

# NURSING RESEARCH IN VICTORIA: A SNAPSHOT OF CURRENT POLICY

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## ABSTRACT

The primary aim of this study was to determine the current profile of nursing research in the acute and psychiatric domains of hospitals/health services in Victoria. A self-administered questionnaire was developed by the authors to obtain information on the individual, environmental and organisational characteristics influencing nursing research activity within these settings. The questionnaire was distributed to 422 health services in Victoria. Eighty-eight responses were received representing a return rate of 20.9%. The respondents indicated a high level of interest in research and research utilisation, with a preparedness to provide organisational support. However, relatively few reported the articulation of nursing research into the organisations' mission statement or employing nurses in dedicated research positions. The results suggest that organisations continue to be hampered by a number of barriers to increasing research activity and utilisation by nurses.

## INTRODUCTION

Research must become an important aspect of nursing in terms of education, but most importantly in terms of clinical practice, to build up a body of knowledge to enhance the professional status and scholarship within the context of a health sciences discipline and to ensure that optimal care is provided to patients (Sellick et al 1996; Hicks 1997). Interestingly, there has been little scientific investigation of the degree to which the implementation of research findings improves the quality of patient care. However, the findings of a study by Heater et al (1988) suggest that patients who receive research based nursing care can generally expect better outcomes than patients who receive routine nursing care.

Despite this finding, a large proportion of nursing practices do not have a sound scientific basis (Hicks 1997). An audit of clinical nursing research conducted in Victoria, Australia, in the early 1990s suggests that the importance of nursing research has not infiltrated hospital policy. Less than half (45%) of the hospitals surveyed expected nurses to be involved in research activities. Even fewer (25%) had established nursing research policies, with only 31% of hospitals having nursing positions with a primary research function. Fifty percent provided research education for nurses but the amount and type was not defined (Sellick et al 1996). It would appear, therefore, that no systematic and widespread approach to developing a nursing research culture within the practice domain was present in this State at the time of the study.

A growing body of literature from Australia and overseas suggests that the findings of Sellick et al (1996) do not reflect the attitudes of nurses (Wells and Baggs 1994; Sellick et al 1996; Wright et al 1996; Deans and Lea 1997; Tisdale et al 1997). From a survey of nurses' attitudes, the authors found that the potential value of research to nursing practice is appreciated. A relationship between level of education and a positive view of research was identified in some studies (Sellick et al 1996; Tisdale

et al 1997) yet found not to be an influence in the study by Wright et al (1996).

Evidence highlights a number of barriers to the use of research findings in practice including nurses' lack of autonomy, insufficient time, poor cooperation from other health professionals, nurses' attitudes, lack of interest, poor research evaluative skills, and the accessibility of research findings (Funk et al 1991; Caroll et al 1997; Hicks 1996; Dunn et al 1998; Parahoo 2000). Any increase in nursing research predominantly reflects the activity of nurse academics (Hicks 1996). While this activity is highly valuable in contributing to the development of a body of knowledge, its lack of impact on the clinical field is cause for concern. Not only do nurses consider themselves insufficiently equipped to conduct research, but research results suggest they are not implementing research findings into the practice situation (Wright et al 1996).

The utilisation of research for the improvement of nursing practice has not yet been well demonstrated. For example, Pearson et al (1992) demonstrated that nurse-managed beds for patients requiring acute nursing care are cost-effective and contribute to improved health outcomes but these findings have not been widely adopted. Veeramah (1995) reported that few nurses working in mental health care settings applied research findings in clinical practice. Similarly, Camiah (1997) found very few clinical areas where research-based evidence is applied. As McSherry's (1997) results indicate, while nurses agree with the introduction of research based practices, the fundamental barriers of 'pressure', 'support', 'confidence', and, 'understanding' continue to exist.

The purpose of this study was (a) to develop and validate an instrument to evaluate the profile of nursing research, which can be used in other nursing settings to collect base-line data, and measure changes over time, and, (b) to determine the current profile of nursing research in the acute and psychiatric domains of public and private hospitals in Victoria. While the results of the Sellick et al (1996) study have provided a useful basis for understanding the Victorian situation, the results presented are not clearly defined. Nursing positions with a primary research function is not further elaborated and the reader is not able to ascertain the level of this appointment (eg professor, research nurse) or the amount of their work time that is devoted to research. A more detailed analysis of nursing research activity in Victorian hospitals is required to provide an accurate perspective of the position of nursing research within the clinical domain.

## METHOD

A list of hospitals and health services in Victoria was compiled from health services databases. A nursing research in Victoria audit tool, accompanied by a letter inviting participation, was distributed by mail to all 422 hospitals and health services on the list. The information was sent to the directors of nursing of hospitals and to the

area managers of mental health services. Eighty-eight questionnaires were returned (response rate = 20.8%). The majority of respondents were directors or assistant directors of nursing (n=59, 67%). Three area mental health managers, two senior psychiatric nurses and 23 others were among the respondents to this survey.

## Questionnaire

The nursing research in Victoria audit tool was designed by the researchers to obtain detailed information on the individual, environmental and organisational characteristics influencing nursing research activity in the clinical areas of the institutions. A thorough review of the literature was conducted in order to identify the major issues for inclusion in the questionnaire.

The instrument developed was a self-administered, anonymous questionnaire, designed to seek detailed information on the individual and organisational characteristics influencing the conduct of research and research utilisation based on the work of Funk et al (1991). Individual characteristics include education, and area of speciality and seniority. Organisational characteristics include available resources, functional differentiation, culture, internal and external communication channels and decision making processes. Participants were asked to respond to statements in a five point Likert-type format (1 = strongly agree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree; 5 = strongly agree).

A pilot study was undertaken prior to data collection to ensure the validity of the instrument, with 20 senior registered nurses. These people were chosen on the basis that they would have a knowledge of the issues concerned but would not be the people likely to complete the final questionnaire. Face and content validity of the instrument were confirmed by an expert panel consisting of four nursing academics and two experts in survey design. All nurses felt that as the survey was confidential, non-threatening, and user-friendly colleagues would respond, but asked that minor changes be made.

## Data analysis

Data analysis was undertaken using SPSS (Statistical Package for Social Sciences). Comparisons of respondents' views on nurses' involvement in research were made using paired t-tests and statistical significance was assumed at  $p < 0.05$ . Pearson's chi-square statistical test was performed in order to examine whether there was a difference between metropolitan and rural, private and public hospitals in the articulation of a research mission statement. Similarly, possible differences in level of research support by organisational type: public versus private; in-patient versus community versus combined; specialist versus general; and, rural versus metropolitan hospitals/organisations were examined.

## RESULTS

### Organisational characteristics

The majority of the organisations that responded to the questionnaire were hospitals (62.5%), 29.5% were health services and 8% were other organisations. Approximately two thirds were public and one-third private. Just over half provided general health services, 20% provided specialist services including aged care, palliative care, neurology, obstetrics and gynaecology and orthopaedics and 16% provided psychiatric services. The majority of organisations were located in metropolitan areas with one-third located in rural areas. A little over 50% of organisations provided combined in-patient and community health services. The degree to which these responses represent Victoria as a whole was considered by comparison to the health sector in Victoria. Hospitals in Victoria are 60% public and 40% private. Approximately 58% are located in the metropolitan area and 42% are rural. The responses to this questionnaire therefore appear to provide a cross section of public and private but demonstrate a slight over-representation of metropolitan services.

### Articulation of nursing research in the organisations' mission statement

Thirty-four percent of the organisations surveyed (n=30) indicated that nursing research was clearly stated in the mission statement of the organisation. Twenty-two percent (n=19) employed nurses in dedicated research positions. A total of 27 nurses were employed at various levels of appointment including: associate professor (n=8), research fellow (n=3), research nurse (n=11), research assistant (n=2) and project officer (n=3) who worked in a combination of full time and half time positions. A further 18% (n=16) of organisations employed nurses in combined research and clinical positions. They employed a total of 18 members of staff including: associate professors (n=2); resource nurses (n=3); educator (n=1); research nurse (n=6); research midwife (n=2); quality manager (n=1); infectious control nurse (n=2) and 1 project officer.

Staff development was reported to be provided by 90% (n=79) of the organisations, and 58% (n=51) included staff development activities related to research topics. An overview of the research topics provided includes: the utilisation of research into nursing practice (31.8%); the presentation of research findings (n=19, 22%); the design and implementation of research projects (20%); nursing research methods (20%); and applying for research funding (7%).

Collaborative research links were investigated to ascertain the existence of research collaborations with major national and international research and health service organisations. Only 2% of respondents indicated that they had no research links, while 34% (n=30) had existing collaborations with more than one organisation. University nursing departments accounted for the highest

number of identified collaborations (51.1%), followed by hospital departments (39.7%). Twenty-two percent had research links with state or national hospital-based research centres, 15% with state or national research centers external to their organisation, and 14% had collaborative links with state based research centers other than hospital-based. Eight percent of respondents reported links with international research centres and 3% (n=3) with international hospital based research centres.

The respondents were asked to indicate whether their organisations include research activities in position descriptions as selection criteria. The majority of organisations (n=56; 63%) indicated that they do so. The 36% (n=32) of organisations who do include research in position descriptions tended to do so only for nurses employed at Grade 3 and above.

### Respondents' views on nursing research and utilisation

Table 1 presents participants' responses to questions regarding supports the organisation is able to provide for nursing research. A number of organisational barriers to the conduct of nursing research and implementation of research findings were identified. The required resources, particularly sufficient time and finances, were not considered readily available to support research. On the more positive side participants indicated strong organisational encouragement for nurses to become involved in research and considered that medical staff would be likely to work cooperatively with nurses to implement research into practice. The view was expressed however that a wider organisational strategy is required to create a culture shift towards research-based practice.

Table 1: Organisational support for nursing research (mean scores).

Organisational factors	$\bar{x}$ (SD)
Medical staff would not cooperate with nurses to implement research into practice	2.2 (1.0)
Resources in my organisation/clinical service are adequate to implement research into practice	2.6 (1.2)
Financial resources are available for nurses who are interested in undertaking research	2.6 (1.3)
There is simply not enough time and resources to support nursing research	3.3 (1.1)
The policies and regulations in my organisation do not require any changes based on research evidence	2.0 (1.0)
My organisation actively encourages nurses to be involved in undertaking research	3.0 (1.1)
A wider organisational strategy is required to make a culture shift to research based practice	3.9 (0.9)

The responses indicated a high level of personal interest in research, the utilisation of research into practice, and the relevance of research to nursing practice. Most organisations encourage nurses to be involved in collaborative research with other health professionals. There was broad agreement among respondents that the

implications for practice are not always made clear in research publications; research is not reported in a clear and readable fashion; and, research reports and articles are not readily available to clinicians. This information is presented in Table 2.

**Table 2: Respondents' views on nursing research and utilisation (mean scores).**

Respondents' views	$\bar{x}$ (SD)
I have a personal interest in research	3.9 (0.9)
I have a personal interest in utilising research	4.3 (0.6)
I believe that research is relevant to a nurse's practice	4.5 (0.6)
I encourage nurses to be involved in collaborative research with other health professionals	4.2 (0.6)
The implications for practice are not always made clear in research publications	3.6 (0.7)
Research is not reported in a clear and readable fashion	3.5 (0.8)
Research reports and articles are not readily available	3.0 (1.0)

### Respondents' views on nurses' research skills and interest

The responses to these questions suggest some concerns with nurses' ability to access research findings and information, and to appraise research results particularly where statistical analyses are involved. Nurses' appreciation of the value of research to practice was, however, regarded as quite high, with a general sense that nurses would have the opportunity to, the interest in, and feel sufficiently empowered to change practice on the basis of research evidence. More detailed information is presented in Table 3.

The degree of support for nursing research was compared between those organisations with, and those without, nursing research policies articulated into their mission statement. Means and standard deviations for the two groups are presented in Table 4. The t-tests results

show that there is a statistically significant difference between whether research is within the organisational mission and the availability of financial resources for nurses who are interested in undertaking research ( $t=0.009$ ,  $p<0.05$ ). Similarly, a statistically significant association was found between views on encouraging nurses to be involved in undertaking research ( $t=0.001$ ,  $p<0.05$ ) and the inclusion of research within the mission statement.

**Table 4: Comparison of mean scores of respondents' by integration and non-integration of nursing research into the organisation's mission statement.**

Organisational factor	Presence of research in mission statement (n=30) $\bar{x}$ (SD)	Absence of research in mission statement (n=58) $\bar{x}$ (SD)	t-value
Medical staff would not cooperate with nurses to implement research into practice	2.2 (1.0)	2.2 (1.0)	0.90
Resources in my organisation/clinical service are adequate to implement research into practice	2.9 (1.1)	2.5 (1.2)	0.15
Financial resources are available for nurses who are interested in undertaking research	3.2 (1.1)	2.4 (1.3)	0.01*
There is simply not enough time and resources to support nursing research	3.5 (1.0)	3.1 (1.2)	0.16
The policies and regulations in my organisation do not require any changes based on research evidence	1.9 (1.0)	2.1 (1.0)	0.55
My organisation actively encourages nurses to be involved in undertaking research	3.6 (1.0)	2.7 (1.0)	0.001*
A wider organisational strategy is required to make a culture shift to research based practice	3.7 (1.0)	4.0 (0.9)	0.89

\* p value <0.05

**Table 3: Respondents' views on nurses' involvement in research (mean scores)**

Respondents' views	$\bar{x}$ (SD)
Nurses in my organisation are encouraged to gain research related qualifications at a higher degree level	3.2 (1.0)
Most nurses in this organisation would not support changes based on research evidence	2.1 (0.7)
Nurses are unaware of research findings	3.1 (1.0)
Nurses do not feel they have enough authority to change patient care procedures	2.7 (1.0)
There is not enough time on the job for nurses to implement new ideas	2.7 (1.0)
Nurses are isolated from colleagues with research knowledge with whom to discuss the research	3.4 (1.0)
Nurses do not feel they are capable of evaluating the quality of research	3.5 (1.0)
Nurses do not consider that research is relevant to practise	2.2 (0.8)
Nurses are generally not willing to change or try new ideas	2.5 (0.9)
Nurses feel the benefits of changing practice will be minimal	2.6 (0.9)
Nurses are uncertain whether to believe the results of research	2.8 (0.9)
Statistical analyses are not understood by most nurses	3.9 (0.7)

Respondents' views on research and research utilisation were compared between those organisations with, and those without, research clearly articulated within their mission statement. It demonstrates that there is no statistically significant difference between any of the items and the presence or absence of research within the mission statement ( $p > .05$ ).

**Table 5: Comparison of mean scores of respondents' views on research and research utilisation by integration and non-integration of nursing research into the organisation's mission statement.**

	Presence of research in mission statement (n=30) $\bar{x}$ (SD)	Absence of research in mission statement (n=58) $\bar{x}$ (SD)	t-value
I have a personal interest in research	4.0 (1.0)	3.9 (0.8)	0.54
I have a personal interest in utilising research	4.4 (0.6)	4.2 (0.6)	0.26
I believe that research is relevant to a nurse's practice	4.3 (0.6)	4.5 (0.5)	0.11
I encourage nurses to be involved in collaborative research with other health professionals	4.2 (0.6)	4.2 (0.7)	0.86
The implications for practice are not always made clear in research publications	3.6 (0.6)	3.6 (0.7)	0.97
Research is not reported in a clear and readable fashion	3.6 (0.8)	3.5 (0.9)	0.87
Research reports and articles are not readily available	3.0 (1.1)	3.1 (1.0)	0.57

The mean scores for respondents' views on nurses' involvement in research by organisations with, and organisations without, nursing research as part of the organisational mission statement are presented in Table 6. Those organisations that include nursing research within the mission statement are less likely to agree with the statements 'nurses do not consider that research is relevant to practice' and 'statistical analyses are not understood by most nurses' than those who do not.

Examination of possible differences in level of research support by organisational type: public versus private; in-patient versus community versus combined; specialist versus general; and, rural versus metropolitan, was undertaken through a series of chi-squared tests. There was no statistically significant relationship between organisations with or without nursing research articulated within the mission statement and the organisational type, ownership, whether general or specialist and or metropolitan, rural or regional. However, a statistically significant association was found between private and public hospitals in relation to the inclusion of research activities in the selection criteria for position descriptions. It was found that publicly funded organisations are more likely to include research activities in selection criteria ( $p < 0.05$ ).

**Table 6: Comparison of mean scores of respondents' views on nurses' involvement in research by integration and non-integration of nursing research into the organisation's mission.**

	Presence of research in mission statement (n=30) $\bar{x}$ (SD)	Absence of research in mission statement (n=58) $\bar{x}$ (SD)	t-value
Nurses in my organisation are encouraged to gain research related qualifications at a higher degree level	3.2 (1.0)	3.2 (1.0)	0.79
Most nurses in this organisation would not support changes based on research evidence	2.0 (0.7)	2.2 (0.7)	0.20
Nurses are unaware of research findings	3.0 (1.1)	3.1 (1.0)	0.57
Nurses do not feel they have enough authority to change patient care procedures	2.7 (1.0)	2.7 (1.0)	0.75
There is not enough time on the job for nurses to implement new ideas	2.6 (0.9)	2.7 (1.1)	0.80
Nurses are isolated from colleagues with research knowledge with whom to discuss the research	3.3 (1.0)	3.5 (1.0)	0.30
Nurses do not feel they are capable of evaluating the quality of research	3.2 (1.0)	3.6 (0.9)	0.06
Nurses do not consider that research is relevant to practice	2.0 (0.6)	2.3 (0.8)	0.04
Nurses are generally not willing to change or try new ideas	2.3 (1.0)	2.5 (0.9)	0.93
Nurses feel the benefits of changing practice will be minimal	2.5 (0.8)	2.6 (0.9)	0.61
Nurses are uncertain whether to believe the results of research	2.8 (0.9)	2.9 (1.0)	0.86
Statistical analyses are not understood by most nurses	3.7 (0.7)	4.1 (0.6)	0.03*

\* p value < 0.05

A statistically significant association was found between the size of the organisation (eg number of beds, number of community patients) and a number of the responses given. In summary, it appears that the larger the size of the organisation, the greater the opportunities for nurses to become involved in research, to gain access to research reports and articles, to gain access to colleagues with research knowledge and to receive encouragement to gain research related qualifications.

## DISCUSSION

The findings of this study suggest some development in nursing research activity has occurred in Victoria since the conduct of Sellick et al's study (1996) in the early to mid

1990s. At that time only seven (24%) organisations had a formal nursing research policy.

The proportion of organisations that have articulated nursing research into their mission statement has grown to 34% (n=30) in the current study indicating an increase of 10% within a decade. Conversely, the number of research positions specifically designed for nursing research in organisations has declined from 38% (Sellick et al 1996) to 21% during this period.

On closer analysis, however, if the figures for organisations with joint academic-clinical positions are included, the figure in the current study rises to 40% (not withstanding the difficulty in estimating what proportion of time the incumbents of these positions allocate to research activity). Comparisons with the Sellick et al (1996) study are, however, difficult due to the smaller sample size (n=29) and the fact that only hospitals were surveyed in the Sellick et al study. The findings of the current study are based on a higher number of respondents and have included specialist mental health services in addition to general hospitals.

The results of the current study are encouraging particularly with respect to the inclusion of research in staff development programs. Importantly, collaborative research links with outside organisations appear to be expanding. A little over half of the organisations had research links with university nursing departments and about 40% had links with hospital departments. Clearly, there is scope to substantially improve the collaborative research links with national and international research organisations if both parties are committed to the same goal of expanding their research activity. It appears, however, that almost half of the organisations have no nursing research links with either hospital departments or university nursing departments. This is a strong indication of a need to establish further collaborative research links with academic and hospital departments in order to improve nursing research activity.

The attitudes of respondents to the value of nursing research were very encouraging. The findings reflected a strong commitment, interest and preparedness to become involved in nursing research and to collaborate with research centres. Almost all organisations surveyed recognised the importance of research and the utilisation of research findings into practice. Similarly, they acknowledged the relevance of research to nursing practice and encouraged nurses to be involved in collaborative research with other health professionals.

On the less positive side, the findings support the available literature in identifying that significant barriers exist to the establishment of a research culture for nursing. The majority of respondents indicated that lack of time, lack of infrastructure, lack of management support and a lack of resources prevented them from developing further research activity. Most respondents considered nurses to be relatively isolated from knowledgeable colleagues, and to experience difficulties in accessing and appraising

research. This would seem to reflect a wider issue that spans across nursing education curricula and the organisational structure and culture. Although the nursing curricula can potentially be changed to accommodate more research, evaluation and statistical skills, it may not be tempting to overcome all the organisational barriers identified. Isolation from research knowledgeable colleagues, adequate time and resource allocation, for example cannot be altered in the absence of a significant change to organisational culture.

The findings of this study also support the broader research literature in suggesting that the value of nursing research is appreciated within the field (Wells and Baggs 1994; Wright et al 1996; Sellick et al 1996; Deans and Lea 1997; Tisdale et al 1997) and in identifying the barriers to further research involvement (both conduct and utilisation) by nurses within the clinical domain (Funk et al 1991; Carroll et al 1997; Hicks 1996; Dunn et al 1998; Parahoo 2000). The barriers are well documented and the challenge for the nursing profession must now become that of identifying, implementing and developing strategies to support the conduct of clinical nursing research and the utilisation of relevant research findings.

## LIMITATIONS

The limitations for this study relate to the very low response rate. The researchers anticipated a low response and planned for it in our method. Sending two reminder letters, one near the deadline, did not make a high difference. As this study was conducted in Victoria it is also difficult to ascertain its generalisability beyond the State. Furthermore, the small sample size limits the extent to which these results can be considered representative of Victorian health care organisations.

## CONCLUSION

Although the findings of this study must be interpreted cautiously, there is some evidence to suggest a gradual increase in nursing research and related activity since the conduct of the Sellick et al (1996) study during the early to mid 1990s. The level of research interest, research utilisation, collaborative research links, and preparedness from the organisations surveyed is positive and favourable, indicating a move toward more emphasis on nursing research within hospitals and health services. However, nursing research activity remains low with a number of barriers identified to its further development.

Nursing research needs to be collaboratively located, critically evaluated and organisationally assisted if a research culture is to develop. Most critically, nursing research needs to be articulated into the mission statement of every hospital and health service. Innovative approaches to increasing the relevance and applicability of research findings are required as a matter of urgency to address the current situation. Providing the skills to understand and implement research findings may be a

positive step towards empowering nurses. The results of this study clearly provide the basis for establishing education workshops to enhance the development of research utilisation skills among clinically-based nurses and inform the manner in which research is taught in curricula at undergraduate, postgraduate and higher degree levels.

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