

UNDERSTANDING THE NURSING WORKFORCE: A LONGITUDINAL STUDY OF AUSTRALIAN NURSES SIX YEARS AFTER GRADUATE STUDY

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ABSTRACT

Background:

The challenge posed by the worldwide nursing shortage is significant not only for workforce and facility planners, but also for those who educate nurses for practice and nurses themselves. The provision of skilled and competent advanced nurses is clearly a goal of postgraduate education. An increasing shortage of skilled and qualified nursing staff to provide the required level of care is evident in Australia.

Objective

To determine the impact of graduate education on registered nurses' personal and professional development.

Design

A longitudinal descriptive and co-relational study of postgraduate nursing students using postal survey.

Sample:

Five cohorts (1998-2002) of nurses who had graduated from university with a graduate diploma or master of nursing qualification were all surveyed over six years post graduation (n=151).

Results:

The study showed the greatest motivator to change jobs was greater job satisfaction; self esteem and their ability to carry out their role exceeded their job satisfaction; one quarter wanted to change their career and the strongest facilitator and the

strongest barrier to career advancement were their personal situation.

Conclusion:

This paper focuses on recent career moves, motivation, intentions and influencing factors six years after completion of their tertiary studies. This information is critical in choosing retention strategies and workforce planning.

INTRODUCTION

In the 20 years since the transfer of nursing education into the higher education sector in Australia, graduate programs for nurses have proliferated with many specialist clinical courses having moved to universities. Although master level nursing courses have been available in this country since the early 1980s, they were relatively few until the transfer of the hospital based nursing programs to the tertiary sector in 1985. Also at this time the graduate diploma developed as an increasingly popular educational option as it became available in different Australian states. Students often transferred from the graduate diploma program to the masters program and completed that program. Alternatively they graduated with the graduate diploma and returned at a later date to convert it to a master's qualification after further study.

Also, nurses began to evaluate the graduate courses offered in Australia (Simsen and Holyroyd 1997; Boore 1996). Simsen and Holyroyd (1997, p.370) assert that:

Postgraduate nursing education supports a tertiary-based vertical career path, which not only facilitates

professional career development but also gives nursing parity with other professions that have well-established postgraduate education structures.

In reporting the findings of a longitudinal study following graduates from a higher degree program it is these professional career development activities that are of primary interest to the researchers. Consequently, the literature review will focus on these aspects but will also include workforce issues. Consideration of the impact of graduate study on competence and advanced practice or critical thinking and research or other dimensions will be covered in less depth.

This paper presents the findings from a 10-year longitudinal study of registered nurses (RNs) who completed a graduate diploma or master of nursing course work degree. The purpose of the study was to determine the impact of graduate education on their personal and professional development.

One element of this was the perceived impact of their education on their career advancement or movements, initially after graduation (Pelletier et al 1998a) and six years later. The study commenced with a pilot in 1991 (Pelletier et al 1994) and five cohorts of students (1992-1996) were surveyed every two years for six years post-graduation. The final questionnaire for each cohort was completed from 1998 to 2002. The findings related to the early impact on their professional growth, behaviour and care activities have been reported elsewhere (Pelletier et al 1998b) as has the perceived effect of their study on the practice and quality of care (Pelletier et al 2002).

LITERATURE REVIEW

Whether achieved through sound knowledge and practice in the research process (Sandor et al 1998) or at other points in the programs (Dexter et al 1997; Sandor et al 1998; Vaughan-Wrobel et al 1997) critical and analytic thinking are valued and seen as goals of masters level education for nurses (Giot 2000). Boore (1996) studied a masters program which claimed its goals were to develop the nurse's knowledge and skills to support their role as an advanced nurse and to develop nurses with a capacity for nursing research. Increasingly, descriptions of advanced nursing practice are using words such as analysis, critical thinking, synthesis of information, establishing priorities, reflection and creativity (Davis 1993). While it is believed these are qualities which can be achieved through postgraduate education, research evidence has not identified significant differences in critical thinking skills in practice at different stages of their studies (Giot 2000). Giot (2000) did find a significant improvement in decision-making skills as a result of graduate education. So what motivates nurses to study at the graduate level?

An early study of nurses found that students were motivated by career advancement and the opportunities offered by access to higher education (Thurber 1988).

Watson and Wells (1987) found professional growth, personal growth and professional socialisation were the main motivators to pursue study to master's level. Winson (1993) undertook a longitudinal study of nurses who had completed master or doctoral level theses or were doing so. The study showed there was a strong tendency after one to two years for these nurses to move into positions that permitted them more autonomy.

Another UK study found personal development and growth rather than career advancement were the main motivating factors for graduate study (Fraser and Titherington 1991). Boore's study (1996) revealed about 20% were motivated by the enhancement of career paths but the majority were motivated by the course's relationship to practice and potential to increase their competence. In contrast, an Australian study evaluating a tertiary critical care course, found students strongly believed the course would contribute to their achievement of a promotion (Chaboyer and Retsas 1996). Another Australian study (Pelletier et al 1998c) found the motivating factors to be personal or job satisfaction (42%), increased professional status (22%) and better job opportunities (17%).

The literature is quite consistent on what facilitates and blocks efforts to study - time, support and recognition. The majority of clinical students in Boore's (1996) study received time off and only 25% received no financial support. Lack of financial support and time off, as well as lack of recognition in promotional opportunities were recognised in Simsen and Holroyd's (1997) study. Trewthewie, in her qualitative study (1999), found respondents would have liked more support from their institutions in the form of time off and funding. She also recommended on the basis of her findings that nurses with graduate qualifications be recognised and remunerated by their employers.

The work environment

The Australian work environment has changed significantly in recent years and most probably many of the respondents in the study reported here would have felt the impact of these changes. In developed countries the nurses' workload has been affected by increased patient acuity, shortened lengths of stay, more chronic lifestyle diseases and improved life expectancy, an increase in patient age and the number of severely ill patients (AIHW 2001; Aiken et al 2001; Diers and Bozzo 1997; Duffield and O'Brien-Pallas 2002; Jakob and Rothen 1997; O'Brien-Pallas et al 2001). In addition, the workforce is ageing (DEST 2002) and nurses are potentially retiring faster than they can be replaced (O'Brien-Pallas et al 2004) and they are being actively recruited to other industries (Duffield and Franks 2001; Duffield et al 2004).

Unacceptable and unsafe work environments and experiences impact negatively on retention (Duffield and O'Brien-Pallas 2002) as do the perception of poor

rewards (monetary and a lack of recognition relative to efforts put into the job) (Aiken et al 2001; Fagin 2001; O'Brien-Pallas 2000). Hospital restructuring and downsizing have an impact on staff satisfaction and well being (Burke 2003) and these factors may have contributed to the respondents' decision to change their position.

Given economic uncertainty in Australia, in both the health and higher education sectors and their accountability for the use of public monies, it is important that educational providers monitor the outcomes of their endeavours. As students are likely to be paying more in the future for their education, either as direct fees or through increased HECS (Higher Education Contribution Scheme) charges, the value of the product they are purchasing will need to be made more explicit, particularly in an increasingly competitive market. The need for evaluation of the outcomes of graduate education continues to be argued (Bethune and Jackling 1997; Dexter et al 1997) and Jordan (2000) calls for better tools and methods to do so.

METHOD

Design

This is a longitudinal descriptive and co-relational study of postgraduate nursing students on completion of their studies and for six years afterwards.

Sample

The respondents were nurses who graduated from a graduate nursing course in a metropolitan Australian university between 1992 and 1996. The programs were essentially focused on management or a clinical specialty. Research subjects were included, especially in the third year of the master program. The sample did not include those doing a master of nursing by research thesis. Students may have entered the program on the basis of an undergraduate degree or on the basis of experience and prior learning (Donoghue et al 2002). The demographic profile of the cohort collected on commencement of this project was undertaken on completion of their studies, six years before the time of completion of the final questionnaire in the series, Questionnaire D which is the focus of this article.

Ninety three percent were female and 30% were married. Ages ranged from 21-58 with a mean age of 35. Attrition and loss of participants is inevitable in a longitudinal study. This means that while this profile is reflective of the original population it cannot be considered exact for those still responding six years later.

Procedure

A questionnaire was used on each of the four occasions. The first (A) was completed at university and subsequently B, C and D were sent to students by mail and returned by self addressed stamped envelope. Each of

the five cohorts was followed every two years for six years post graduation via questionnaire. A variety of strategies were used to reduce loss of participants. These include contacting professional bodies, clinical venues and fellow academics to try to track non-responders. Loss rates are reported in table 1.

Table 1: Number of participants completing questionnaire A (on graduation) and questionnaire D (six years later)

On graduation	Six years later	% lost
1992: 70	1998: 33	53
1993: 90	1999: 36	60
1994: 82	2000: 33	59
1995: 80	2001: 32	60
1996: 81	2002: 28	70

Instrument

The final questionnaire (D) had 28 questions divided into sections using 15 tick box questions and 13 questions with a five point Likert Scale. It was developed by the authors and has not been validated. Demographic data were collected at the time of graduation only and not on subsequent surveys. The areas explored in questionnaire D were position, career moves (including motivation, impact and related factors), goals and career and study plans. Findings from the fourth and final questionnaire (D) in each cohort's series are reported here.

Results

Participants' current positions and whether these had changed in the previous two years were explored (see table 2) and a great deal of variation is obvious. Over half of two cohorts had changed jobs in the previous two years. This move was perceived to be upward by 43% (in 2002) down from 75% in 2000. Twenty to 28% perceived it as downward and from 13-28% perceived it as horizontal in nature. From 28-83% felt it increased their salary whereas 8-36% felt their salary went down. From 8-71% felt their salary had not changed as a result of the move.

The level of personal significance of this career move was very high at 71-100% for all cohorts. Their perception of the influence of their study on the move is also strong with 50-80% feeling it had a moderate or high influence. However, from 8-29% felt their qualification had not influenced their success.

Motivation for changing jobs was explored (see Figure 1) and the percentage of participants who did so and indicated 'quite a bit' or a 'great deal' for each motivating factor is shown. While there was no consistently strong motivator across the cohorts the desire to increase their job satisfaction shows most strongly with the exception of the 2002 cohort. Balancing life and satisfaction are of equal importance to the 1999 and 2002 cohorts. Career advancement is more predominant in recent years and the need for balance in their life is stronger with earlier cohorts.

The next questions are not tied to their career move but focus on their current circumstances. All participants (not just those who had changed jobs) were asked to indicate their self perception of self esteem, ability to carry out their role and their job satisfaction (Figure 2). The percentage rates for strong positive responses are presented. It is apparent that self esteem is lowest in the 2000 cohort and that the ability to carry out their work role is consistently strong and out strips job satisfaction itself.

Perceptions on three beliefs about their current working circumstances were explored. Only half to two-thirds of the participants indicated that they had 'sufficient' control over their career and future despite having strong tertiary qualifications. From 60-80% felt that they had gained recognition from others. Less than half of them were interested in further study.

Current goals of participants are presented in table 3 and their intention to remain in nursing over five to 10 years is shown in table 4. The most significant factors that facilitate or hinder their career advancement are presented in tables 5 and 6. Approximately half of each cohort intends to remain in nursing for the next five years but from 19-33% are uncertain. From 21-30% intend to remain 10 years but 25-41% of them are uncertain of this.

No group identified a single factor that would strongly facilitate their career goals. However, the 1996 cohort was influenced most by their personal situation and least by their qualifications with the reverse picture for the 2002

cohort. The strongest factor at a little over third was job availability for the 1998 cohort.

Barriers featured more strongly than facilitating factors with personal situation the highest or equal highest for all cohorts. Financial and other support was most important at 24% for the 1998 cohort and much less for others. Job availability remains a factor for 15.6 % of the 2002 cohort despite the nursing shortage.

Participants' study activities were explored and from 3% of the 1998 cohort to 12% of the 2000 cohort were studying in a nursing-related course six years after entering the study following completion of their postgraduate qualification. Within nursing, 3% of one cohort was studying either at the graduate diploma or coursework masters level with a total of 8% across two cohorts at the masters thesis level and a total of 11% across three cohorts doing doctoral studies. From 16-25% across the cohorts were studying outside the field of nursing.

DISCUSSION

The study has a number of limiting factors to be acknowledged before the results are discussed. The total sample size of 151 is small and care must be taken when generalising findings. However, as longitudinal studies are uncommon and retention is always problematic the small number retained in the study is not surprising. Having a subset within this of those who changed positions reduces the numbers further to 59. The non-

Table 2: Position held at time of questionnaire completion, ie six years after graduation (%) and % who changed positioning last two years

	% in 1998 n=33	% in 1999 n=36	% in 2000 n=33	% in 2001 n=32	% in 2002 n=28
RN	24	17	19	28	21
CNS	27	22	23	6	29
NUM	21	14	36	3	18
Educator	12	8	0	12	4
CNC	6	11	9	16	4
Unemployed	3	11	5	6	14
Other	6	17	8	28	11
Changed position	36	45	55	54	29

CNS = Clinical Nurse Specialist NUM = Nurse Unit Manager CNC = Clinical Nurse Consultant

Note: Missing variable percentages not included in this table

Figure 1: Changing my job was STRONGLY motivated by my desire to:

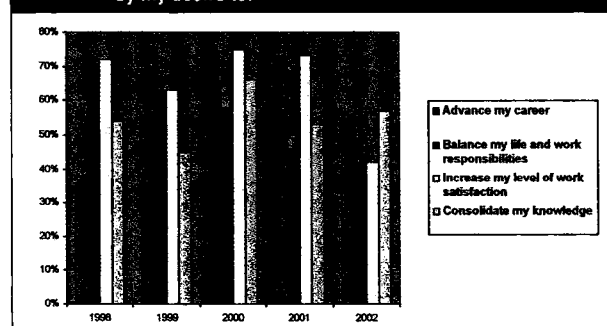


Figure 2: Percentage indicating their self perception on three characteristics

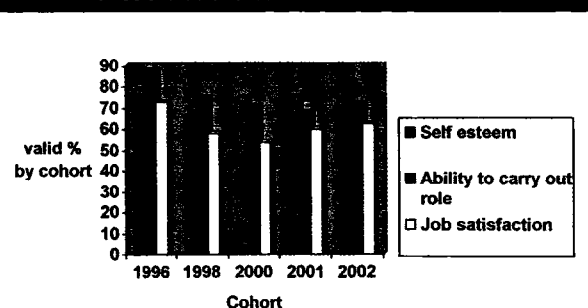


Table 3: Highest reported current goal in percentage

	1998 n=33%	1999 n=36%	2000 n=33%	2001 n=32%	2002 n=28%
Change career	27	23	25	25	19
Advance career	12	6	12	10	25
Increase management involvement	15	6	4	4	6
Professional development	6	6	7	7	6
Other	15	8	0	0	6

Note: Missing variable percentages not included in this table

Table 4: Do you intend to remain employed in nursing for the next five years? Next 10 years?

	1996 n=33%	1998 n=36%	2000 n=33%	2001 n=32%	2002 n=28%
Yes	51 30	58 28	46 29	46 29	53 22
No	9 27	8 25	13 36	14 36	6 25
Uncertain	33 36	19 33	33 25	29 25	28 41

Note: Missing variable percentages not included in this table

Table 5: Facilitate career advancement rank no: 1. Highest reported item in percentage

	1996 n=33%	1998 n=36%	2000 n=33%	2001 n=32%	2002 n=28%
Personal situation	21	17	16	14	6
Diversity of skills	12	6	12	11	3
Job availability	9	36	16	14	19
Motivation	9	8	13	11	14
Post grad education	6	11	17	14	25

Note: Missing variable percentages not included in this table

Table 6: Main barriers to career advancement rank no: 1. Highest reported percentage item

	1996 n=33%	1998 n=36%	2000 n=33%	2001 n=32%	2002 n=28%
Personal situation	30	33	17	18	25
Lack career path	0	17	17	18	3
Job availability	15	6	8	7	16
Experience	0	6	4	4	13
Course recognition	0	6	4	4	13
Hospital funding and support	24	14	4	7	13

Note: Missing variable percentages not included in this table

validation of the instrument used might be regarded as another limitation.

However, some insights were gained from the results. The five cohorts (1998-2002) were all surveyed six years post graduation and, as such, they are relatively senior within the health care system.

It is not surprising a number would have changed jobs, as career advancement was a strong motivating factor in the literature for graduate study. In this study, seeking job satisfaction is the strongest motivating factor, slightly ahead of 'advancing the career'. This is supported somewhat by the findings that upward mobility and more money were not a result of the move as approximately a third of some cohorts felt their salary dropped or the move was downward or horizontal in nature. (The drop in

salary was probably due to moving off penalty awards because of shift work). This emphasis on the importance of job satisfaction, while not surprising, is further evidence of the need for managers to seek strategies both to measure and enhance this in the current climate of nursing shortages. However, from 40-60% made the career move, possibly downward or sideways and at no extra pay with the motivation to balance work life and family. This reinforces the importance for managers of initiatives such as child care, flexible rostering and others designed to keep nurses in the workplace.

The success in achieving more job satisfaction may be evident in the very high perceptions of their self esteem and their capacity to carry out their role. But their perception of their job satisfaction does not hold up as strongly with only 55% of the 2002 ranking it highly. This

may cause managers to review the elements that comprise job satisfaction since a high self-esteem and capacity to fulfil the role would be part of this, but the inclusion of their degree of autonomy might have strengthened the results here. The high level of self-esteem may be considered surprising but this may be due to the fact that the majority (66%) of respondents were holding more senior positions than that of RN in the form of specialist, managerial or consultant roles for example.

Managers may be heartened to find that the majority had experienced a high level of recognition from others in the workplace and that they had sufficient control of their career and future. The former might strengthen their allegiance to their workplace and retention of highly qualified nurses in whatever position must be a managerial goal in the current climate. The perceived degree of control over their career and future may seem somewhat surprising since there may be some perception that nurses are a relatively powerless group. However, while a lack of control within a clinical or managerial work environment may be understandable, the more global nature of this question may have encouraged a more positive response. Certainly as the nursing shortage increases, particularly for specialist well qualified nurses which these participants are, they may have felt a greater sense of control with more options open should they chose to change jobs.

While almost half the sample had changed jobs in the two years prior to completing this questionnaire they may also have changed positions in the previous four years. While there have been few changes to the career ladder in this period in New South Wales, new roles are emerging in the form of practice nurses and nurse practitioners. Re-structuring in institutions is at the very least altering traditional career paths as middle management positions disappear, particularly in nursing. On the other hand, the increased rate of casualisation (Creegan et al 2003) may generate more career opportunities for full-time employees at the expense of those working part-time and casually.

In terms of career movement or job change an important aspect that was not explored was whether their move was out of nursing. However, there is evidence emerging that nurses are actively being recruited into positions outside nursing and indeed, the health industry as a whole (Duffield et al 2004; Duffield and Franks 2001). This trend is likely to be exacerbated by registered nurses who are not only very experienced but also, possess a higher degree.

It is perhaps not surprising that only a quarter or less of the participants felt their graduate qualification played a major role in the success of their job application since it was achieved six years prior. Their subsequent work expertise may well have had a greater impact. Also, for the latter cohorts, over half had completed an additional graduate course which they may have seen as having more impact. These latter cohorts are likely to be a

younger population and their responses signal what might be seen as a pattern of 'life long' learning or efforts to carry out some form of career development plan. Again, a weakness is that the study did not determine if the completed courses were outside nursing. However, it did determine that from 16-25 % of each cohort was studying outside nursing and only 3-12% within nursing. This finding is supported by other Australian work which shows many nurses gained non-nursing qualifications prior to moving to positions outside the health industry (Duffield et al 2004).

The intention of the respondents to remain in nursing will be of interest to workforce planners. About half of all cohorts intend to remain five years which is not high since they are only six years out from having gained a significant professional qualification. The level of uncertainty in staying is 20-30%. This fits with the pattern of doing study outside nursing and again fits with a trend for nurses to move outside the nursing field (Duffield et al 2004).

Not surprisingly, in the intention to remain 10 years, the numbers drop to 22-30% which would take account the fact that more have reached retirement age (O'Brien et al 2004) as well as the continued shift out of nursing. Understandably the number indicating they are uncertain of their intention rises to 41% in 2002 but was also at 36% in 1998 so it is not directly attributable to the current difficult work environment.

In the context of factors that would facilitate their career advancement, it seems over the time of the study the personal situation has become less important which may reflect some of the initiatives regarding flexible rostering, increased part time opportunities and child care or the passage of time.

Job availability, a strong factor for the 1999 cohort is substantial at 19% for the 2002 cohort. Since the nursing shortage reduces the impact of this factor in most circumstances it may be the lack of availability of management positions, especially middle management that are the concern. Alternatively, it may be that it is of importance to those seeking positions outside nursing. The 2002 cohort puts more emphasis on the impact of postgraduate education reflected in their higher levels of completion of courses and studying both inside and out of nursing. Again, this may reflect the trend for the more recent groups who are presumably younger, to plan and work towards a career following a life long learning track. These inter-generational differences will continue to challenge employers to provide ever changing and challenging workplaces (Creegan et al 2003).

In Australia, as in other developed countries, the nursing shortage and ageing work force make it increasingly imperative for administrators to 'understand' their workforce and what motivates them to study, to move and hopefully to stay in the health service sector. They are an invaluable asset.

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