Nursing and midwifery research grants: profiling the outcomes

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KEY WORDS

Nursing and midwifery research, research funding, evidence based practice.

ABSTRACT

Objective
To profile the outcomes of nursing and midwifery research that was conducted as a result of a research grant program administered by a nursing and midwifery regulatory authority in Australia between 1996 and 2010.

Design
A cross-sectional electronic survey relating to research grant outcomes.

Setting
The survey was open to all past and present research grant recipients in Australia.

Subjects
The survey was completed by 71 past and present research grant recipients from across Australia.

Main outcome measures
Survey findings.

Results
Thirty three percent of nursing and midwifery researchers who were funded through a grant program are engaging in research that has implications for the advancement of clinical practice, nursing and midwifery education, indigenous health, mental health, child health, rural and remote nursing and midwifery practice and technological advancement in health care.

Conclusion
The findings indicate that nursing and midwifery researchers are conducting a broad range of research studies that contribute to professional development and to health care in general. Respondents demonstrated the benefits of their research projects through clinical practice improvements, policy changes and through professional networking that contributed to the critical mass of nurse and midwifery research based knowledge. Most respondents disseminated their findings through various media on a national or international basis. The survey findings demonstrate the importance of a continuing commitment to nursing and midwifery research by relevant organisations.

INTRODUCTION

The Queensland Nursing Council (QNC) has administered a research grant program since 1996. Funding for nursing and midwifery research has been distributed annually through grants to successful applicants in four categories of research. In addition, every two years a Florence Chatfield grant was awarded to encourage nursing and midwifery researchers to establish collaborative funding partnerships with other entities. Florence Chatfield (1867-1949), was the first nurse appointed to the inaugural Queensland Nurse's Registration Board. Miss Chatfield is honoured for her contribution to the advancement of nursing and midwifery. In 2004, a separate award category, the Florence Nightingale grant, was created when additional funding became available in that year only.

Subsequently, a total of 134 research grants were funded in the following categories: novice researcher (*n*=60); early career researcher (*n*=11); research implementation (*n*=3); experienced researcher (*n*=49), Florence Chatfield (*n*=10) and Florence Nightingale (*n*=1).

The total value of all grant funding is $1,965,045.00, or almost two million dollars. However, the research grant program may cease from July 2010 due to the transfer of state and territory nursing and midwifery regulation into a national health profession regulatory scheme. Accordingly, it was timely to conduct a survey aimed at profiling the outcomes of research support provided through the research grant program.

Nursing and midwifery led research is a relatively new area within the professions and several barriers that discourage nurses and midwives from pursuing research have been identified. Green et al (2006) and others examined a university department's approach to building research capacity and reported lack of confidence in undertaking research by neophyte nurse researchers as a barrier to pursuing research. The authors identified the need for more formal support structures. While the study was limited in scope, the findings supported earlier research that explored the research-practice gap by surveying 317 nurses working in a major Australian teaching hospital and identified similar barriers (Hutchinson and Johnston 2004). Other studies have cited leadership support as a critical component in successful research development (Henderson et al 2009; Chummun and Tiran 2008; McCance et al 2007).

In recognition of the research skill and support deficit, Tagney and Haines (2009) proposed a research framework that included linkages between clinical practice and academia and incorporating nursing research into education programs and mandatory training. This type of framework offers a formal support structure for nurse and midwifery researchers.

Despite the barriers, there is evidence that nurses and midwives are fully engaged in research activities. Borbasi and others analysed 509 nursing based research articles from eleven Australian and United Kingdom (UK) nursing journals that were published between 1995 and 2000 (Borbasi et al 2002). In their analysis, the authors noted that education was the most popular focus of research and that qualitative method (47%) was more popular than quantitative method (41%) among nurse researchers. Only one study reported using a randomised control trial (RCT). The authors noted that most nurse research funding was sourced from professional nursing associations (42%) with only 5% of nurse-led research funded through national competitive grant schemes. Very few studies were focused on national health priorities. The authors concluded that nurses and midwives would have a greater influence on population health if their research was aligned with national health priorities. While the Borbasi et al's (2002) study was limited by restricting article analysis to generalist journals, the scope of the study provided a comprehensive snapshot of nursing and midwifery research and encouraged nurse researchers to pursue clinically relevant research.

Borbasi et al's (2002) study echoed an earlier study by Traynor and others that was narrowed to an analysis of published UK nursing research. In the UK study, the authors found that nursing research tended to focus on 'endogenous' rather than on 'exogenous'

research (Traynor et al 2001). Endogenous research was described by the authors as research that focused on nursing as a profession rather than on patient centred outcomes.

A paper by the same authors reported that nursing research in Europe was significantly underfunded in comparison to other comparable professions and was also under funded in relation to the size of the profession (Rafferty and Trayner 2004). The authors noted that education research receives as much as 4.5 times funding as nursing research. In their conclusion, the authors proposed that nursing research, as a collective, should ensure that the current upward trajectory in the growth of nursing research is continued by achieving greater commitment from funding sources and networking initiatives.

Despite organisational barriers and lack of funding, there is no doubt that there are considerable benefits to be made from nursing and midwifery research based initiatives in terms of direct and indirect cost savings (Buxton and Hanney 1996; Rafferty et al 2003). Moreover, nurses and midwives are ideally placed to make significant contributions to improving health care outcomes (Fitzsimons et al 2006; Swenson-Britt and Reineck 2009).

Accordingly, this survey was aimed at profiling the contribution made to health care and to the nursing and midwifery professions by researchers who were supported in their endeavours by funding from the QNC.

METHOD

The cross-sectional survey consisted of the distribution of a twenty-one item electronic questionnaire. Respondents were required to assess the impact and benefit of the research grant on nursing and midwifery knowledge, practice, and/or education and on the professional value of receiving funding support for their project.

Study participants

A total of 71 research grant recipients participated in the survey. The total number of recipients per award was three hundred and seventy eight (378) recipients. Several recipients received more than one award, either for different award categories or in different years. Therefore, the total target group for the survey was three hundred and fourteen (314) grant recipients. Questionnaires were distributed to the two hundred and fifteen (215) grant recipients who were contactable.

Data analysis

Frequencies were calculated using the survey tool data analysis function. Frequencies provided an actual count as well as the computation of the percentage of individuals selecting each response category for a specific questionnaire item. Qualitative data was analysed using thematic analysis. Each response was individually coded; subthemes were identified and were then clustered into major themes.

ETHICAL CONSIDERATIONS

Ethical approval was received from the QNC.

RESULTS

Results are presented in four domains: demographic data, award category and research focus, research grant impact and qualitative findings.

Demographic data

The majority of respondents were female (91.4%), with males comprising 8.6% of respondents. Ninety three per cent (93 %) of respondents were nurses and 7% were midwives.

Age groups were categorised as: 20-29 years; 30-39 years; 40-49 years; 50-59 years and 60 years and older. The majority of respondents were in the 40-49 year age group (38%) followed by the 50-59 year age group (29.6%), the 30-39 year age group (19.7%) and 12.7% of respondents were from the > 60 years age group. No responses were received from the 20-29 year age group.

Award category and research focus

The majority of respondents were awarded a novice researcher grant (56.3%). The remaining respondents were awarded research grants in the following categories: experienced researcher (21.1%), early career researcher (18.3%), research implementation grant (2.8%), Florence Chatfield grant (8.5%) and Florence Nightingale grant (1.4%).

There was a relatively even spread between respondents who pursued a quantitative method (39%) and respondents who conducted qualitative research (37%). Thirty one per cent (31%) of respondents employed a mixed methodology.

Quantitative methods included: descriptive (45%); case study (14.3%), cohort (17.9%), correlational (12.5%), pre-test/post-test (21.4%), randomised controlled trial (26.8%) and time series (10.7%). Two projects utilised structural equation modelling and instrument development.

Qualitative researchers employed: focus groups (36.6%); participatory research (24.4%), phenomenology (22%), action research (17.1%), grounded theory (12.2%), Delphi (7.3%), ethnography (5%), thematic analysis (2%), phenomenography (1%), combined interview/focus group (1%), hermeneutics (1%), narrative (1%) and constructivism (1%).

For reporting purposes, projects were categorised into four streams: clinical practice, education, management and research. Research projects focused on clinical practice (71.6%), research knowledge generation (52.5%) and education (19.4%). Projects with a focus on health system, infection control, leadership and patient flow were categorised as 'Management'. A selection of examples of research focus is outlined in table 1.

Table 1: Major research focus - examples

Focus	Clinical Practice	Education	Management	Research
Sub categories	Cancer/oncology	Caregivers	Health system	Attitudes/Ethics
	Culturally appropriate care	Education	Infection control	Evaluation research
	Evidence based practice	Health promotion client/ patient	Leadership	Patients/Student experiences
	Models of care	Health promotion nurse/midwife	Patient flow	Personal experiences
	Nursing role/scope of practice	Professional development	Technology	Internationalisation of nursing Australia
	Decision making			

A majority of researchers agreed that their research project was not difficult to complete (69%). Barriers encountered included workload (55%) financial reasons (18.2%), lack of organisational support (27.3%), lack of resources (27.3%) and staffing (9.1%). The benefits of funding outcomes are outlined in table 2.

Most respondents presented their findings to a national conference (73%) or to an international conference (42%). Sixty seven per cent (67%) were published in a peer reviewed journal, or other journals (25.5%), an international journal (26%) or a national journal (9%). Dissemination methods are portrayed in figure 1.

All respondents believed or 'hoped' that their project made a positive contribution towards health care (100%). It is beyond the scope of this paper to list all project outcomes. A selection of examples describing the contribution to health outcomes is outlined in table 3.

Table 2: Benefit of the research grant

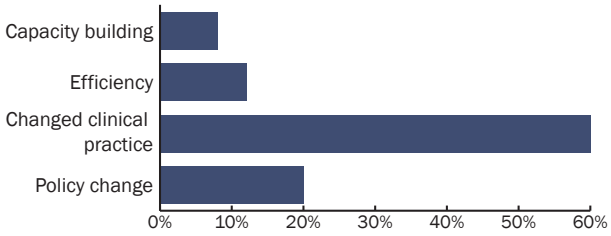

Figure 1: Dissemination of findings

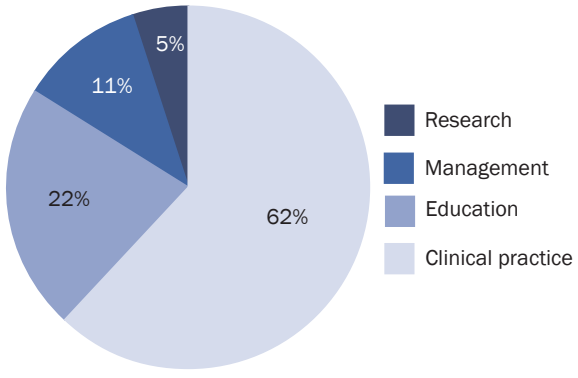

Table 3: Contribution to health care

Field/Area	Examples of health outcomes
Best practice	Timely removal of indwelling catheters/intravenous peripheral catheters Competency standards for palliative care nursing practice
Indigenous health	Recruitment/retention of indigenous nurses Improving the indigenous student's tertiary experience
Mental health	Development of Brisbane Postnatal Depression Index Evaluation of benefits of exercise for people with dementia
Midwifery -related	Identification of challenges of new fatherhood Optimal management of third stage labour
Education	Evaluation of a preceptorship model Clinical leadership strategies
Paediatric/Child health	Clinical pathway for bronchiolitis Paediatric pain management
Rural/Remote	Understanding rural women's cancer survivor experiences Identification of gaps in rural health services
Technology	Computerised adult triage tool for use in emergency areas Enhanced point of care data collection

Table 4: Emergent themes

Major Theme	Supporting statements
Sense of achievement	*The professional acknowledgement that I was undertaking a project that was judged as being able to contribute to the nursing profession by a peer review panel of experts* *Recognition that midwifery research is valued*
Health promotion	*Development of a course on women against violence* *Provided an opportunity for participants (spouse/partners of people with schizophrenia) to have a voice and be heard*
Identified a health problem	*Provided an understanding of why smoking continues to be a problem in the mental health setting* *Provided insight into the experience of patients undergoing peripheral blood stem cell collection*
Enabling project	*Provided ability to conduct research into a very important part of paediatric practice* *Without funding the research would not have been undertaken*
Knowledge building	*Explored an area of nursing that had never been explored previously* *Contributed towards understanding the needs of new fathers*
Improved practice/policy	*Showed that a simple educational package can benefit carers of people with dementia*
Capacity building	*Paved the way for a research program that focuses on resilience and chronic illness including cancer*
Networking	*Developed a body of knowledge that I could share and commence building a professional network*

Qualitative responses

Emergent themes relating to the most significant benefit/aspect of the research grant were categorised into major themes with examples of verbatim supporting statements as outlined in table 4.

DISCUSSION

The respondent demographics were representative of current demographics among the nursing and midwifery professions. In Australia, 90.4% of the nursing profession is female and 33.0% of the

nursing workforce is aged over 50 years, with an average age of 43.8 years (Australian Institute of Health and Welfare (2009a). Most respondents in this survey were female, more likely to be employed as nurses/nurse academics than midwives and were aged between 40 and 49 years. Respondents in the 'over sixty' age group were well represented, indicating that researchers in the older age group continue to make significant contributions to the nursing and midwifery body of knowledge. The lack of response from the younger age group may reflect the need to consolidate a clinical career or balance career with personal commitments.

Randomised controlled trials (RCTs) and pre-test/post-test were prominent among methods adopted by quantitative respondents. This finding contrasts a study on nursing research published by Australian authors between 1995 and 2000. In their review, the authors found that only one of 509 studies included an RCT (Borbasi et al 2002). The frequency of RCTs conducted by respondents in this survey is indicative of the rising trend towards evidence-based practice in nursing and midwifery.

Focus groups were a popular qualitative method, followed by participatory research, action research and phenomenology. Nurses and midwives are reported to be drawn to phenomenology as a method of enquiry (Balls 2009). These approaches are closely related to professional and ethical philosophies underpinning nursing and midwifery practice and reflect a desire to understand the health care experiences of patients/clients.

More than one third of respondents focused their research on nursing and midwifery staff. These findings are consistent with literature reporting that most nursing research is 'endogenous', or profession focused, rather than 'exogenous', or patient centred (Trayner et al 2001). The findings are also consistent with an international comparative analysis conducted by Polit and Beck (2009), which analysed the characteristics of 1,072 nursing research studies from eight leading English speaking-language research journals in 2005 and 2006. The authors noted international differences existing in the conduct of nurse led research and concluded that nurses in Europe, Australia, and Canada tended to focus on nurses, compared to research in Asia and the United States of America where research tended toward a patient focus.

A major focus of the 'endogenous' research by respondents was on clinical practice. This finding suggests that a majority of respondents were examining what it is that nurses and midwives are doing, and how care is delivered which must, arguably, be patient focused. Research projects with a management focus were often centred on health care systems, for example, patient flow (admission, transfer and discharge) and technologies, or on leadership, which all filter down and impact on clinical practice and thus, could be considered as indirectly patient focused.

Surprisingly, very little research focused on national health priorities which are: arthritis/musculoskeletal, asthma, cancer control, cardiovascular, diabetes, injury prevention, mental health and obesity (Australian Institute of Health and Welfare (2009b). In this survey, research that focused on cancer control and mental health were the only projects that correlated with national health priorities. Borbasi and others advocate for greater alignment of nursing research with national health priorities in order to secure the place of nursing in health research (Borbasi et al 2002; Pearson 2004). Nursing and midwifery researchers may be well advised to consider a closer association between their research projects and national health priorities in order to maximise access to available funding.

Most respondents agreed that their project was not difficult to complete. Workload and lack of organisational support were reported as the most frequent difficulties when encountered. These finding were consistent with literature reporting that the implementation of nurse led research is often strongly influenced by high workloads, lack of time and organisational culture (Green et al 2006; Tagney and Haines 2009). The reality is that not all health care organisations consider research within their business planning strategy and nursing and midwifery researchers are often left to flounder without support (Fitzsimons et al 2006).

Despite organisational barriers, the positive 'payback' from nursing research has also been reported in the literature. Buxton and Hanney (1996) identified several benefits from research including knowledge generation, workplace efficiencies; cost savings attributed to a healthier workforce and better decision making based on up to date information. These types of benefit were acknowledged by respondents in this survey.

A majority of respondents presented their findings at a national conference, were published in a peer reviewed journal or in an international journal. A significant number of respondents presented their findings to an international audience. The results reflect the maturity of Australian nursing and midwifery research and its ability to make a significant contribution to research based knowledge on the world stage.

Not surprisingly, all respondents identified that their project made a positive contribution toward professional development and towards health care in general. Research projects have resulted in improvements to educational programs for nursing and midwifery students, identification of gaps in service delivery with recommendations for improvement, improved nursing and midwifery practices, technological advancement in nursing and midwifery care and a greater understanding of the patient experience when accessing the health care system. All of the research outcomes reflect the many positive contributions to health care that research grant recipients have made.

Themes explicated from the qualitative results of this survey demonstrate that several of the funded research projects led to a change in practice and/or policy, contributed to health care knowledge or provided the impetus for further research. The findings from this survey support recommendations from literature proposing that nursing research should be aligned to the notion of care (Cox 2009). There was clear evidence from the outcomes generated by respondents that research projects were centred on a notion of care, whether directly or indirectly provided to health care consumers.

Lack of funding was a concern addressed by respondents whose statements echoed one assertion that, funding for nursing is not readily available. The comments are supported in literature recognising that nursing and midwifery research is underfunded (Polit and Beck 2009; Cox 2009; Pearson 2004). Where funding has been made available, it is often sourced from professional nursing associations (Borbasi et al 2002). The reality that very little funding is available for nursing and midwifery research provides a strong argument for professional nursing and midwifery organisations to take up the challenge and consider the overall benefits to the profession and to health care consumers in providing funding for nurse and midwifery research.

CONCLUSION

The survey results indicate that nurse and midwife researchers are conducting a broad range of research studies that make a significant contribution to development of the nursing and midwifery professions and to health care in general despite workload and other barriers. Respondents were able to demonstrate the benefits of their research projects through changes to clinical practice, policy change or through the formation of professional networks that contributed to the critical mass of nurse and midwifery research based knowledge. Moreover, most respondents were able to disseminate their knowledge and research findings through various media on a national and international basis. The results of this survey demonstrate the importance of a continuing commitment to nurse and midwifery led research. An ongoing commitment to nursing and midwifery led research will ensure that health care recipients are provided with up to date evidence based practice. Continued support for nursing and midwifery led research will sustain the current ability of Australian nursing and midwifery researchers to make an important contribution to health care on an international level, thus contribute to improvements in health care on a worldwide basis.

Limitations of the survey

The response rate of thirty three per cent (33%) was relatively low. This was attributed to survey distribution towards the end of the academic year

which, in retrospect, was not the optimal time to survey a population group that included a high proportion of academics. The low response rate would normally limit the ability to extrapolate the results of this survey to nursing and midwifery research in general, however, the correlation between the results of this survey and findings reported in literature provide some support that the results, with caution, may provide a generalised picture of nursing and midwifery research in Australia.

Recommendation

This survey demonstrates the value of funding for nursing and midwifery and supports the recommendation that organisations or agencies that have an interest in health related research consider setting aside financial resources on an annual basis towards the provision of funding for future nursing and midwifery research.

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