Several methodological problems limit the findings and interpretations of this study. The convenience sample was drawn from one generic pre-registration course in a single school of nursing, and the findings cannot be generalised to other undergraduate nursing curricula. However, the use of a convenience sample, as frequently occurs in nursing research, does not nullify these findings (Polit et al., 2001). Students were only permitted to select from a limited number of key careers in the study. Even though they were given the opportunity to indicate 'other' and requested to provide more information about this preference, the restricted choice may have prevented some from having a viable choice in areas such as primary health care. While the sample was obtained from a single cohort of students who commenced their studies in 2005, it cannot be assumed the same students completed the questionnaire at each time point, particularly as there was a decrease in the response rate in the second year of data collection, which limits comparisons between this and other years of the study. Furthermore, the study is limited because there is always a difference between what individuals claim they will do and what they actually do. Finally, because the study used a repeated measures series design with a single cohort of students, the findings may have been affected by factors external to the course.

Conclusion

If future career preferences can be taken as one indicator of the outcomes of generic Bachelor of Nursing curricula, this study offers some insights into the strengths and shortcomings of this type of program in supporting students to commit to a career in certain clinical specialties. On the one hand, acute care of the adult and mental health may be the main beneficiaries of this program. Given commencing students' level of uncertainty about career preferences, and lack of interest in a career in mental health, in comparison to acute care of the adult, the findings suggest the overall quality of the curriculum may have a positive influence on career choices in these fields. On the other hand, the curriculum discourages students from seeking a career in aged care and midwifery, and, as a consequence, may contribute indirectly to shortages of new graduates in these fields.

There are three implications of our study's findings. First, from a workforce planning perspective the findings indicate it is possible to change negative perceptions about career preferences in certain specialties, in this instance, choosing a career in mental health nursing. The findings also support the decision of some schools to introduce direct entry pre-registration midwifery curricula to help address the shortage of midwives. From an aged care perspective, however, the findings are suggestive of adverse workforce

planning implications, highlighting the need for a comprehensive review of the nature, amount and placement of aged care in generic curricula, and for greater utilisation of academics and clinicians with primary experience in aged care. Second, the findings highlight the need for curricula to address, in a non-threatening way, misconceptions and stigmas about particular patients and conditions. Third, more research is needed to examine the reasons behind students' career choices, the most effective measures to change negative images of aged care in particular, and to assess if a relationship exists between career choices during enrolment in generic courses and career pathways followed in specialist fields as a registered nurse.

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