

Doctoral theses in nursing and midwifery: challenging their contribution to nursing scholarship and the profession

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KEY WORDS

research dissemination, nurse education, research in practice.

ABSTRACT

Objective

To determine the impact and outputs of research conducted as part of doctoral studies in nursing.

Design

An online survey was conducted with 27 nursing doctoral graduates from United Kingdom and Australia who had graduated between 2001 and 2012. Textual and numerical data were collected and sorted on outcomes of research for management, education, practice and workforce. Numerical data were collected from journal article outputs regarding impact factors and citation rates; as well as demographic information on graduates. Frequencies were tallied, percentages calculated for both textual and numerical data and tables and figures formulated.

Setting

University and health sector.

Subjects

Doctoral nursing graduates who graduated between 2001 and 2012 from universities in Australia and the United Kingdom were recruited to complete the online survey.

Main outcome measure

The outcomes and outputs of doctoral research are usually implied in the theses but assessment of these is often not apparent in the literature or clinical area. There is little evidence to demonstrate whether or not the nursing profession is influenced by the outcomes of and outputs from nurses' doctoral studies.

Results

The top three topic areas covered by their theses were paediatrics, acute care and the role of nurses in practice. The key outputs from the 21 doctoral studies were 86 publications. Articles from the individual theses had verified citations ranging from 0 to 75. Outcomes from the research were evident in contributions to policy development, models of care, workplace issues at universities, and nursing curricula.

Conclusion

The study shows the need for nursing research at the doctoral level should be directed towards professional needs which ultimately impact on patient care.

INTRODUCTION

A doctorate is said to prepare future leaders of the discipline, “who will creatively generate new knowledge, critically conserve valuable and useful ideas and responsibly transform those understandings through writing, teaching and applications” (Golde and Walker 2006, pp.5). While doctorates are usually research-based degrees and common in nursing faculties (Carlson 2003) questions arise as to whether they are preparing graduates to have an impact on nursing practice. In 2011 only 1% of nurses in the United States of America (USA) had a doctoral degree (Nickitas and Feeg 2011). The most recent published data from the United Kingdom (UK) in 2005 indicated there were only 900 nurses registered in nursing/midwifery PhD programs (Moule and Goodman 2009). While statistics available in Australia suggest an increase in doctorates in the health field from 11.7% (3,884) in 2001 to 15.2% (5,796) in 2009, no comparable data are available in nursing although the statistics suggest 39.5% of female doctorates were in health (Dobson 2012).

The outcomes and outputs of doctoral research is usually implied in doctoral theses but assessment of these is often not apparent in the literature or clinical area. This paper reports on a study conducted with graduates of doctoral programs (traditional PhD, PhD by publication and professional doctorate) in UK and Australia.

Background

In most western countries including Australia, UK, USA and Canada advanced practice nurses are usually required to have Masters degrees (Watson et al 2011; Brar et al 2010; O’Baugh et al 2007). With the emergence of nurse practitioners in a number of clinical areas it is debated whether these nurses should be educated within Doctorate of Nursing Practice programs which have an emphasis on the translation of research into practice, rather than the actual conduct of research (Brar et al 2010; Edwardson 2010; Chase and Pruitt 2006; Meleis and Dracup 2005). In both the UK and Australia the growth of doctoral education has risen significantly in the last decade.

More than 15 years ago, Antrobus and Kitson (1999) argued that there was a need for doctoral graduates in clinical positions, but today there is still confusion as to how valuable it is to the individual nurse and society. Universities clearly value doctorates as a source of income and many graduates go back to academia, teach students and conduct research. However, Watson et al (2011) speculate that this only indirectly benefits nursing practice and society. Borbasi and Emden (2001) note that completing a doctorate in nursing does not necessarily prepare nurses to be better clinicians or managers and they found that most nurses undertake higher degrees to fulfil personal goals. Writing in the late 1990s, Atkin (1999) and Clark (1996) argued that doctoral graduates were unlikely to find employment in nursing as the industry viewed them negatively. However, more contemporary work by Wilkes and Mohan (2008) explored the application and relevance of a doctorate to nurses working in clinical practice in Australia, and found some participants felt their studies had contributed to practice, education and policy development.

In an Australian study conducted in the state of Victoria, Happell et al (2008) surveyed the scholarship of doctoral students in mental health nursing. With a small sample of 16 graduates they found that while nursing and mental health practice were the most common subjects of research, however there was considerable variation in the topics of inquiry and the extent to which the research had been disseminated. The number of publications for individuals ranged from 1 to 119 in the period 1995 to 2005. It was not specified whether these publications were outcomes related to doctoral theses. Happell et al (2008) noted most nurse scholars tend to pursue an academic career path. However, there are an increasing number of doctorally-prepared nurses working in clinical practice, although it is uncertain whether they are able to effectively utilise the skills and knowledge they have gained within their doctoral studies or whether they are pursuing clinical research careers (Wilkes and Mohan, 2008). Within academia, the value of a doctorate lies in it being a

basic requirement for an academic career (Happell et al 2008). Jackson et al (2011) reinforce the view that while doctorate educated nurses are essential in the academic area to pursue research, scholarly activities, and a component of teaching future nurses, this may be indicative of the university's need to demonstrate increased research performance rather than meeting the needs of the students or the outside community.

For a doctorate degree to be effectively utilised in nursing practice and thus have a social impact on health, the research recommendations have to be considered and, where appropriate, implemented. Knowledge translation has been described as 'the exchange, synthesis and ethically sound application of knowledge... within a complex system of interactions among researchers and users... to accelerate the capture of the benefits of research' (Canadian Institute of Health Research 2012, pp.1). This suggests the field of knowledge translation has the potential to improve health and healthcare by providing direction to efficiently facilitate the uptake of research findings and other forms of knowledge.

There exists an overall agreement in the nursing discipline that nurses educated to the doctoral level will enhance the health of people through discovery and dissemination of new knowledge (Kim et al 2006). However, there is a global need for international research to be conducted into the value of doctoral education in nursing and for this to be evaluated across the spectrum of contribution to research, education and practice (Watson et al 2011). This study will address the gap in current knowledge, by examining the impact of theses produced as part of a doctorate in nursing.

METHOD

Aim

To determine the outcomes and outputs of research conducted as part of doctoral studies (traditional PhD, PhD by publication and professional doctorates) in nursing.

Design

An online survey of doctoral graduates was used to access qualitative and quantitative data. The survey consisted of five sections:

- Section 1: PhD topic, university, year of completion and clinical speciality (items 1-4);
- Section 2: research impact on education and training, management, practice, politics, workplace issues and other (items 5-10);
- Section 3: publication output and list of three best publications (items 11-12);
- Section 4: ongoing research and funding (item 13);
- Section 5: demographics details (items 14-16).

Items for the survey were developed using the available literature and included some aspects of Happell's questionnaire on mental health nurses doctoral thesis. The items were trialled with doctoral candidate supervisors for accuracy and content validity. The survey was formatted for online use in Survey Monkey (Waclawski 2012).

Participants

Doctoral nursing graduates who graduated between 2001 and 2012 from universities in Australia and the UK were recruited to complete the online survey.

Data collection

Emails were sent to known professors within the author's networks of nursing or midwifery from universities in both Australia and United Kingdom using university websites. The email contained an invitation to participate in the study, a participant information sheet, a link to the online questionnaire and a printable copy of the survey.

The professors were asked to forward the information to doctorate candidates, whom they have supervised and who had graduated since 2001. By using the professors as points of contact it is unknown how many emails were forwarded to potential participants, therefore there is no way of knowing how many graduates received the emails. The participants were asked to complete the survey either online or in hardcopy which could be returned to the lead researcher's email or postal address.

Ethical considerations

Ethics approval was obtained from the University of Western Sydney. The sample was voluntary and self-selecting as the participants made the choice to access and complete the survey. The participants were notified at the beginning of the survey that some of the information may have been identifiable to the researchers, as they were citing publications and informed them that these data would be de-identified in any publications and reports to ensure anonymity and confidentiality. Participants were able to withdraw at any time without prejudice. All data were stored according to guidelines of the National Health and Medical Research Council of Australia (2007).

Data analysis

Textual data from sections relating to doctoral topic, impact of research and ongoing research were analysed and sorted into the following categories: doctoral topic area; university of completion; year of completion; relevant clinical speciality; the area of change in nursing (education and training, practice, management, political, workplace issues) and on-going projects, topics and funding bodies. Quantitative data related to demographic information were downloaded from Survey Monkey into SPSS version 20 for analysis. Frequencies of occurrence were tallied, and percentages were calculated and displayed in figures and tables. Frequencies of classified impact data into education, management, practice, political, workplace issues were also tallied with percentages calculated and findings tabulated. Publications listed in Section 3 of the survey were collated into Endnote. The refereed journal articles were classified according to participants, name of journal, the country in which the data were collected, and methods that were used in the study. The journals' impact factors were sourced from JCR (Journal Citation Reports) ISI Web of Knowledge. The impact factor and number of citations for each article was tallied and percentages calculated where appropriate through conducting a search using Scopus and Google Scholar websites and these were summarised in tables and figures.

Rigour

To ensure consistency and reduce the potential for response bias, detailed instructions were on the online and hard copy versions of the surveys. Audit trails were also used for tracking participant data and maintaining accuracy of records. Qualitative data and categories were checked and compared to original data for accuracy of interpretation by the members of the team.

FINDINGS

The respondents

Twenty seven doctoral graduates completed the survey from nine universities in Australia (16, 59.2%) and six in England (11, 40.8%) between 2001 and 2012. Nineteen (70.3%) were female and four (14.8%) were male. Four (14.8%) respondents chose not to declare their gender. The respondents ranged in age from 37-60 years with a mean age of 50 years. The majority of graduates were employed in academic areas (16, 59.2%) with five (18.5%) working in clinical areas. Two (7.4%) of the respondents were employed in both clinical and academic areas and four (14.8%) respondents did not reply.

The doctoral theses

The thesis topic areas included: paediatrics, midwifery, nurse focus, sexual health, palliative care, stroke, drug and alcohol, mental health, acute care and women's health. The top three research areas were paediatrics

(6, 22.2%), acute care (5, 18.5%) and the role of nurses in practice (4, 14.8%). Twenty three (85%) of the theses had a patient focus. Four (15%) emanating from Australian studies were related to nursing issues of unethical conduct, resilience in the workplace and nurse/midwife roles. The majority of the theses used a qualitative methodology (22, 81.4%). The others were quantitative (5, 11.1%) or mixed methods (3, 6.7%).

Changes in nursing practices resulting from doctoral research

The majority of respondents perceived their doctoral research had led to changes in nursing. Fourteen (51.9%) respondents thought their research had made an impact in at least one of the six areas listed. There was a fairly even spread across the two countries with six of the 14 (42.9%) respondents from the UK highlighting impacts. Two respondents noted their research had an impact in five of the areas listed. Four respondents stated their research had an impact in two areas. Three (11.1%) respondents did not provide an answer to this section of the survey.

Three (11.1%) respondents noted personal change related to career development and development of research partnerships. Another ten respondents (37.0%) stated their doctoral research had not changed nursing. The reasons given for this lack of change were: recent completion of doctoral thesis, limited dissemination, change of field or redundancy, type of research, and a perceived lack of interest in research by senior managers: my disappointment from the lack of interest by key nursing managers...resulted in my choice to cease working as a nurse in any capacity (R3). Another respondent reinforced this lack of support: I am not working in the environment, so difficult to influence practice personally (R20). One respondent suggested it was difficult to gauge impact although she suggested her publication and conference presentations may have had some impact (R9).

The educational and training impact was seen as the most common area of research impact (13, 48%). These included changes in undergraduate curriculum (e.g. R1, child health workers), illicit drug use (R13, drug users care in medical wards), stroke (R11, patient decisions after minor strokes), and pain education workshops (R12, parental involvement in pain relief post operatively).

Practice impact was noted by eight respondents (29.6%) with information pamphlets and websites developed (e.g. R5, resilience enhancement with nurses), improvement of practice, clinical policy development and nurses being enthusiastic for the practice continuing with it after the research was completed (e.g. R17, a nursing care treatment for arthritis).

Workplace issues two (2, 7.4%) and management change (2, 7.4%) were noted as impact in a few cases which emphasised the employment of specialists (R9 - a psychologist employed and clinical team formed to address clinical issues in research).

Extension of the research into the political arena was noted by four (14.8%) respondents. This included becoming involved in national networks related to research (R8); development of policies by national nursing bodies (R1); development of position statements for nurses (R4, practice nurses in general practice), best practice guideline development (R6, mental health community activism and academics).

Ongoing research

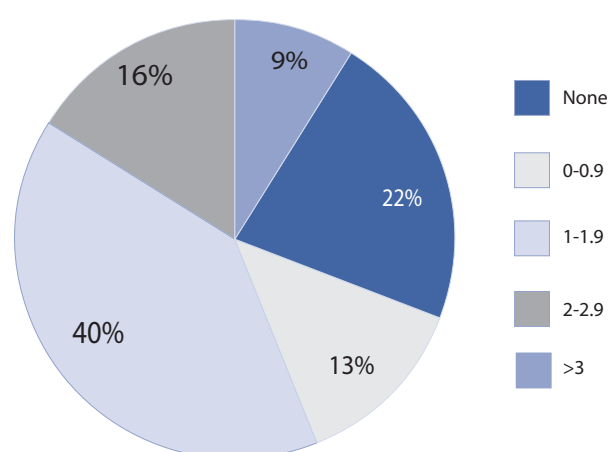
Since graduating, 20 of the respondents had ongoing research projects. Five of these graduates worked solely in clinical positions while others worked in academia. Of the 49 projects documented by the respondents, 42 were funded (ranging from approximately (AU\$2,000 to AU\$2million) either from internal or external grants. Only six of the 36 externally funded projects involved Australian graduates.

Publication output

Although six studies had no output, the remaining 21 resulted in 88 publications including refereed journal

articles, book chapters and refereed conference presentations. The number of articles published by the graduates ranged from 0-12, with a mean of 3.38 papers. Two of the graduates (graduating in 2003 and 2012) had published 12 papers from their doctoral research. Twenty respondents identified a total of 51 publications which included a book (n=1), book chapters (n=2), refereed journal articles (n=45), refereed conference proceeding (n=1) and conference papers (n=2).

Figure 1: Impact factor of journals published in by respondents best three journal articles (n=45)



Refereed journal article output

The two journals with the highest impact factor in which the respondents published were the Journal of Advanced Nursing (17.8%) and the Journal of Clinical Nursing (13.3%). A variety of disciplinary journals were utilised by the respondents including nursing, women's health and medical specialities. The impact factors of the journals that respondents published in ranged from 0 to 6.468 (figure 1). Only four articles were published in journals with an impact factor greater than 3. The majority of articles (18, 40.0%) were published in journals with impact factors ranging from 1-1.9. Ten articles were published in journals with no impact factor. No information was collected on reasons for selection of particular journals.

Examining the citations of the respondents' details of their three best journal articles found that (n=45) Scopus citations ranged from 0 to 41 and Google citations ranged from 0 to 75 (figure 2). The majority of the citations for both Scopus and Google were in the 0-9 range (21, 46.7% and 19, 42.2% respectively). Eighteen (40%) articles (published between 1998 and 2012) had no citations noted in Scopus and a total of eleven (24.4%) in Google.

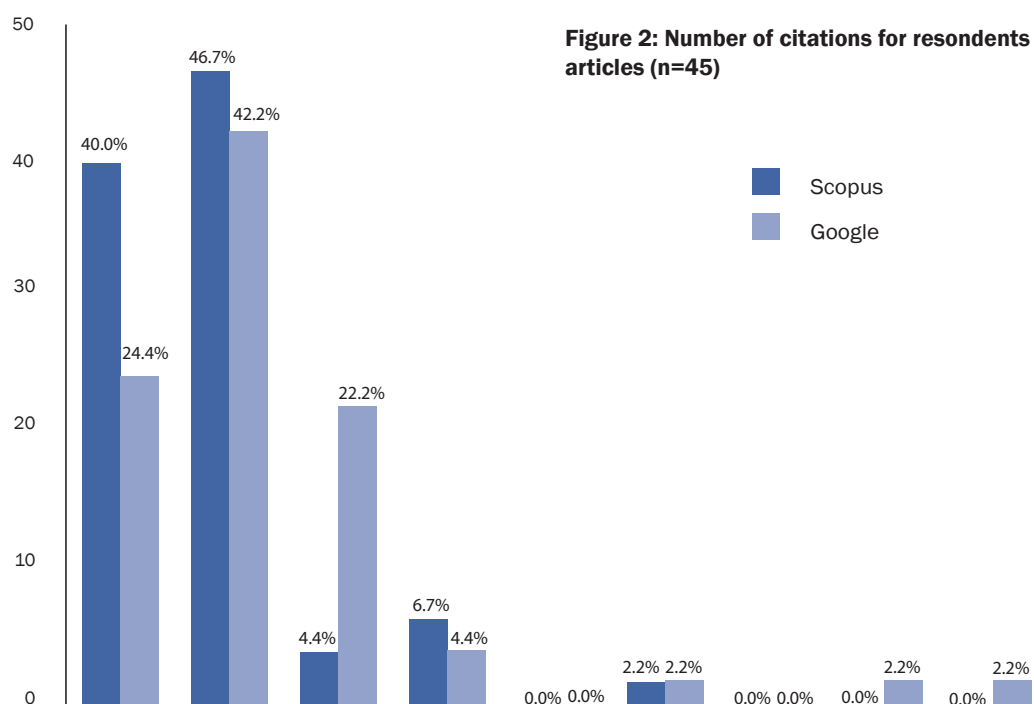


Figure 2: Number of citations for respondents three best journal articles (n=45)

DISCUSSION

This study emphasised the current situation in which most doctoral graduates in Australia and the UK are working in the academy. The situation described in the 1990's was that there should be more doctorally prepared nurses working within clinical settings (Antrobus and Kitson 1999) and that management and health services need to make it easier for nurses to work clinically and to be utilised in decision-making in health (Atkin 1999; Clark 1996). Cohesive and coherent programs were developed from a clear assessment for a structured approach and investment to address all levels of research development, such as transitioning from Masters to Doctorate and beyond (Finch 2007). An example of this is the Clinical Academic Training Pathway (National Institute for Health Research 2013) in the UK which is making a difference by recognising and supporting nurses to pursue clinical/academic careers. However, even with such prestigious programs with high levels of investment, clinical settings are slow to respond in creating appropriate roles. Knowledge transfer is more likely to happen more effectively if doctorally prepared nurses become clinical scholars who share and disseminate knowledge broadly, undertake clinically-focused research, have professional vision and are able to motivate other nurses through their practice and research (Mannix et al 2013).

There seems to be an increasing emphasis on patient and practice-focused research as nurses end the first decade of the 21st century. On reviewing Australian nurse researchers' publications from 1995 to 2000, Borbasi et al (2002) found the most common topic of research was education with a focus on nurse participants. In contrast, when examining publications between 2004 and 2008 (Wilkes and Jackson 2011) the focus had moved towards practice-issue research with patients/family participants. This patient emphasis is supported by the current research and the findings of Bunn and Kendall (2011) and Wilkes and Mohan (2008). With a fewer than 50% of respondents in the current study stating any impact of their research, the trend reported previously continues with variable impact of clinical studies by (Borbasi and Emden 2001; Atkin 1999; Clark 1996).

Publication output is increasingly important in the assessment of a university track record, both in Australia and UK for funding and quality assessment. Impact factors and citations are important aspects of these assessments. Increasingly, hospitals are beginning to see publications as a quality and/or performance indicator. From this study it appears that doctoral graduates are striving to publish in the highest ranking nursing journals with the majority of publications in journals with an impact factor (IF) of between 1.1-1.9. While this IF may not be considered high in the Institute for Scientific Information (ISI) ranking (Smith 2007) it should be noted that the highest impact factor for nursing/midwifery journals in 2012 were Oncology Nursing Forum (IF 2.5), Birth (IF 2.1) and International Journal of Nursing Studies (IF 2.1). However, 22% of the publications in this study were in journals with no IF, although this broadly reflects the fact that many established and sound nursing journals have yet to gain an IF, and the respondents may have deliberately made a decision to publish in journals which will be read by their target audience despite a low or absent IF. The citation rates in this study are relatively low with a mean of five indicating that researchers need to use online sites to encourage greater access to their publications and this could include sites such as Research Gate, The Conversation and open access journals. However, it has to be acknowledged that nurses may have limited access to publishing in open access journals possibly due to financial constraints.

Implications for nursing education

If nursing is to capitalise on the impact/outcomes of and outputs from doctoral research, then doctoral candidates should be encouraged to conduct projects that will ultimately be of value to the profession. Higher degree candidates should be encouraged to publish while they are doing their doctorate. In Australia and the UK more research degree students are taking the publication portfolio approach to doctoral theses and this

could be encouraged. One way of enhancing the translation of research from theses into practice may be to form alliances with clinical services, co-identify research questions with practitioners and service users and have appropriate supervision from both clinical and academic arenas.

Universities should access the clinical area to form partnerships in research and encourage higher degree candidates to be involved in the design and development of projects that the clinical services want and need to improve patient/client care. Grant applications for projects with a clinical focus should include doctoral students as part of the proposal. Educators need to work with clinical management to encourage nurses with doctorates to take up the challenge to work in their specialties and use their knowledge to improve the profession and patient/client care. Without management support this will not happen. Clinical settings need to gear up to promote opportunities for doctorally prepared nurses to more fully engage in clinical research careers. Some studies show this does not readily occur and novice post-doctoral researchers are impeded in terms of their research productivity (Al-Nawafleh et al 2013). Although specifically referring to professional doctorates, Smith (2012) notes the need for an “interface between the nurse manager, the practitioner researcher and academics, before, during and after the professional doctorate”. This seems equally relevant for other doctoral programs. Within doctoral programs emphasis should be placed not only on research skills such as data collection and analysis but also on modes of dissemination, knowledge translation, implementation science and publication. Nurturing doctorally prepared nurses after completion of their PhD by sustaining positive research relationships with their supervisors or other mentors could encourage appropriate publication and dissemination strategies as well as foster the continuing development of the nurse.

Limitations

The major limitation on the research is that because of the small sample which is typical of qualitative research, no generalisations can be made. Utilising the survey on a larger sample would provide a broader picture of the impact of doctoral education for the discipline of nursing in the 21st century. However, the study has shone light on an area which is not generally explored.

CONCLUSION

In this small cohort of participants, this study has demonstrated that doctoral nursing research has the potential to have a large impact on nursing practice both at local and national levels. There was variability in outcomes and impact and more work is required to encourage educators and managers to work together to encourage clinical focus in doctoral theses projects.

RECOMMENDATIONS

A closer examination of doctoral theses with a larger sample possibly using doctoral dissertation abstracts could provide a fuller picture of the impact situation. If we are encouraging nurses to complete doctoral studies they should be encouraged to work not only in academia where it is an essential entry criteria, but also need to be encouraged and supported to work in clinical services.

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