FROM THE EDITOR – Dr Jackie Jones RN PhD

PROFESSIONAL PARTNERS IN RESEARCH AND WRITING? THE ABYSS BETWEEN THE 'DOERS' AND 'THINKERS' OF RESEARCH.

As we move to our final edition of *AJAN* for the year 2006 it is timely to reflect how research leadership and nurses' roles therein are progressing within the clinical domain. After all, evidence based practice is firmly established in the quality and safety rhetoric of major teaching and non teaching patient care environments.

Professor Gardner in her guest editorial identifies the need for nurses to work more collaboratively as researchers and as clinicians to *'establish truly collaborative research programs involving teams that include basic researchers, clinicians and clinical researchers who are all working on different points of a trajectory strategically and holistically designed to develop, translate, test and evaluate theoretically based nursing interventions' (p.8)*. This is a tremendous ideal and yet trying to make this work in practice, particularly for clinicians who look for results immediately to enhance patient outcomes, presents a far greater challenge than trying to change perceptions of research validity for nursing evolution. A key issue is understanding that, what we espouse versus what we experience in trying to make such research partnerships work, can be significantly divergent.

It may be increasingly important in the future to explore the rhetoric of putting nurses with others to do research and acknowledging and defining what that role means organisationally and professionally. Ask a clinician what research is and compare this to a research 'trained' clinician and you may be surprised by a very different response. An example of research rhetoric is the role of the research nurse who collects data for a clinical team and yet is not involved in any conceptual or analytical role related to the research per se. For all intents and purposes these research nurses are considered to be researchers by some. Other nurses do undertake a more extensive role within the research endeavour and yet may find themselves excluded from being known as part of the research team therefore diluting nursing research capacity in the process.

Undertaking research within a university setting is replete with academic language, academic expectations for scholarship and rigour, and a common groundswell of research 'trained' individuals who have PhD qualifications. Access to the clinical field for research is a valuable and often sought after commodity in the performance driven environment of research funding. Clinical research thinking at the other end of the spectrum, one could argue, seems to focus more on the outcomes, the results per se, rather than the research process. Furthermore there is a paucity of appropriately research 'qualified' clinical staff and as such this can directly contribute to the hindrance of research scholarship. Ultimately developing a 'blind leading the blind' culture where the norm is not knowing what it is 'we' don't know about research rigour and quality.

The complexity of ethical conduct and who owns what in the clinical domain involving patients means research rigour and ethical process is at risk of being clouded by a longstanding medical or professional ownership dimension. Is what is usually a given in terms of access to a patient and indeed their body acceptable and ethical in research terms? As nurses become part of the research endeavour they also become part of the standards that govern research and consequently must increasingly act as advocate for patient participants from within research.

One must question whether nurses in trying to participate as professional partners in research are on a level playing field within the current research environment. Research monies are often awarded in the clinical context to experienced medical researchers thus making it hard for nurses to gain isolated funding or gain experience sufficient to win research monies. We know from contemporary ideas that health care team effectiveness has the potential to enhance or hinder patient/client outcomes. The following questions therefore arise. 'Are teams really fully functioning teams? Do research team members have the necessary knowledge and expertise to participate in and or lead research? If they are clinical leaders are they adequate research leaders? To what degree does the professional and clinical status of an individual influence the degree to which such leaders are held in high regard as researchers? Who are the gatekeepers and therefore providers of safety nets for patients on the receiving end of research.

If a person is a great clinician, skilled in a particular field or procedure does that make the doctor, nurse or allied health professional a great researcher? If they are leaders within the clinical environment what of the role of research experts brought in to help guide the research development and rigor? Are these expert partners truly considered professional partners in research or merely the instruments through which others do research? What also of the role of nurses who are told they are doing research and yet may be the collectors of data for others only.

Collaborative research and research partnerships require the development and acknowledgement of specific skills. It is fair to say that in the main all is not ideal in the collaborative research environment. The research environment of the university is at times, it may

seem, at odds with the research environment within the clinical field. The rigors and expectations of quality in one versus the power, availability of patients and measure of accountability in another provide further challenges for nurses. How does a nurse, for example, actively participate in a research team with research knowledge and expertise yet no clinical power?

It is imperative that nurses know their rights and how to support the rights of others including research participants and fellow nurses or colleagues doing research. A solid place to start is to be aware of and engage in the positions and debates offered by the *Australian Code for the Responsible Conduct of Research* (ACRCR) (2006) jointly authored by the Australian Research Council, the Australian Vice Chancellor's Committee and the National Health and Medical Research Council. These peak research voices, through this joint code, highlight that 'good research conduct arises from a research culture of respect for the truth and for those involved in the research process' (p.11). The code goes on to argue that 'the right to authorship is not tied to either position or profession and does not depend on whether the contribution was paid or voluntary' (ACRCR 2006, p.29). Authorship requires substantial scholarly contribution and as such no person who qualifies as an author may be included or excluded as an author without their permission in writing (p.29). Strategies such as early conversations, full team meetings, joint allocation and development of all written work, shadowing on ethics committees and succession planning for professional partnerships in research can build effective research teams. Mentoring novice researchers in research conduct, research writing, and strategic communication can help develop nurses as professional partners.

We at *AJAN* encourage papers from across the spectrum of novice to expert researcher and across the complex to simple or more basic research trajectory. In addition peer reviewers contribute to the ongoing development of ideas and research ideals through writing, feedback and critique for authors. In this edition research papers reflect the variety of differences between and across contexts such as mental health and general nursing; clinical educators or preceptors bridging the gaps between theory and practice; palliative care in acute settings; and the prevalence of health behaviours such as smoking of health professionals.

The first paper presents a small qualitative study by Sharrock et al that describes the subjective experience of nurses in providing surgical and medical care for patients experiencing mental health problems. Using grounded theory, findings indicated that the nurses were striving for competence in the provision of mental health care and supported the notion that general nurses lack confidence when caring for patients with mental health problems in medical-surgical settings. These authors also make note of the discrepancy between the holistic framework encouraged at undergraduate level and what is experienced in practice.

In the second paper Mcallister and Moyle argue that clinical educators in Australian health settings whilst performing a crucial role in facilitating effective learning for students of nursing are undervalued and under-supported. They motivate students to make links between theory and practice; moving students safely from the known to the unknown; developing clinical skills and reflective practice.

Parish and colleagues present research findings from a retrospective analysis using multiple methods such as case note auditing and interviews of key staff to determine the quality of end of life support provided to an opportunistic sample of patients who died in acute care wards of a 250 bed teaching hospital. They argue that patients who are receiving end of life care in an acute hospital may not experience support which fully reflects appropriate palliative care management.

Gaynor et al systematically reviewed the published scientific literature for studies quantifying or examining factors associated with the attrition of undergraduate nursing students in pre-registration programs and the retention of graduate nurses in the workforce. Gaynor and colleagues argue there is an identified need to systematically track undergraduates and new graduates to quantify and understand attrition, retention and workforce choices within the nursing profession and begin to build a rigorous evidence-base.

In recognising the cultural diversity evident in Australia and therefore in our health care settings, our next paper by Smith reports on a study that used a self-report questionnaire adapted from previous investigations and sent to a complete cross-section of 1162 nurses from a large teaching hospital in southern Japan. The study raises questions regarding specific interventions to address the cultural and social motivations for tobacco usage among Japanese nurses.

Charleston and Happell examine the preceptorship relationship between students' and mental health nurses' in the mental health setting. The range of settings included: adult acute; rehabilitation; and community teams. Dealing with the uncertainty of, and reconciling differences between, the general and mental health environments emerged as a strong theme from the research. The next two research papers reflect our growing international nursing audience and similarity of practice. Khowaja reports on a study using a transurethral resection of prostate (TURP) clinical pathway intervention in Pakistan; whilst Movahedi et al from Iran report on the effects of local refrigeration prior to venipuncture on pain related responses in school age children.

In our scholarly paper Elsom et al focuses discussion on the potential implications for the developing nurse practitioner role on the existing clinical nurse specialist

role. In a context of a lack of clarity Elsom et al argue that the roles of clinical nurse specialist and nurse practitioner may be complementary but fulfil different functions. These authors suggest that in relation to mental health in particular it is important that both roles be maintained and implemented in response to consumer and health service needs.

REFERENCES

AVCC/NHMRC/ARC 2006 Australian Code for the Responsible Conduct of Research (ACRCR) available:
http://www.nhmrc.gov.au/funding/policy/code.htm.

GUEST EDITORIAL – Professor Glenn Gardner RN, PhD, Chair in Clinical Nursing, Royal Brisbane and Women's Hospital and Queensland University of Technology, Australia.

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NEW PERSPECTIVES ON OLD DEBATES: RE-ENGINEERING THE THEORY PRACTICE GAP

Nursing can be slow to recognise change and the need for change. An example of this is our ongoing interest in the so called theory practice gap. The nursing literature continues to discuss and debate this concept whilst all around us in the practice environment the context is dramatically changing. In this editorial I am going to explore this theory practice gap and propose a re-framing of this old notion and suggest a scenario whereby theorists and clinicians have a meeting point that transcends the erstwhile theory practice gap.

Without doubt the volume of research output has increased over the past ten years. The focus has been enhanced in terms of our enthusiastic response to the evidence based practice agenda: the language of research and evidence is becoming part of the lexicon of nurse clinicians, managers and executives. This is progress. Nursing research increasingly *matters* in the world of health care practice. It matters to nurse clinicians and is starting to attract the attention of health service managers, health bureaucrats and other health disciplines. Furthermore, our discipline's presence, albeit small to date, in the list of successful national competitive grants is testament to this. Given such progress can we at last say that the much discussed theory practice gap in nursing has closed?

Well, yes … but, maybe no. Maybe the so called *gap* has just morphed into something different, something that is in accord with contemporary developments in research and practice in nursing. In fact, in the environment of health care we rarely hear talk of the research practice gap. Research conversation is dominated by the language and intent of evidence based practice, which by definition, is a *gap-closer*.

If nurses are asking about and appraising research evidence for practice, they have leapt over the theory practice gap and have moved to improving the uptake of research in nursing practice. This is progress. The evidence based practice movement has focused our research agenda toward issues of direct clinical significance; in short, nursing has responded to the imperatives of confirming clinical efficacy in the practice we deliver.

But before we get too comfortable in the certainty that contemporary nursing has solved the problem that has bedevilled our discipline for the past 30 years, we need to think about the discipline's body of knowledge and the 'state of health' of nursing interventions. After all, efficacy studies need material or interventions to test.

I think we all agree that the evidence available to inform nursing practice is scant. Whilst the same might be claimed for medicine, the discipline of medicine is backed or supported by robust basic bioscience research that develops new knowledge to inform what the media then headlines as a 'medical breakthrough' in a particular field. This medical breakthrough is subsequently worked on and developed to produce a medical intervention that can be tested through clinical research and ultimately contribute to patient treatment options. This is referred to as translational research activity.

Thus the aim of translational research is to develop and convert the exciting and novel findings made in fundamental, or basic, laboratory research, into a testable entity or hypotheses for evaluation in clinical trials. This translational research by the way is beginning to attract serious funding from state and national competitive funding bodies. This raises questions of: Where do nursing interventions come from? What are nursing's novel and exciting research findings? To answer, we need to turn to the research that is not designed to test an intervention, **but the research that is conducted from the position of intellectual curiosity**, the 'why…'; 'what if…'; and 'how do…' questions.

While many of us have generated efficacy studies in response to direct questions on clinical effectiveness, others have generated studies in response to different imperatives or triggers such as patients' experiences of health, illness and health care. We have also leapt into the research space by questioning factors that influence the context, environment or culture of nursing practice; we have responded with research promising solutions to complex topics such as chronic pain, dementia, palliative care, grief and suffering, treatment compliance, the intersection of acute and chronic illness, the discord of technology, care of older people, and so on. These are some of the big issues of nursing that require deep and sustained inquiry and often are not immediately amenable to quantification, causation or comparison. Often this branch of inquiry will draw upon the difficult and multifarious methods of qualitative research to examine, explore and theorise these complex terrains of human experience, health, illness and health care.

It is these studies that produce nursing's novel and exciting research findings. But all too often the findings from this body of research remain at the level of an interesting read. The work excites us and usually elicits the *phenomenological nod* in that we recognise the truth,

value and relevance of the findings. But as a discipline we are struggling to make the outcomes of this body of research mean something in clinical practice. If we are to mature as a discipline we must respond to the need for change and develop a strategy and a language that can link our theoretical/exploratory research to the clinical context. To achieve this we need to re-frame our thinking and consider this branch of inquiry as the *basic* research of nursing. That is, nursing's equivalent to the laboratory research that informs and drives the development of medical interventions. This move transforms what was previously a theory practice gap into a communication gap. Bridging this communication gap is the role of translational research.

Researchers, working with qualitative methodologies or large scale epidemiological explorations, and nurse clinicians, who directly interact with patients, speak very different languages. Translational research provides a much needed bridge of communication between these highly specialised theorists and clinicians in nursing. Translational research can ensure that the findings from exploratory and theoretical nursing research arrive at the clinical context in a useable format.

The translational process involves identifying current significant research projects and taking the knowledge and learning from these studies and applying it to the patient/community level. This is no small task. Specific strategies need to be devised to make seamless and effortless the translation of findings from theoretical research into practice interventions. The responsibility for this rests with both theoretical and clinical researchers. Nurse researchers, who are engaged in basic research need to develop links with clinicians and clinical researchers to collaborate on extending the findings from their research to develop, polish and test interventions that are both useable and theoretically based.

Conversely, clinicians and clinical researchers need to develop links with qualitative and population researchers to build the repertoire of interventions that can improve nursing effectiveness and the health and well being of patients in specific fields of health care. The meeting point for these two groups, the mechanism that will provide a common language, is translational research.

In a practice profession such as nursing, translational research is central to the research strategy of the discipline. The way forward to bridging the communication gap between theoreticians and clinicians in nursing is to establish truly collaborative research programs involving teams that include basic researchers, clinicians and clinical researchers who are all working on different points of a trajectory strategically and holistically designed to develop, translate, test and evaluate theoretically based nursing interventions.

COMPETENCE IN PROVIDING MENTAL HEALTH CARE: A GROUNDED THEORY ANALYSIS OF NURSES' EXPERIENCES

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Key words: Mental health, psychiatric nursing, psychiatric co-morbidity, nursing education, general health care

ABSTRACT

Objective:

In view of the evidence that general nurses have difficulty in caring for patients experiencing mental health problems, the aim of this study was to explore and describe the subjective experience of nurses in providing care for this client group.

Design:

A grounded theory approach was used. The data were collected via semi-structured individual interviews and analysed using the constant comparative method.

Setting:

The study was conducted with nurses from general health care settings that provide medical and surgical care and treatment.

Subjects:

Four nurses who were completing their second year post graduation participated in the study.

Main outcome measure:

The experiences of providing care for people experiencing a mental illness as described by participants.

Results:

The findings indicated the nurses were striving for competence in the provision of mental health care. They acknowledged the mental health needs of patients and their right to quality care.

Conclusions:

This study supports the notion that general nurses lack confidence when caring for patients with mental health problems in medical and surgical settings. It also highlights a discrepancy between the holistic framework encouraged at undergraduate level and what is experienced in practice.

INTRODUCTION

During the 1970s the Australian nursing profession began the shift from an apprenticeship model to a university-based system of nursing education, a direction consistent with international trends in nursing education (Commonwealth of Australia 2002). By the end of 1993, undergraduate university programs with a minimum entry standard of Year 12 equivalent had replaced pre-registration nursing courses based in hospitals (Commonwealth of Australia 2001). During the 1990s, a comprehensive approach to undergraduate programs was advocated. Comprehensive nursing curricula adopt a holistic and culturally sensitive approach as the basis for integrating theory and practice drawn from general, psychiatric and community nursing as they occur in institutional and non-institutional settings. The broad expectation of these curricula is to prepare graduates who leave university with a comprehensive grounding in nursing theory and practice (Reid 1994) and who will be able to function as first level, multi-skilled practitioners in any area of nursing practice (Mental Health Branch 1998). Graduates then have the option of undertaking postgraduate study in specialist and advanced areas of nursing (Commonwealth of Australia 2002).

Within a similar time frame, the de-institutionalisation of mental health care and the implementation of the National Mental Health Policy (Australian Health Ministers 1992) was occurring. This was a coordinated policy direction to replace traditional stand alone psychiatric hospitals with a mix of general hospital, residential and community services integrated into and co-located with the mainstream health system. It was hoped that by reducing the isolation of psychiatric services, clients would have increased access to general health care; stigmatisation and neglect would be reduced

(Australian Health Ministers 1992); and continuity and quality of care would be improved (RCNA 1995).

However, the effectiveness of comprehensive nursing curricula in the preparation of nurses to care for clients with mental illness has been questioned in Australia (Clinton 2001; Commonwealth of Australia 2001; Nurse Recruitment and Retention Committee 2001; Wynaden et al 2000; Henderson 1990) and New Zealand (Prebble 2001). Further to this, significant inconsistencies in the amount of time allocated to the theory and practice of mental health nursing in undergraduate programs within Australian universities have been identified (Nurses Board of Victoria 2002; Happell 1998; Farrell and Carr 1996).

In the presence of a mainstreamed health care system all nurses need to be adequately educated and equipped with expertise to care for people with mental health problems. This is particularly relevant for medical and surgical nurses because it has been estimated that between 30% and 50% of general hospital patients have a psychiatric co-morbidity (RCP and RCP 1995; Clarke et al 1991). Physical illness is known to increase the risk of psychiatric disorder (Clarke et al 1991; Feldman et al 1987; Mayou and Hawton 1986). In addition, people who have a psychiatric disorder are more likely to have physical problems and are now more likely to access general hospitals to meet their health needs (Lawrence et al 2001; Koranyi and Potoczny 1992).

There is evidence that nurses working in general health care settings have difficulty in meeting the needs of this group of patients. A number of studies found that general nurses perceived themselves as lacking knowledge, skills and confidence in the assessment and management of mental health problems (Sharrock and Happell 2002; Wand and Happell 2001; Brinn 2000; Bailey 1998; Roberts 1998; Gillette et al 1996; Muirhead and Tilley 1995; Fleming and Szmukler 1992).

Bailey (1998) identified feelings of fear and inadequacy and a lack of understanding among critical care nurses caring for patients post self-harm. In other studies nurses have been found to describe reduced work satisfaction; to question their role; and to give priority to physical needs and task completion in caring for patients with mental health problems (Gillette et al 1996; Bailey 1994; Fleming and Szmukler 1992). Some evidence suggests that nurses find it particularly difficult when patient behaviour is perceived as difficult, threatening or disruptive (Happell and Sharrock 2002; Heslop et al 2000; Pollard and Hazelton 1999).

Compounding these difficulties is a lack of resources, expert assistance and workplace policy in relation to people with mental health problems (Wand and Happell 2001; Bailey 1998; Gillette et al 1996). In addition, staff attitude is an important factor when considering the delivery of mental health nursing to patients and both negative (Brinn 2000; Bailey 1998; Mavundla and Uys 1997; Gillette et al 1996; Fleming and Szmukler 1992) and positive attitudes have been reported among nurses (Rogers and Kashima 1998; Anderson 1997; Sidley and Renton 1996; McLaughlin 1994).

The limited published research relating to general nurses and the care of patients with mental health problems has examined nurses' responses to particular psychiatric symptoms or disorders and in specific clinical settings. There are no studies that have examined the subjective experience of nurses caring for people with mental health problems in the general health setting and consequently a rich description of the nursing experience has not been articulated in the literature.

The purpose of this study was to explore this experience from the perspective of comprehensively educated nurses working in the medical and surgical settings.

METHOD

In order to access the subjective and descriptive experience of nurses, a qualitative approach was selected for this study. In particular, grounded theory (Strauss and Corbin 1990; Glaser and Strauss 1967) was favoured as it provides for the generation of emergent theory when there is little known about a particular phenomenon. That is, grounded theory applies a systematic, concurrent data collection and analysis process throughout the inquiry that allows salient features of the phenomenon under investigation to emerge from the data. These features are conceptualised, categorised and verified, leading the researcher to generate a conceptual framework that assists in understanding or explaining that phenomenon. The conceptual framework forms a theory that is grounded in the data.

Ethical approval was obtained from the University Human Research Ethics Committee prior to commencement of the study.

Participants

Participants in the study were selected from nurses introduced through collegial networks, who fitted the inclusion criteria and who indicated an interest and consented to participate in the study. Theoretical sampling guided participant selection. Concepts that arose from the data directed the researcher to additional participants who could provide further data that had relevance to evolving concepts. Participant selection, data collection and data analysis continued until theoretical saturation was reached and rich description of experience had been obtained. Data collection was ceased after the fourth interview, as it was clear that no new themes had emerged.

The authors acknowledge it is unusual for data saturation to occur after so few interviews. However, in this case the four participants raised essentially the same issues. The data derived (as will be demonstrated in the findings section) supports the available literature thus suggesting that while the participant responses cannot be generalised, they are consistent with what is known about nurses' attitudes toward people experiencing mental health problems.

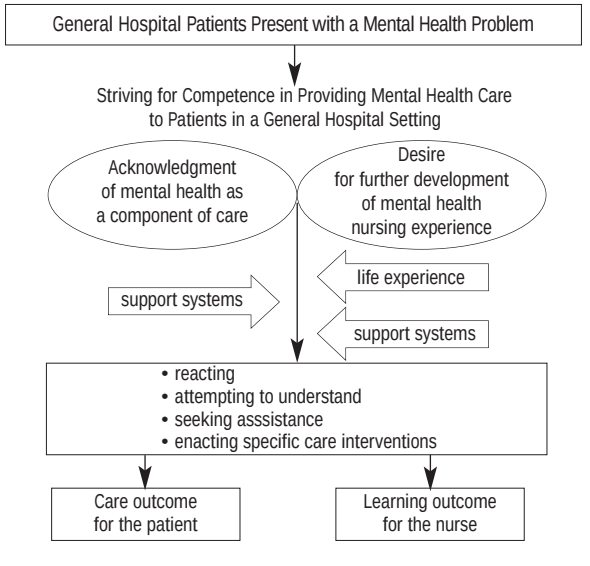
Procedure

Data were collected through in-depth semi-structured individual interviews using an interview guide (Minichiello et al 1995). At interview, participants were asked to describe their experience of caring for at least one patient within the previous two months who experienced a mental health problem during their medical or surgical admission. Interviews lasted from 45 to 60 minutes, were audiotaped and transcribed. The transcribed document formed the basis for data analysis.

Data analysis

Each transcript was analysed using the constant comparative method. This method employs coding techniques through which data are broken down, conceptualised and put back together in new ways (Strauss and Corbin 1990). This type of analysis uncovers the common elements in the subjective experiences of participants (Fossey et al 2002). Analysis is a constant and dynamic process where questions are asked about data and comparisons are made between emerging concepts. Consideration was given to what words, phrases or paragraphs represented and a label was applied. This generated an extensive list of labels that were sorted and categorised into groups of concepts with similar meaning which were subsequently named. The categories were further developed through identification of relationships between the categories. As the categories were developed, the researcher returned to the transcripts to validate their consistency with the data. In addition, a descriptive narrative was conceptualised into a *story line* and this also assisted the researcher to identify the categories and to make links between the categories. The story line became more integrated through the use of questions and comparisons and the application of the *paradigm model* (fig. 1). This further assisted in organising the concepts as they emerged into a theory that was grounded in the data.

Figure 1: Paradigm Model



Rigour

Methodological rigour (Fossey et al 2002) was enhanced through the systematic application of grounded theory methodology and techniques. Member checking (Lincoln and Guba 1985) was used to strengthen the credibility of the study, that is, ensuring the descriptions and interpretations of the experiences were faithfully reflected so they could be recognised not only by the participants in the experience but by others who have had similar experience (Sandelowski 1986).

Each participant was given the opportunity to review, clarify and correct any points within their transcript. Three participants were available to review and comment on the emergent theory. General and psychiatric nurse colleagues were also asked to comment on the emergent theory and indicate its applicability to the experiences of nurses outside the study. The subjectivity of the researcher in qualitative research is acknowledged (Minichiello et al 1995) and it is essential that the researcher is sensitive to the phenomenon. However, Strauss and Corbin (1990) warn that it is important to balance sensitivity and bias. The opportunity to debrief with peers and supervisors (Lincoln and Guba 1985) assisted in maintaining this balance as it provided space in which to review and seek alternative views regarding the emerging concepts.

FINDINGS

Context

Participants included in this study were registered nurses (RN Division 1 in Victoria), who had completed a comprehensive undergraduate nursing course, who had not completed specialist psychiatric nursing education and who were in their second year of experience in a health care setting that provided general or specialist medical or surgical care as its primary focus. Participants were assigned a pseudonym as follows (table 1):

Participants considered that their comprehensive undergraduate education gave them general and psychiatric nursing qualifications yet they perceived themselves primarily as general nurses:

To be honest I classify myself only as a general nurse because I don't know anything about psych … I have heard some people say, 'well you know, you are psych trained as well'. I'm not really. (Helen)

Table 1: Participants

Psuedonym	Sue	Sarah	Helen	Karen
Undergraduate Education	Rural university	Metropolitan university	Metropolitan university	Rural university
Employment	Rural public hospital	Metropolitan public hospital	Metropolitan public hospital	Metropolitan private hospital
Age	24	23	23	23
Experience Since Registration	15 months	15 months	16 months	18 months

The participants perceived they had increased exposure to the theory and practice of psychiatric nursing and considered themselves as better equipped than nurses educated outside the comprehensive course.

The experiences of caring for a patient experiencing a mental health problem described by the participants occurred on cardiac, neurology, orthopaedic, paediatric and rehabilitation units. One participant cited experience in a private general hospital, the remainder in public metropolitan and country general hospitals. The work environments were usually busy with a dominant focus of attention on physical aspects of care. However, the participants recognised that it is impossible to separate the mind from the body. The work setting made it difficult to incorporate mental health care into their practice and many of the experiences described highlighted this conflict, for example:

If they've got a stroke … How do you work it out? … What do you look after first, their mental health or their physical health? I don't know what comes first. (Sue)

The patients described had mental health problems that were either pre-existing or developed during hospitalisation. Most had multiple, complex problems of an enduring nature and displayed a range of disturbances in mental functioning. The participants had some information on the psychiatric diagnoses of the patients but generally used descriptions to depict patients' behaviours, emotions, thoughts and perceptions, as the following quote suggests:

She was fine pre-op but post-op … with the anaesthetic and that, it sent her a bit funny and then she got worse for days and days. And then we found out that she had a psych background … There was one morning when I looked after her and it was around 3 o'clock and she started going all funny, yelling out and holding onto the bed as if it was upside down. She was saying 'the bed's upside down, I'm falling, I'm going to fall' and she was just shaking and bright red all over. (Sarah)

Striving for competence in providing mental health care

Central to the nurses' stories was a strong sense of commitment, a genuine deep concern for patients and a desire to provide high quality care. In terms of mental health nursing, the participants recognised that their expertise was limited and they wanted to move from a reactive to a more considered approach to care. This was exemplified by Sarah who expressed disappointment at her management of an incident:

Because I had done some psych it made it a bit easier for me...but not enough to actually know what to do at the time. Take control of it I suppose…I should have known more having done the psych and general double degree …

Acknowledgment was the term chosen to encompass the recognition and acceptance by the participants that patients in their care could have mental health problems, that these patients had a right to quality care and that as nurses, they had a role in providing that care. Given this, participants considered patients with physical and mental health problems had a right to be cared for in a general hospital setting:

At the time I said 'why don't they just take him to [a psychiatric unit]?' Then I said, 'Don't be so stupid, he's got to be here. This is a stroke ward, he's had a stroke for God's sake!' I said it about 3 times. I was angry … but there's no way I wanted him to go … (Sue)

Participants' attitudes toward people with mental illness were overwhelmingly positive. They referred to their patients in a respectful and non-judgmental manner and they embraced the concept of holistic care, for example:

You can't take the (psychological) component away from someone if they've got a physical problem, and nor should you have to. I mean it's holistic care. Just because someone's got a broken leg doesn't mean that they're not going to be sitting there paranoid. (Karen)

Participants recognised their need for further exposure to psychiatric nursing, as stated:

We did psych at uni but nothing prepares you for it when it's face-to-face like that. We didn't cover enough … You've got to have the experience as well. (Sarah)

Undergraduate education

The role that undergraduate education had in the development of expertise was echoed throughout the participants' comments. The quantity and quality of exposure to the theory and practice of mental health nursing represented the most significant factor affecting the participants' confidence in their expertise. Three of the participants were critical of their undergraduate education and believed that the mental health nursing content was inadequate to equip them to care for patients with mental health problems in any setting. Sarah described her undergraduate education as:

… mainly focussed on general. We just had little compartments of psych in it and there were a few clinical placements.

Consequently they doubted their knowledge and had limited confidence in their expertise:

I think you turn a bit of a blind eye though. You don't really address that side of it in the acute scene … I think you are probably scared to. You don't feel as if you've got the knowledge. You sort of tend to avoid it. (Helen)

In contrast, one participant had completed an undergraduate program with a significant time allocation to mental health. She demonstrated a higher level of confidence and spoke very positively of her undergraduate program:

Fifty percent of the time was psych involved and the other 50% was general involved … Honestly the awareness that raises is great. (Karen)

Participants considered their clinical placements as extremely valuable because they provided the opportunity to practise skills through direct contact with people experiencing mental health problems. The placements increased awareness and understanding of mental illness and the life context in which it exists and assisted the participants to connect theory with practice:

You learn more on your placements … with your first hand experience … And you see it right there … like if someone's got delusions … They [lecturers] can tell you all about that but when you get to your psych placement in an acute ward, you actually get to see the patients displaying those certain things. (Helen)

Support systems

The participants made repeated reference to the provision (or lack) of support within the busy general hospital environment. Work load, patient throughput, work organisation and the focus on physical care were factors that impacted on the participants' abilities to attend to the mental health needs of their patients. Time and resources were limited in a hospital environment that tended toward reductionism with a priority on throughput, physical care and task completion:

A lot of people on a general setting find they don't have … the time that it takes to work with someone who's got a mental illness … Do the quick in 'Hi how are you?' Walk out the door because they've got so many other tasks. In general settings we seem to be very task orientated. (Karen)

The availability, accessibility, quality and timeliness of support within the work system had a significant influence on the delivery of care and whether the experience described was positive or negative for the participant. Emotional, practical and educational support was valued. The sense of being able to share the load with colleagues and having somewhere to turn for advice, direction, help, validation and information were all considered important. Whilst support was sought from a range of team members, the main source was other nurses:

All support came from the nursing staff … The thing is they're my peers, without that support it would be awful. No one to turn to for advice. (Sue)

In addition, the attitude of other staff was sometimes inconsistent with the participants' attitudes. Some colleagues shared a positive approach while others demonstrated limited commitment to attending to the needs of this group of patients. Participants gave examples of marginalisation and avoidance of patients with mental health problems with a perception that older, more experienced nurses were less likely to be committed to mental health care than younger, less experienced nurses were.

The participants described minimal access to educational resources on mental health related topics in their work areas. They were unaware of the availability of mental health specialists to help them care for patients. The nurses in this study were junior and relied on senior staff to access expert guidance and education.

DISCUSSION

Participant responses clearly indicate that these four nurses had positive attitudes toward people with mental health problems and acknowledged mental health care as part of their nursing work. However, their stories highlight a discrepancy between the holistic philosophy encouraged at undergraduate level and what is often experienced in practice. The need to care for the mind and the body in an integrated manner was important to the participants, but they faced a work environment that focussed on the physical, and organised nursing work into tasks. In addition, their undergraduate education was fragmented with mental health and general nursing theoretically and clinically separated, for all but one.

Lawler (1991) is critical of a reductionist organisation of knowledge that separates the mind and the body because, in doing so, the person is neglected as an integrated being. Benner concurs by stating: 'We analytically separate mind and body - the psychosocial and the physical - for study and then find it difficult to re-combine these components to achieve a holistic or total approach to the patient' (1984, p.48). The participants appeared to have difficulty reintegrating the fragments of their education to care for patients with multiple needs.

Three participants described low levels of confidence in their mental health nursing practice. This is concerning, as anxiety can impede further skill development. While a low level of anxiety provides motivation for individuals to learn, high anxiety can prohibit taking on new information or adopting alternative frameworks for viewing a situation (Peplau 1988). If low confidence persists, the participants may become less open to learning, more rigid in their views and less able to assist patients through hospital experiences. Lack of success in establishing and maintaining relationships with patients with mental health problems may further compound their feelings of uncertainty.

The clinical situations described were in relation to patients with multiple and complex problems. In many instances, the care demands of the patients were beyond the expertise of the participants. Other nurses were accessed for clinical support and guidance, but the nurses who the participants in this study accessed, shared similar limitations. This raises questions about the quality of mental health nursing expertise that beginning practitioners might develop if nurses with limited skills were the main resource available for guidance.

The development of psychiatric/mental health nurse consultants in general hospitals has arisen in response to recognition of the challenges faced by nurses caring for patients with psychiatric and physical co-morbidity in the medical and surgical setting. There is growing evidence

that these services can promote staff confidence, positive attitudes and improve the quality of care through the provision of advice, guidance, assistance and education to generalist nurses in relation to the care of patients with mental health problems (Sharrock et al 2006; Sharrock and Happell 2001; Gillette et al 1996; Newton and Wilson 1990; Davis and Nelson 1980). The development of these services is worthy of further research.

LIMITATIONS

This study used a very small self-selecting convenience sample and therefore cannot be generalised to other groups. It is possible that the nurses that accepted the invitation to participate in this study had a degree of commitment and some affinity toward mental health issues. Further to this, it cannot be determined whether the participants' practice was congruent with the positive attitude presented to the researcher or if their skills were as limited as they perceived.

CONCLUSION

This study adds depth to understanding the experience and challenges for beginning nurses and factors that can influence the development of mental health nursing expertise. It also supports the notion that nurses not specifically educated in mental health face difficulties when expected to care for patients with psychiatric and physical co-morbidity in a busy general hospital setting. While the findings of this study cannot be generalised, the experiences described are likely to be recognised and related to by other nurses working in medical and surgical settings.

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STAKEHOLDERS' VIEWS IN RELATION TO CURRICULUM DEVELOPMENT APPROACHES FOR AUSTRALIAN CLINICAL EDUCATORS

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ABSTRACT

Objective::

Clinical educators in nursing perform a crucial role in facilitating effective learning for students of nursing. They have the potential to act as a catalysing agent for learning – motivating students to make links between theory and practice, moving students safely from the known to the unknown, developing clinical skills and reflective practice. Whilst their role is extremely important, clinical educators in Australia are undervalued and under-supported. They are isolated and fragmented, and lack a unifying professional body and infrastructure to assist them in education, research and practice development. This paper reports on a study to explore what educational solutions could help to resolve the problem.

Design:

A qualitative design utilising snowball sampling and semi-structured interviews was conducted.

Setting:

The study took place in Queensland and thus results are limited to the needs identified in this region of Australia.

Subjects:

Ten participants provided their views about educational innovations.

Conclusions:

There is strong support for a curriculum focused on clinical education and centred on the concept of a learning community in order to provide community and build capacity in the specialty group so that they become self-reliant and their achievements and contributions are sustainable.

INTRODUCTION

In 2003, the authors secured an internal university grant to explore the need and the content of a new university course directly targeting clinical educators. A clinical educator (also known as facilitator and teacher) is defined in this paper as teachers employed by the university to assist in the off-campus clinical learning experiences of Bachelor of Nursing students. Skilled clinical educators are crucial to facilitating learning and skills development in students of health professions. Maintaining educational quality in this area is challenging because of many issues (Clare, White et al 2002). The role requires specialised education knowledge, skills and attributes, in particular clinical teaching skills and educational research competence. Yet there is lack of consistency in relation to the role of clinical educator (Adams 2002). Schools and universities may have different requirements, as may the various health services that make use of clinical educators.

Curriculum philosophies that take a humanistic approach may require clinical educators to emphasise generalised support and guidance. Others that emphasise cognitive and technical skill competence may require clinical educators to assess technique and knowledge more closely, and thus clinical educators need to be familiar with varied educational philosophies and processes and skilled in those relevant to specific curricula and schools.

This paper presents the findings of a systematic inquiry into the learning needs of a specific group of clinical educators and the potential that a learning community might have in the supported development of this important role.

BACKGROUND

In Australia many clinical educators lack qualifications perhaps because of role overload and minimal incentives

to undertake graduate study (N3ET 2005). There are few educational pathways for clinical educators and many lack professional support, identity and recognition. According to some university and health service providers, there are shortages of suitable clinical educators and minimal structures to support or develop their roles (Clare, Edwards et al 2002). Few clinical educators are engaged in research in the field and as a result (Clare et al 2002) the role is limited to teaching and learning and is therefore conservative rather than future-oriented and capacity building.

A future-oriented specialty group would perhaps be aiming for a future in which clinical education assumes its own unique professional identity within nursing, or health care, and for that self-reliance, a career path and sustainable processes for generating and accrediting new members would need to be established. Thus, in addition to teaching students, clinical educators need to be engaged in research and development activities, exploring, testing and disseminating knowledge of nursing practices, constraints and achievements so that the wider profession can acknowledge and respond to needs, and for nursing education to continue to develop and improve. Some need also to be involved in capacity building activities that will bring in resources to the sub-specialty, improving its collective influence, knowledge skills and effectiveness (Clarke and Ramprogus 2001).

Establishing a knowledgeable group of clinical educators is the first step toward establishing a unified collective who can then proceed to lobby for resources to be used for ongoing education, motivation, promoting achievements, monitoring and evaluation and establishing corrective mechanisms to ensure openness and accountability.

Recent state and national reviews relating to clinical education (Clare et al 2002; Clare et al 2003; Heath 2002) and the growing number of scholarly articles on the issues affecting clinical educators and health professional learning indicate that clinical education is now being appreciated as a significant area for research, innovation and development.

The Clare et al (2002) national report identified the need for greater linkage between learning that takes place within the university and clinical contexts. This report emphasised that clinical educators need to have the skills to respond to various learning styles and curriculum models: to encourage learning; provide feedback; develop currency in nursing knowledge; and integrate science, knowledge and reflective practice. Indeed, there is strong evidence to suggest that the relationship between clinical educator and student has a profound effect on student learning in nursing (Chapman and Orb 2000; Lo and Brown 2000). Lee, Cholowski and Williams (2002) in their survey of students and clinical educators' perceptions of effective clinical educators found that educators who value interpersonal relationships with students as well as competence were the most effective. Familiarity of clinical educators with the health service areas, attendance at ongoing workshops and provision of detailed information about courses, objectives and assessments are each helpful to clinical educator's performance (Grealish and Carroll 1998).

On the other hand, clinical educator-student relationships, which are viewed negatively, actually impeded learning for students (Lofmark and Wikblad 2001; Nash et al 1998; Windsor 1987). Clinicians, who are poor teachers, over or under-protective, unfriendly or unsupportive, provide inadequate learning for students (Spouse 1996). Clinical education itself can be a negative and stressful experience for the clinical educator, particularly if they do not take on the role willingly, if they feel overloaded with competing roles, or if their role is not valued or accommodated (Andrews and Chilton 2000). Ferguson (1996) found that clinical educators who are employed on a casual basis may have little knowledge of the curriculum and no prior experience of the role, and this may lead to an undermining of trust from clinicians.

Several authors argue that to continue to be effective in the role, clinical educators should have more support in terms of role development, and better liaison and dialogue between universities and health services (Davies, Turner and Osborne 1999; Ohrling and Hallberg 2001).

A range of approaches to the provision of quality clinical education is needed, including peer support (McAllister and Osborne 1997); dedicated education units (Gonda, Wotton et al 1999); establishing a learning environment and a culture of research and development in clinical education (Wellard, Williams and Bethune 2000). Scanlan (2001) lends support to these innovations by arguing that clinical teaching in nursing is a complex phenomenon that lacks a coherent theoretical base and is perplexing to novices, who tend to teach as they were taught (p.240).

Improving the quality of, and access to, specialised education and training on clinical education is one way of transforming this situation and advancing nursing education as well as the sub-specialty of clinical education. Thus, in order to develop an education program that would be interesting and relevant to local clinical educators' needs, a needs analysis study was designed.

RESEARCH METHOD

The study was conducted in a major metropolitan university in south-east Queensland and aimed to provide a snap shot of views from stakeholders and potential clinical education students in answer to the following broad research question: *What are stakeholders' views about the content and process of a clinical education course?* Ethical approval for the study was provided through the university Human Research Ethics Committee.

Participants and Sampling

An introductory email was sent to a school staff email list inviting participation and asking individuals to identify other individuals to extend the scope of participants. This recruited a range of stakeholders, or those holding an interest in clinical education. Ten participants were selected through this process of snowball sampling, a method that involves using networks to identify the sample (Ritchie and Lewis 2003). Five participants were nursing academics, one was an administrator, two were clinical educators and two were clinicians. The research assistant (RA) trained in interviewing skills and in education, was not familiar with clinical education and this unfamiliarity allowed her to encourage open and critical dialogue. She was seen as impartial by stakeholders.

Data Collection

The RA conducted one interview with each participant using an interview guide constructed by the researchers as the basis for the interviews (see table 1). Interviews were approximately two hours in duration. Data were collected until the research team felt that no new insights about clinical education were revealed. Data were transcribed and the participant de-identified except for the type of stakeholder position. Data were analysed qualitatively using thematic analysis and compared with current clinical education literature.

Table 1: Interview schedule

What are the requirements of the clinical education role from your point of view (scoping across potential students, educators, academics, clinicians)?
What conditions (could) exist to support this role?
What is your view of the need for a course on clinical education?
If supportive, what would you like to see the course contain?
What issues exist as barriers and opportunities in relation to this?

FINDINGS

Five themes about clinical education and educational needs were extracted from the data and include:

1. characteristics of a good clinical educator;
2. factors impacting on effectiveness;
3. potential benefits of a dedicated curriculum;
4. content of a Learning Community curriculum; and
5. challenges to be overcome.

These themes are briefly explained in the following sections

Characteristics of a good clinical educator

Participants suggested that a good clinical educator is someone who is a good listener, great role model for students, can set the agenda, and is prepared to negotiate learning by listening to students.

A good clinical educator is not someone who necessarily puts themselves forward as an expert, but they are a good listener and great role model. They negotiate learning, and listen to students' concerns and agendas. These attributes need to be fleshed out and communicated to future clinical educators so that expectations are clear. (Academic)

Furthermore, participants recommended that this person would have knowledge to make the connection between the clinical placement and clinical learning on campus, capability to effectively assess students' clinical ability, and excellent clinical and communication skills.

Factors impacting on effectiveness

Participants suggested that the effectiveness of a clinical educator is impeded by the number of placements and number of agencies they are asked to work in, as well as not being familiar with the specific curriculum philosophy and processes.

Many of the clinical facilitators (sic) that we employ are also working for at least three other universities and working as a clinician. They only have a one day induction program into our university and so there is never much time to explain the curriculum. I think there is information overload in a very short space of time. (Administrator)

Potential benefits of a dedicated curriculum

Participants were favourable about the idea of a dedicated course, especially one that was offered flexibly and suggested a number of potential benefits. These included: the opportunity for networking and sharing of clinical teaching ideas with other clinical educators; reducing clinical educators' isolation through an improvement in communication between clinical educators and academic community; helping to engage clinical educators in the academic community, opportunities for problem-solving through sharing of information 24 hours a day, an avenue for up to date information and education; and a reduction in current duplication of paperwork and information. Other benefits described included a valuing of clinical educators' role, a focus on positive rather than negative strategies, an improvement in employment opportunities through education, and a potential certificate award.

Having a course aimed at clinical educators is a great idea and long overdue. This is a hidden career pathway for many nurses, so providing good education and training in the area will make this pathway more visible and open for development. (Clinical educator)

Content of a learning community curriculum

Participants identified a number of elements thought to improve the process of flexible learning. They included: information on how to use the web; and ideas of how to encourage participation through a sharing of this information with others. Information about the structure of the school was considered to be important, as well as profiles and photographs of academic staff, their roles, responsibilities and their area of research; and profiles, clinical interests and photographs of clinical educators. Additionally, the provision of an administration centre that includes clinical forms and policies for downloading, information about legal issues, links to professional websites, daily noticeboard information as required and seminar and professional development dates. One participant elaborated on a specific idea to promote critical reflection on present teaching practice. He (an academic) said:

I think it will be useful to use the Bachelor of Nursing curriculum itself as a case study for … students to critically examine. Students could use it to ask: What theories underpin the content? Is it sound educationally? Is there a clear philosophy?

Other specific teaching strategies were also identified and included provision of:

clinical vignettes; a tracking mechanism to be able to see each students' web activity; feedback or tips section for facilitators to share their experiences/ideas/solutions; role and attributes of a good clinical educator; and key lecture materials.

Challenges to be overcome

Participants were also able to identify some issues that could be overcome with pre-planning and foresight. They include the need to: encourage discussion so that topical issues are shared, rather than avoided or allowed to escalate; consider efficient use of time because the majority of clinical educators are in part time employment; provide on-line discussions as an adjunct to face-to-face contact rather than a replacement because benefits of both are not equivalent; and a need to overcome a teacher's unfamiliarity with, or reluctance to use, computer technology.

DISCUSSION

All stakeholders expressed a need for an educational course for clinical educators and could see potential benefits for students and the nursing profession. However, there were some methodological limitations to this study that are important to outline. Snowball sampling is a useful means of involving networks to identify the sample when the sample is difficult to access and time frames are limited. Even so, such a sampling method as used in this research offered the researchers convenience at the risk of sample bias. Furthermore, the small sample size in this research requires the results to be read with caution and the findings cannot be generalised to other populations. In spite of these limitations the study findings have generated areas of interest for clinical education and provide the basis for further study.

Participants emphasised the importance of introducing flexible study options, such as web-enhanced learning, to improve access for clinical educators. Participants felt that such a course would enable dedicated time and space to facilitate communication between clinical educators and university staff and that this would build familiarity and community. Therefore there is a need for a relevant, flexibly delivered and engaging course. An online component of such a course would offer the advantages of efficient use of time by the student clinical educator, and the capacity to work at the student's own pace. However face-to-face contact is also considered to be important to allow orientation to the use of web-based learning and to offer support, encouragement and sense of belonging.

Participants identified the issue of role overload when clinical educators are allocated numerous different clinical agencies in the course of their work which is perceived to hinder their effectiveness. Clinical Administration Offices could therefore aim to reduce the variety of agencies a clinical educator is asked to work in. Furthermore, discussing specifics of curricula in any future clinical education course could extend knowledge of the local curriculum. Thus, an activity that invites students of such a course to examine the local curriculum and compare its philosophy, content and processes with a contrasting curriculum is required.

In order to overcome the problem of isolation and lack of support that clinical educators can experience, a dedicated time and space within the timetable would offer opportunity for networking, sharing of ideas and resources. During such time, the course convenors role would be to encourage and enable participants to consider the establishment of a more enduring organisation. In this way, clinical education would be assisted to become future-oriented and engage in capacity building activities.

If participants seem interested, then information and expert guidance on how to establish a professional association could be provided. In the long term, such an organisation is likely to offer infrastructure to enable shared decision making and public information, as well as research and development on issues such as role definition, role expansion, standards, credentialing, mechanisms for accountability, and the accumulation of evidence based clinical education.

Further research is required to evaluate innovations to advance clinical education. In particular if a course is developed, a comprehensive plan to evaluate its impact from multiple points of view is recommended.

CONCLUSION

Clinical educators are crucial in facilitating the teaching and learning of clinical practice skills and development for students of health professions. The fundamental role of clinical educators may have been overlooked and this can result in limited access to specific educational programmes. This research supports the need for a program of continuing education for clinical educators and advocates a program to meet their specific education needs; one that is readily available through on-line learning and encourages communication between other clinical educators and university staff.

If clinical educators are given the opportunity to learn the theory of education, discuss creative approaches to clinical teaching and learning and be immersed within a culture of inquiry, then numerous benefits are likely to arise. Clinical educators may approach their role in a more optimistic and effective way. The isolation and fragmentation that currently weakens the role may be replaced with a more unified professional group. Students of nursing would receive a higher quality clinical learning experience. A stronger more effective clinical educator would also help to strengthen the university/clinical agency partnership, and thus the whole health/education interface is enhanced. This is likely to lead to significant long term benefits. Collaborative research might be more possible; higher student satisfaction with an education program's clinical relevance; and more work ready, effective graduates will be produced thus ultimately benefiting the health care provided to clients.

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DYING FOR ATTENTION: PALLIATIVE CARE IN THE ACUTE SETTING

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ABSTRACT

Background:

Palliative care has emerged as a specialist discipline in the past 25 years. However in relation to acute hospitals, a sense exists that patients who are receiving end of life care may not experience support which fully reflects appropriate palliative care management.

Objective:

This study aimed to analyse the end of life care received by patients in the acute wards of a busy teaching hospital.

Design:

Retrospective analysis using multiple methods including: case note auditing and interviews of key staff was used to determine the quality of end of life support provided to an opportunistic sample of patients who died in acute care wards.

Setting:

The research site is a 250 bed teaching hospital in South Australia.

Subjects:

A medical record audit using an opportunistic sample of 20 recently deceased patients from acute wards was used. For each patient, interviews were also conducted with two nurses (n=40) selected on the basis of having a major care involvement.

Main Outcome:

A range of strategies for enhancing the end of life care for patients in acute wards were determined, including support for application of a Palliative Care Advanced Disease Pathway.

Results:

The lack of appropriate assessment and documentation indicates that major opportunities for enhanced service provision exist both in relation to physical care and even more significantly in relation to psychosocial and spiritual care.

Conclusions:

The end of life care provided for patients reviewed in this study indicates a far from ideal situation in the acute hospital wards of the research setting. An eagerness from the nurse participants in the study for tools and further support in their practice was noted and augurs well for future developments within the research site.

INTRODUCTION

This paper describes a retrospective study of the end of life care provided to 20 patients who died in acute wards. The research site is a 250 bed teaching hospital with a focus on service provision for older people. The aims of the project were to:

- analyse the end of life care received by patients in the acute wards of the hospital;
- identify best care principles and relate these to the actual care provision;
- recommend learning opportunities and strategies for nurses working in the acute wards of the hospital; and
- identify whether a need exists for a Palliative Care Advanced Disease Pathway (PCADP) and identify other strategies to enhance nursing palliative care in the acute setting.

Major findings around nursing assessment, the nurses' perceptions of the care provided, communication and

decision making, and the psychosocial and spiritual aspects of care are discussed and recommendations for the way forward are highlighted.

LITERATURE REVIEW

In South Australia, 41% of deaths occur in public hospitals: 26% in non-designated palliative care beds and 36% in a hospice or palliative care designated bed in a public hospital (DHS 2001). There have been few comprehensive studies undertaken to explore the outcomes of the range of palliative services provided in various settings.

The care of dying patients in the acute general hospital setting – international research

International studies in relation to dying in the acute care setting have persistently indicated that there are problems with poor symptom control and inadequate nursing care (Mills, Davies and Macrae 1994). Administrative data confirms that interventions and investigations often continue up until death (Earle, Elyse et al 2003). Poor communication, in particular clear and honest communication between health professionals and the patient, is still a key issue (Curtis, Weinrich et al 2001; Carline, Curtis et al 2003). Many nurses never discuss hospice care with their patients and others avoid discussing prognosis (Bradley, Cherlin et al 2001).

Australian research

Australian data has been sparse on this topic. An early study in South Australia (Ashby, Maddocks et al 1991) found poor levels of terminal care in public hospitals. Relatives also indicated that doctors were found to be inaccessible and uncaring (Wakefield and Ashby 1992). In addition, 25% of patients had uncontrolled severe pain, 57% of hospitals did not have bereavement care and many respondents were dissatisfied with the overall standard of care. These findings indicated that public hospitals were considered by the majority of respondents to be providing unsatisfactory terminal care.

More recently Pincombe et al (1998) examined the care of 20 patients who died in two acute general hospitals in South Australia. Findings indicated that the overwhelming amount of care offered to dying patients by health professionals was associated with routine and technological care, and that the presence or absence of family and their activities and attitudes significantly influenced the quality of care received by the patient. It was found that nurses experience considerable stress when patients are dying in an acute care setting because of competing demands on their time and/or their lack of experience and/or the absence of positive role models. Improved education in the palliative approach for all staff was recommended. Pincombe et al (1998) concluded that the principles of palliative care are yet to be fully incorporated into the acute care setting.

The Pincombe et al (1998) findings are further reinforced by Middlewood et al (2001), who described patterns of medical and nursing practice for patients dying of oncological and haematological malignancies in a Canberra Hospital. They found that although 88 out of 100 patients had 'do not resuscitate' orders, 48 had been documented less than two days prior to death.

The overall results confirm that the principles of palliative care had not been adequately incorporated into the acute care setting.

RESEARCH METHODS

Study design

The study sought to retrospectively analyse the end of life care provided to 20 patients who died in acute wards of the hospital. Multiple methods were used. A case note audit tool was developed utilising the Beth Israel (1999) palliative care advanced disease pathway framework (PCADP). This included a review of documentation in relation to the major aspects of comfort care including nursing assessment of physical, psychosocial and spiritual care.

Information from the medical record audit related to whether a comprehensive nursing assessment occurred, whether the appropriate nursing interventions were implemented as a consequence of the assessments, and whether the nurses documented the outcomes of their interventions and undertook appropriate modifications to nursing care accordingly.

This data was supplemented by data from interviews with two nurses identified as having a major care involvement with each patient. A staff interview tool was used which was also developed utilising the Beth Israel (1999) framework for their PCADP. Nurses were interviewed within one week of the patient's death to enhance recall of the specific episode of care.

Sampling

The selection of medical records to be retrospectively audited was through opportunistic, random sampling. The medical records selected were those of the most recently deceased patients from an acute medical or surgical ward at the time the nurse research assistant was in a position to undertake the next audit. Medical records were excluded if the patient had died unexpectedly without a recognised terminal phase. In total, 20 medical records were audited. Interview selection was undertaken through case note audit identifying two nurses who were most involved with the patient's care in the last days of life.

Ethical considerations

Institutional ethics approval was gained. An information sheet identifying the nature and rationale for the study was provided to all nurses approached for interview consent. Standard statements identifying that participation was voluntary and that participants could withdraw at any stage were included. There were no

difficulties in gaining consent, with only one nurse declining to participate out of the 40 nurses approached.

Data analysis

Quantitative data was entered into an Access database for storage and manipulation. Qualitative data was analysed on a case by case approach to determine specific themes within the categories in which data were sought. Themes were independently drawn out by two of the researchers and individually checked by the investigating team. Cross sectional analysis was then used to cluster and label core themes that were interrelated and repeated between cases.

RESULTS AND DISCUSSION

Patient demographics

All patients had died within one and six days prior to data collection. There were 10 male and 10 female deceased patients. Length of hospital stay varied between 1 and 80 days (average 25.7 days). The patients included in the study were all elderly, which reflects the demographics of the hospital. The patients had a range of medical conditions including malignancies, cardiac, and respiratory disorders.

Nurse demographics

The nurses (n=40) were aged between 20 and 55 years, with 87.5% being 36 years and over. The age demographic of the nurses reflects the average age of nurses at the hospital (43 years). Nursing experience varied from 1 to 27 years with 60% having more than 11 years nursing experience. Palliative knowledge was self perceived to be 'below average' (2), 'average' (16), 'better than average' (20) and 'excellent' (2), with 95% rating palliative knowledge as average or better. Conversely, 65% rated their confidence in delivery of palliative care as 'reasonable' and only 27.5% felt 'very confident' in their delivery of palliative care. With regard to qualifications, 19 out of the 40 nurses held a Bachelor of Nursing, while 21 out of the 40 were hospital trained registered nurses. The remaining five nurses interviewed were enrolled nurses (12 months formal education).

There was very little difference in the knowledge and confidence rating between hospital trained nurses and those with a nursing degree. Both nurses who rated their knowledge as excellent were hospital trained.

MAJOR FINDINGS

The major findings can be grouped according to four specific areas of care provision:

- nursing assessment,
- nurses' perceptions of care provided,
- communication and decision-making, and
- psychosocial and spiritual aspects of care.

Nursing assessment

The nursing care plans at the time of death were reviewed for each patient. Of these, 13 were considered to match identified need but in seven cases the frequency of observations was considered inappropriate. The dimensions of care that were pre-determined included: physical, psychological, social and spiritual aspects of care. Review of the medical records revealed that for 18 patients the physical aspects were documented, however, psychological and social aspects were only documented for 6 of the 20 patients and only one patient had any documentation recognising spiritual needs.

For each patient the three main symptoms were identified in the medical records and correlated through the interview process. In 40% of cases the major symptoms most frequently documented were not the same as those identified by the nurses during the interview process. It was concluded that the documentation of symptoms was rarely adequate or comprehensive enough to influence treatment decisions.

Nurses' perceptions of care provided

The nurses were asked to rank their general impressions on the patient care provided. There were four criteria ranging from 'none of needs met' to 'exceptional care given'. The analysis revealed that 47.5% felt that some of the needs were met, 45% felt that all the needs were met and 7.5% reported the care as being exceptional.

The nurses were asked to comment on the usefulness of a palliative care pathway and specific education to enhance their ability to provide end of life care. All but one respondent felt a pathway would be useful. With regard to education, the majority of nurses identified the need for further continuing education in relation to palliative care. The most frequently requested subjects included pain and symptom management, dealing with families, communication skills and assessment/recognition of disease progression and the terminal phase.

Communication and decision making

In relation to treatment choices, nurses indicated that eight of the 20 patients were involved in decision making in relation to their care. The remainder of patients were classified as 'unable to comment' for a range of reasons including being unresponsive, unable to communicate or that the patient's family was in conflict or was unavailable. It appeared that the issue of death was rarely discussed, even if raised by the patient.

No evidence could be found of advance directives in the form of 'living wills'. Not for resuscitation (NFR) orders were recorded for all patients, but it was not always clear whether patients or their families had been involved in this decision.

In 11 cases the terminal phase was recognised by the nurse and documented. Thirteen families were notified of

impending death between 25 minutes and 48 hours prior to the event. In 10 cases family members were present at the time of death.

The documentation around family involvement was very poor, with communication and concerns only surfacing in the terminal phase. There were no formal multidisciplinary conferences between health professionals and families although in six cases there was documentation of families expressing distress, anxiety, anger or concern about the patient's care or prognosis.

A theme of powerlessness emerged in relation to the nurses' concerns about poor communication between nursing and medical staff with regard to treatment choices for patients. Difficulties in accessing doctors after hours to meet with distressed family members were also reported by the nurses.

Psychosocial and spiritual aspects of care

There was little documentation relating to the management of non-physical dimensions, despite significant ongoing issues in these areas for some patients and families. Documentation of physical symptoms occurred in all patient medical records (n=20), whereas psychological symptoms or issues were only recorded in six (30%), social in nine (45%) and spiritual in one (5%). For seven patients (35%), the care of physical needs was the only dimension reported. In four sets of medical records both physical and social issues were mentioned; physical and psychological issues were noted in two others. In four cases (20%) physical, social and psychological dimensions were documented in some form. In only one patient's medical record were the four dimensions: physical, social, psychological and spiritual, all documented.

Of the 40 nurses interviewed, 38 were able to identify the 'significant others' of the patients for whom they cared. Documentation of family involvement occurred in 18 medical records. This was largely restricted to noting visits, however in two cases the presence of particularly supportive family members was clearly stated. Discussions with family were also documented, as were, occasionally, family members' concerns. Interactions between the patient and family were rarely mentioned. Insights into family dynamics are therefore missing from most of the patient records, although widely recognised in health care as impacting on health outcomes, including a 'good death'.

Of the research cohort, none of the patients had cultural issues which appeared to be significant. There was no mention of culture in either interviews or medical records, apart from one case note mention of a patient's Dutch origins. While it was noted by the research team that had there been cultural issues, there was nowhere in the formal case note assessment tools to document these concerns.

Similarly, the formal tools contain no prompts for documentation of spiritual issues beyond a line in the hospital admission form on which to note a patient's religious denomination. The only patient case note entry mentioning the spiritual dimension was limited to a notation of a visit by a pastor.

DISCUSSION

The nurses' knowledge of palliative care self-ratings did not correlate with their confidence or their ability to provide expert palliative nursing support or with the inadequacies in care identified. There was some evidence of appropriate care planning for patients, but this was primarily in relation to physical needs. Very poor correlation existed between documented identification of symptoms and the verbal feedback provided by the nurses interviewed. The inevitable result of poor assessment and planning was: inconsistent and ad hoc symptom management; and inadequacies in evaluation and modification of care planning.

Of further concern was the minimal recognition of the psychological, social and spiritual needs of patients and their families. Communication between nurses and patients and their families was poorly demonstrated. Documentation of fear, anger or distress was made, but the issues appeared to be unresolved. There were no formal family conferences recorded.

In nine cases, death was not recognised as imminent in the medical record and in five cases no signs or symptoms of the terminal stage were documented. Seven families were not informed that death was imminent and therefore missed the opportunity to be with their family member. It is difficult to assume there were no signs of the terminal phase present. It would seem that clinical staff were focussed on carrying out treatment rather than noting deterioration and spending time identifying and managing patient and family concerns.

Given the study was a retrospective review it is not possible to identify how these discrepancies and inadequacies impacted on patients, but it would be reasonable to predict that failure of documented identification of these needs led to omissions in care. These issues suggest a shortfall in palliative education and an inappropriateness of the acute setting to providing quality palliative care.

CONCLUSIONS

It was apparent from the study that nurses at the research site had a strong desire to provide quality palliative care to patients. However the lack of appropriate palliative assessment and documentation, particularly for patients who had a non-malignant life-limiting disease, indicated that in this study care provision could have been enhanced.

Furthermore, while concerns about the limitation of care provided were expressed by the nurses, there was limited focus in relation to the psychological, social and spiritual needs of the patients.

Nurses indicated that better care could be provided with increased resources, although it was not clear how these resources would be applied to enhance practice. Limitations in knowledge and expertise in relation to palliative care from the clinical treating teams were major factors which affected patient care, according to the nurses interviewed.

The nurses indicated strong support for the application of a resource such as a Palliative Care Advanced Disease Pathway for use in the acute wards of the hospital. They also indicated a range of areas where further education would be valued. Three major recommendations were developed:

1. Increase liaison between palliative care services and acute care settings, including the development of 'link nurse' positions.
2. Provide continuing education in palliative care, particularly in relation to the non-physical needs of patients requiring end of life support.
3. Develop comprehensive palliative care protocols including a standardised practical tool for the identification of holistic care needs for acute care facilities.

It was noted that a range of effective care was provided to the patients reviewed, particularly in relation to the commitment of the nurses, and it is easy to overlook this in the face of the significant discrepancies between ideal care and the care provided. Nurses also demonstrated a willingness to receive support and a strong desire to participate in identifying how this support might be provided. It is anticipated that further work in this setting will be embraced by the nurses practising in the acute wards and it is noted that the organisation is receptive to change. These factors augur well for fundamental changes to nursing practices, building on the commitment and expertise already existing in the hospital and on evidence developing as international best practice.

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WHERE DO ALL THE UNDERGRADUATE AND NEW GRADUATE NURSES GO AND WHY? A SEARCH FOR EMPIRICAL RESEARCH EVIDENCE

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ABSTRACT

Objective:

To review the published scientific literature for studies quantifying or examining factors associated with the attrition of undergraduate nursing students in pre-registration programs and the retention of graduate nurses in the workforce.

Methods:

The following selection criteria were used to systematically search the literature: target populations were either students in pre-registration nursing programs or registered nurses in their graduate year; the studies were to be primary observational or analytical (cross-sectional, case-control or prospective cohort studies) in design; and outcome measures were attrition in undergraduate programs and/or retention of graduates within the workforce. Three authors guided by a standardised procedure performed data extraction and quality assessment independently. Synthesis of the data appears in text and tabular format. Due to the heterogenic nature of the study methods, meta-analysis was not possible.

Results:

This review found only four studies that met all inclusion criteria. All four studies examined undergraduate attrition as an outcome with two studies reporting a range of 25-27% attrition within the first year. No studies were found that quantified or examined retention of new graduates as an outcome measure. Only two of the four studies followed cohorts of students prospectively and were able to provide a high level of evidence, although each of these studies was designed to assess specific exposures as potential predictors of attrition, rather than assess actual factors associated with students leaving their program.

Conclusion:

There is a paucity of research studies in the literature from which evidence quantifying attrition and retention and the reasons why students leave undergraduate nursing programs or new graduates leave the profession can be obtained. Clearly there is a need to systematically track undergraduates and new graduates to quantify and understand attrition, retention and workforce choices within the nursing profession and begin to build this evidence-base.

INTRODUCTION

Current and future nursing workforce supplies are critically low and have been acknowledged internationally (CNA 2002; Crowley et al 2002; DEST 2002; ICN 2004; Crow et al 2005; RCN UK 2005). The International Council of Nurses launched the 'Global Nursing Workforce Project' in 2004 in response to the global nursing crisis (ICN 2004). Nurses comprise the largest health professional group and the overall effectiveness of any health care system depends on a viable nursing workforce (ICN 2004).

In the United States of America (USA), the nursing shortage is estimated to double from 6% in 2000 to 12% in 2010 (Crow et al 2005). Projected estimates in Canada predict a shortfall of 78,000 nurses by the year 2011, increasing to 113,000 nurses by 2016 (CNA 2002). In the United Kingdom (UK), quantifying projected shortages of the nursing workforce appears to be difficult to ascertain. A recent report from the Royal College of Nursing (RCN UK) states there are 'information gaps' and 'weaknesses' in the available data on the nursing labour market (RCN UK 2005 p.10). However, a current survey found that 62% of nursing managers found it difficult to fill vacancies, and current efforts by stakeholders to increase the workforce are not sufficient to meet nursing

workforce demands over the next ten years (RCN UK 2005). Within the Australian health care system, a 40,000 deficit nursing supply is predicted by the year 2010, and the supply of nursing graduates over recent years, as well as future estimates, have not and will not be able to meet demand (DEST 2002; AHWAC 2004).

The number of nurses who permanently leave nursing is reported as large and improved retention rates are critical to managing the current nursing workforce crisis and assuring there are sufficient nurses to replace the 'baby boomer' generation as they retire from the nursing workforce in the next ten to fifteen years (ICN 2004; Heath 2002). Undergraduate nursing students and graduate nurses represent the future of the nursing workforce and the consequences of student attrition and of new graduates leaving the profession will only exacerbate current and projected nursing shortages.

Interestingly, universities in the UK are currently expected to maintain a less than 13% rate of attrition or face financial penalty (Deary et al 2003). The Department of Health in the United Kingdom (UK) estimate attrition rates from pre-registration courses to be 20% for 2004/2005 and that 14.3% of newly qualified nurses and midwives choose not to enter their profession (RCN UK 2005). However the RCN UK state that there is a lack of accurate national data collected during pre-registration and midwifery education and little information is available on the number of nurses recruited, completing an undergraduate program, or graduating each year (RCN UK 2005). The Canadian Nurses Association (CNA) also cast doubts over the accuracy of reported nursing education statistics (CNA 2002). Completion rates for new nursing enrolments in 2001 was estimated at 60% or less, however there is substantial diversity in Canadian pre-registration programs and these attrition rates are not based on reliable sources (CNA 2002).

There is a paucity of national data in Australia that quantifies student attrition and graduate retention or describes the factors that influence an individual to enter an undergraduate nursing program and subsequently remain in the workforce. National statistics are reported on students who commence and complete their program but attrition rates are only calculated on all students and not reported by specific field of study (DEST 2004). Aggregate attrition rates for domestic undergraduate students has remained stable since 1994 at a rate of 20-21% but are not completely accurate as they include students who transfer across universities and who withdraw and re-enter their program at a later time (DEST 2004).

Since 1994, all registered nurses in Australia have been educated to bachelor degree level within universities and program completion by domestic students have steadily declined from 10,999 in 1994 to 7,794 in 2000 (DEST 2005). Even if attrition and graduate retention rates in nursing are similar or less than other professions, they still require accurate identification and quantification for workforce planning, university enrolments and associated risk factors that can be modified.

Attrition from nursing programs and an exploration of why this happens has created considerable debate and a body of literature since the early 1930s (Rhinehart 1933; Lepley 1959; Plapp et al 1966). Common themes surrounding student attrition included: personality traits, such as degree of self-efficacy (Harvey and McMurray 1994) and suitability of personality for a career in nursing (Adib-Hajbaghery and Dianati 2005); specific entry characteristics of nursing students (Kevern, Ricketts et al 1999; Wharrad, Chapple et al 2003; Yatkin, Azoury et al 2003); academic demands of education programs (Mashaba and Mhlongo 1995; Kevern, Ricketts et al 1999; Ehrenfeld and Tabak 2000; Last and Fulbrook 2003; Glossop 2002); the changing demographic profile of commencing students eg. the 'maturing' of student ages and accompanying responsibilities including children and financial obligations (Marsland and Murrells 1996; Horner 2000; Glossop 2002; Brodie, Andrews et al 2004; Cuthbertson, Lauder et al 2004; Kevern and Webb 2004); ethnicity (Jalili-Grenier and Chase 1997; Klisch 2000; Gardner 2005); stress (Lindop 1991; Deary, Watson et al 2003; Brodie, Andrews et al 2004); and discordant perceptions students hold between what a nursing education program entails and what the realities are (Harvey and McMurray 1997; Brodie, Andrews et al 2004).

With respect to retaining graduate nurses in their first year as registered nurses, the literature suggests the importance of structured transitional programs for fostering retention (Loiseau, Kitchen et al 2003; Almada, Carafoli et al 2004); 'reality shock', a term that describes the gap between the undergraduate program and the realities of the workplace (QNC 2001; Boswell, Lowry et al. 2004; Casey, Fink et al. 2004; Duchscher and Cowin 2004); stress related to patient acuity and lack of experience (Beecroft, Kunzman et al 2001; Almada, Carafoli et al 2004); and concern about the quality of patient care, management issues and lack of guidance and support (Bowles and Candela 2005).

Despite the quantity of diverse writings on student attrition and graduate retention over several decades, there are surprisingly few high quality primary analytical studies underpinning these discussions. A great deal of discussion is in the form of theoretical commentaries (McSherry and Marland 1999; Greenwood 2000; Glossop 2001; Clare and van Loon 2003; Cowin and Jacobsson 2003; Wells 2003; Jackson and Daly 2004; Crow and Hartman 2005; Usher, Lindsay et al 2005; Crow and Hartman 2005a). Research studies are limited methodologically by being descriptive rather than analytical (Mashaba and Mhlongo 1995; Jordan 1996; Jalili-Grenier and Chase 1997; Klisch 2000; Glossop 2002; Squires 2002; Baillie, Allen et al 2003; Loiseau, Kitchen et al 2003; Wharrad, Chapple et al 2003; Brodie, Andrews et al 2004; Casey, Fink et al 2004; Robshaw and Smith 2004; Bowles and Candela 2005); rely on small

convenience samples (Mander 1987; Jordan 1996; Last and Fulbrook 2003; Almada, Carafoli et al 2004; Adib-Hajbaghery and Dianati 2005); and assess intentions rather than actually measure attrition or retention as outcomes (Cowin et al 2006; (Lindop 1991; Murrells and Robinson 1999; Beecroft, Kunzman et al 2001; Cuthbertson, Lauder et al 2004; Roberts, Jones et al 2004).

The aim of this paper is to systematically review the evidence in the published scientific literature for studies that quantify and examine factors associated with the attrition of undergraduate nursing students in pre-registration programs and the retention of graduate nurses in the workforce.

METHODS

Computerised databases were searched using EBSCOhost as a search tool for Medline (1966 to 2005) and CINAHL (1982-2005).The following five separate search strategies were used:

- (attrition OR retention) AND (nurs* OR graduate) AND (student OR education) AND (measurement OR factors);
- (nursing OR student OR curricula) AND (attrition OR retention);
- nurs* AND graduates AND strategies AND evaluation;
- (nurs* OR graduates OR curricula) AND (retention or attrition);
- nurs* AND graduate AND orientation.

The combined effort of the above searches yielded the following results: Medline produced 856 abstracts, CINAHL produced 1,535 abstracts. The search was then narrowed to published, primary articles and yielded 777 abstracts from Medline and 362 from CINAHL. On examination of the titles and abstracts of this body of literature by the first author [LG] of this review, 60 articles were retrieved. Rejected abstracts did not meet the study selection criteria. The references for these retrieved articles were examined, as well as employing a 'snowballing' strategy of subject headings and titles to further access abstracts and/or full text articles.

The PubMed database was searched under the 'systemic review' and 'clinical queries' categories using the above search terms. Searches were also performed on authors who had submitted relevant thesis for dissertation in PubMed 'single citation' category for published studies with no relevant results. Other databases searched included, PsycInfo, ERIC, Meditext, AMI, APAIS using a key word search, however no new or relevant literature was identified. The Cochrane Library was searched with one further study identified.

Overall, 73 full text articles were retrieved and assessed by the first and last authors of this review (LG and CT), of which 60 were rejected on the basis of not using attrition or retention rates as their outcome measure. The remaining 13 articles were examined by three authors independently (TG, EY and CT), guided by the following selection criteria for this study:

1) study designs were to be observational and/or analytical (cross-sectional; case-control or prospective cohort studies);
2) the targeted population was undergraduate nurses or midwives, or new graduates; and
3) outcome measures were either attrition in undergraduate programs and/or retention of graduates within the workforce.

Four studies met all the inclusion criteria for this review and were subject to a further data extraction process conducted independently by the second and third authors (TG and EY) with the last two authors acting to reconcile differences (SS and CT). Assessment for the quality of the methodology of these studies was based on a standardised abstraction procedure (Centre for Reviews and Dissemination 2002). The data extraction pro-forma is available upon request and the results of the process are outlined in table 1. The nine excluded articles are shown in table 2 and reasons for their exclusion given.

RESULTS

This review found only four studies that met all inclusion criteria. Two studies were prospective cohort (or longitudinal) in design (Deary et al 2003; Harvey et al 1994) and two were cross-sectional (Harvey et al 1997; Kippenbrock et al 1996). All four studies examined undergraduate attrition as an outcome. No studies were found that examined retention of new graduates as an outcome measure. Only two of the four studies followed cohorts of students prospectively and were able to provide a high level of evidence, although each of these studies was designed to assess specific exposures as potential predictors of attrition, rather than assess actual factors associated with students leaving their program.

Prospective cohort studies examining factors associated with student attrition

Deary et al (2003) conducted a longitudinal study to investigate the predictors of, and relationships among stress, burnout and attrition in the nursing student. The sample population were diploma level students in Scotland undertaking nursing education between 1996 and 1999 in one college. Data was collected from a complete college year-of-entry cohort at four points: entry into the program (time 1 n=168); at 12 months (time 2, n=124); at 24 months (time 3, n=90); and on completion (no time specified and no numbers provided). Mean age of the sample was 24 years and 83% were female. There were six types of exposure measures, in the form of questionnaires, distributed at different time-points over the duration of the course. This study

tested for: general mental ability, personality attributes such as neuroticism, openness, and agreeableness; coping strategies; and three questionnaires surrounding different facets of stress.

The result of this study found that no relationship existed between stress, burnout and attrition, and in fact those who experienced greater degrees of stress and aspects of burnout were more likely to complete the degree.

Table 1: Studies of factors associated with nursing student attrition

Reference	Study Design	Outcome Measure	Study Population	Exposure Measure/s	Results
Deary et al 2003	Longitudinal	Comparison of completers and non-completers of course using variables assessed at time 1: sex, age, cognitive ability, personality, coping strategies and psychological distress.	Cohort of undergraduate nursing students at one Scottish institution followed for 4 years (1996-1999) from entry to course completion (n=168 in 1996; n=90 in 1998). No data provided at end of course.	The use of questionnaires, psychometric tests and college information. Data was collected at four time (T) points: entry (T1); 12 months (T2); 24 months (T3); and at end of program.	No relationship between stress, burnout and attrition found. Attrition 25% at 12 months.
Harvey et al 1994	Longitudinal	Undergraduate attrition rates	First year nursing students from four Australian tertiary institutions (n=306).	Nursing Academic Self Efficacy Scale (NASES); Nursing Clinical Efficacy Scales; Internality, Powerful Others and Chance Scales; Academic Self Efficacy Scales, and Commitment.	Attrition 27% at 12 months. Non-completers had significantly lower NASES scores ($p<0.04$); academic SE* scores ($p<0.03$); general SE ($p<0.00004$); GPA# ($p\leq0.05$); Internal LOC^ ($p<0.06$); less committed ($p<0.001$).
Kippenbrock et al 1996	Cross sectional survey at two points	Undergraduate attrition rates at two time points: 1983 and 1995 in semester following the survey.	14 nursing schools in the USA. 1983 (n=182). 1995 (n=209). Schools were randomly selected.	Bean's tool (103 items) including 8 attrition and retention subscales.	Students in 1983 had a higher likelihood of leaving compared to those in 1995 ($p=0.02$).
Harvey et al 1997	Cross sectional	Undergraduate attrition rates: number of leavers/number of enrolments over a two year period.	Nursing students who had commenced a three year course at a rural Australian college two years prior to the study (n=168). Questionnaires sent to both continuers (n=109) and leavers (n=59). Only (n=16) leavers responded.	Two version of same questionnaire sent depending on leaver/continuer status. Consisted of 18 items, including demographic information and student perceptions on clinical and academic issues.	Attrition rate over two years was 19.3%. Significant differences found between the leavers and completers were the differences in perceptions of course content ($p=0.03$) and seeking study skills advice behaviour ($p=0.02$).

*SE = self efficacy; # = grade point average; LOC^ = locus of control

Table 2: Studies retrieved but not selected (n=9)

First author (year)	Reason for exclusion
Almada 2004	Not a primary analytical study. A convenience sample selected at one hospital to evaluate a preceptor program.
Ehrenfield 2000	Not a primary analytical study. A correlation study of aggregate variables over time.
Glossop 2002	Not a primary analytical study. A retrospective cohort study based on an administrative database.
Grobler 2005	Protocol for a Cochrane review to examine retention in rural and under-served communities of all types of health professionals.
Horner 2001	Reports preliminary baseline data collected for proposed longitudinal study. No further study has been published to date.
Kevern 1999	Not a primary analytical study. A retrospective analysis of administrative datasets that examined the association between selected variables on admission to academic achievement and attrition. Individual data on reasons for attrition were not collected.
Klisch 2000	Not a primary analytical study. A review of the literature.
Mashaba 1995	Not a primary analytical study with attrition as an outcome. A cross-sectional survey of enrolled student's perceptions of factors associated with attrition. It is unclear how many of the 46 ex-students in the target population responded to the survey.
Wharrad 2003	Outcome measure was academic success rather than attrition.

In an Australian study, two nursing self-efficacy scales were developed to predict attrition in undergraduate nursing students (Harvey et al 1994). The main study was a three-year prospective cohort study of first year nursing students (n=306) aged between 17 to 45 years, and predominately female (88%) drawn from four Australian tertiary institutions. Variables were measured using the following: the Nursing Academic Self Efficacy Scale (NASES) with 22 items that measure student confidence in relation to learning education requirements of the course; the Nursing Clinical Self Efficacy Scale (NCSES) which has 24 items measuring student confidence in relation to learning skills of the course; Internality, Powerful Others and Chance Scales (IPC) to assess internal and external control; self-efficacy scale, general and social; academic self-efficacy scale measuring behaviours associated with progress in tertiary settings; and commitment which is a 12 item scale measuring 'hardiness'. The outcome measure was the comparison of variables of undergraduate attrition rates of three groups: those who left ('discontinues'); those continuing with intention to complete ('late'); and those who completed ('timely completion').

The results from this study showed 26.5% had left in the first year, 19% were 'late' and 52% of the cohort had completed the undergraduate year. The 'discontinues' had significantly lower means (7.28) on the NASES compared to those who did not withdraw and significantly lower GPAs than completers. Those who left were also significantly less committed, had lower IPC rates than completers, and rated lower on the self-efficacy scale. No differences were seen in the NCSES.

Cross-sectional studies examining factors associated with student attrition

Trends and factors associated with attrition across 14 United States of America baccalaureate nursing programs were examined in the years 1983 and 1995 by Kippenbrock et al (1996). The study involved a cross-sectional survey repeated at two time-points: 1983 (n=183) and 1995 (n=209), on different cohorts. No specific ages were given. The 1983 cohort had a response rate of 45% and consisted of 88 females and 94 males. The 1995 cohort had a response rate of 38%, with 108 male and 101 females.

The purpose of this study was to examine: trends and factors related to attrition in schools of nursing; nursing attrition rates to national student attrition rates; whether gender is associated with attrition; whether rates change over time; and finally, the determinates of nursing student attrition.

Variables were measured using Bean's tool, consisting of 103 items with eight student attrition and retention subscales. The results showed that attrition rates (first semester only) decreased from 12% in 1983 to 4% in 1995. A logistic regression model was used to calculate the risk of the nursing student leaving college, however the only variable showing significance was for 'year' suggesting students had a higher likelihood of dropping out in 1983 than in 1994.

Harvey et al (1997) conducted a cross-sectional study to explore pre-enrolled students perceptions of what an Australian undergraduate nursing program involved and subsequent attrition rates. Two hypotheses were tested. The first was that those who left (leavers) would report a greater difference between their perceptions and their academic experience and secondly that leavers would rate certain potential stressors surrounding decisions to leave as more significant than those who chose to continue.

The sample comprised 168 student nurses from a rural Australian tertiary college who had commenced the three-year Diploma of Applied Science (Nursing) education in the two years prior to the study. From this population, 35% had withdrawn. Of the continuers (n=109), 57 returned the questionnaire, giving a 52.3% return rate, of which 82.2% were female aged between 18-40 years of age. Only 16 of the 59 leavers returned the questionnaire, a response rate of 45.7%. No significance difference was found with respect to age.

The results from this study found the two groups did not differ significantly with respect to difficulties encountered during clinical placements. In relation to academic experience, no significant differences in perceptions of unit difficulty between the two groups was evident, nor was a significant difference seen between the two groups on pre-entry seeking behaviour, or potential stressors such as financial, student life, and importance of factors to withdrawal factors. However this study found a significant difference between continuers and leavers concerning content of the nursing material in nursing education: 59.6% of continuers found the course differed from their pre-enrolled perceptions compared with 81.3% of leavers. Science subjects were cited as the most significant difference between student expectations and the reality. With respect to time and study management, the study found a significant difference in the seeking of advice on time and management and study skills, 93.7% of leavers did not seek such advice compared with 64.9% of continuers.

DISCUSSION

A major finding of this review is that despite the diverse writings about these issues there does not seem to have been a systematic approach to research. Any claims made by the few studies included in the review need to be tempered by methodological limitations or that these studies were designed to assess specific exposures as potential predictors of attrition, rather than assess actual factors associated with students leaving their program.

Of the four studies included in the review, two were limited by their cross-sectional design (Kippenbrock et al 1996; Harvey et al 1997). Strengths of the Kippenbrock et al (1996) study were the random sampling of several

schools and adequate adjustment for confounders such as age, gender, year level and GPA, although no odds ratios were reported. Limitations include a lack of external validity and generalisability due to little comparison between responders and non-responders with the follow-up of only one semester being too short to ascertain attrition rates.

Drawing conclusions from the second cross-sectional study (Harvey et al 1997) should be done with caution because of the small sample from one university and the disappointing response rates. Although this was the only study of the four that sought to obtain data from students who left the program, these findings were based on only 16 students from the one university who chose to respond to the questionnaire.

Deary et al (2003) ambitiously planned to follow a cohort of students at one university for the four year duration of their program. An attrition rate of 25% was reported after the first year of study. A serious limitation of this study is the loss-to- follow-up of 45% over the first two years which questions the internal validity of the results. No comparison was performed between those who remained in the study and those lost to-follow-up to ascertain sample bias and no data is provided for the final end-point at course completion, thus final attrition rates are not given. There is no discussion given for adequate controlling of confounders in the logistic regression model. It was also mentioned in the introduction that 'educational and clinical factors' were associated with attrition in nursing programs, however no assessment of this association was given. Strengths of this study include multiple measures of stress and burnout and validation of the instruments used.

Harvey et al (1994) followed a cohort of Australian undergraduates from one university for their first year of study with at attrition rate of 27%. The strength of this study includes the concerted effort to develop, validate and implement the NASES and NCSES as measurement instruments that had satisfactory consistency and reliability. Limitations of this study include no discussion of sampling bias, and no follow-up of those who left the study, thus generalisability is questionable. Internal validity is also of concern as there is no discussion of confounders or adjustment in analysis. Both longitudinal studies included in this review did not follow students who left the program to determine the reasons as their studies were designed to assess exposures at entry to the program as predictors of completion. Data from each longitudinal study were limited to only one university and are now over ten years old.

CONCLUSION

To the best of our knowledge this is the first published systematic review of empirical evidence examining factors associated with attrition of undergraduate nurses and retention of new graduates. A limitation of this review is the introduction of possible biases through the search strategy. It needs to be acknowledged that although the review process may be subjected to individual interpretation by the authors, every effort has been made to comprehensively and exhaustively search the published scientific literature on this topic. In addition, to enhance the validity of the conclusions drawn and minimise bias, standardised and objective processes guided the independent reviewers.

This review has uncovered a paucity of research studies in the literature from which evidence quantifying attrition and the reasons why students leave undergraduate nursing programs can be obtained. No studies were found that quantified or examined retention of new graduates. Quantifying attrition can be achieved using aggregate annual university census data based on a single university program and/or a state-wide or national average across universities. Determining factors associated with attrition of undergraduates or graduate retention can only be achieved through a longitudinal cohort study and delineating any difference in associated factors across the two groups. Clearly there is a need to systematically track undergraduates and new graduates to the completion of their program and beyond to quantify and understand attrition, retention and workforce choices within the nursing profession and begin to build this evidence-base.

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TOBACCO SMOKING HABITS AMONG A CROSS-SECTION OF RURAL JAPANESE NURSES

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Key words: Japan, nurse, smoking, tobacco, epidemiology

ABSTRACT

Background:

Despite a high community smoking rate, few investigations of tobacco usage among Japanese nurses have been conducted in rural areas, particularly those in the southern islands.

Aim:

The aim of this research was to investigate the epidemiology of tobacco smoking among a previously understudied group of rural Japanese nurses.

Design:

A self-reporting questionnaire was adapted from previous investigations and distributed to a complete cross-section of 1162 nurses from a large teaching hospital in southern Japan (response rate: 74.0%).

Results:

A total of 10.9% (95% Confidence Interval: 9.0-13.2) were current smokers, with a further 2.9% (95% CI: 2.0-4.3) being ex-smokers. When stratified by gender, the prevalence of smoking was 10.8% (95% CI: 8.9-13.1) among females, and 18.7% (95% CI: 6.6-43.0) among males. The median number was 10.0 cigarettes per day for a period of 10.0 years. When stratified by age, the highest smoking prevalence (16.4%) was observed among nurses aged between 45 and 50 years. In relation to career length, the highest smoking prevalence (13.3%) was demonstrated among those who had worked between 6 and 10 years.

Conclusions:

Overall, our study suggests that around 11% of rural nurses in southern Japan currently smoke tobacco. When stratified by gender however, the prevalence among male nurses was almost double that of their female counterparts. Although interventions to reduce smoking are clearly needed in this region, interventions will need to consider the underlying social and cultural motivations for tobacco usage among Japanese people, in general.

INTRODUCTION

Japan has one of the highest smoking rates of any industrialised nation, with roughly one third of all adults being current tobacco users (World Health Organization 2005). Almost half of all Japanese men smoke, while the prevalence rate among women has also risen in recent years, from being almost negligible two decades ago (Simpson 2003) to around 12% in 2002. Annual per capita cigarette consumption has undergone a simultaneous increase, rising from 2810 cigarettes per capita in 1970, to 3023 by the year 2000 (WHO, 2005). Distinct correlations have been shown to exist between various demographic factors and smoking rates among Japanese citizens, particularly socioeconomic status (Fukuda et al 2005). In terms of health effects, smoking now represents an import risk factor for coronary heart disease among Asians (Iso et al 2005), and probably increases the risk of breast cancer among pre-menopausal Japanese women (Hanaoka et al 2005). By the end of last century, around 29000 Japanese men and 4000 women aged between 35 and 69 were dying every year of smoking related diseases (WHO 2005). For a country which made such impressive gains in living standards and longevity last century, tobacco smoking now represents a significant cause of preventable disease as Japan enters the new millennium.

Being at the forefront of health care, nurses occupy an important position as both health care providers and as role models for appropriate health behaviour. Nevertheless, nurses have often had a smoking prevalence rate higher than that of the community in which they live

(Adriaanse et al 1991). Historical research from the United States of America between the 1950s and 1970s for example, showed that large proportions of the nursing population were smokers (Garfinkel and Stellman 1986). Contemporary investigations however, suggest that the smoking rate among nurses is falling in many Western countries (Hay 1998), but remains rather high in other parts of the world (Torres Lana et al 2005; Hodgetts et al 2004). Given the conflicting notion of health care workers engaging in distinctly unhealthy behaviour, many researchers have felt compelled to investigate nurses' smoking in various parts of the world (Adriaanse et al 1991), including Asia (Ohida et al 1999a).

Nevertheless, it has been suggested that many previous investigations of nurses' tobacco smoking have suffered from relatively small sample sizes and an unrepresentative selection of staff (Rowe and Clark 2000b). Similarly, despite a high community smoking rate, recent investigations of tobacco usage among Japanese nurses tend to focus on staff working in urban areas (Kitajima et al 2002) or mixed regions (Ohida et al 1999a). Few studies have specifically looked at smoking among rural nurses, particularly those in southern Japan. One project documented smoking rates in a semi-rural area of eastern Japan (Ohida et al 1999b), however, it was published in Japanese. This bias toward urban areas is somewhat unfortunate, as other Japanese investigations have shown higher community smoking rates among certain populations in rural areas (Fukuda et al 2005). Given such inconsistencies, it was considered necessary to investigate the epidemiology of tobacco smoking among a large cross-section of Japanese nurses, working in a rural area of southern Japan.

METHODOLOGY

This study used a self-reporting survey administered to a complete cross-section of nurses from a large, rural hospital. Ethical clearance was provided by an institutional ethics committee in Japan and the study was conducted in accordance with ethical standards relevant to this country. Our questionnaire was adapted from various international tobacco smoking surveys (Hussain et al 1993; Nelson et al 1994; Hay 1998; Ohida et al 1999a). It was initially translated into Japanese by an experienced team of bilingual health professionals, before being translated back into English and checked against the original. The one page document consisted of simple questions on age, gender, total employment duration, current smoking habits and previous smoking history. The number of cigarettes smoked per day, total duration of smoking, and years since quitting smoking were also requested.

Questionnaires were distributed by senior nurses and collected within a one week period, with informed consent implied if questionnaires were voluntarily completed and returned. Data were entered into a spreadsheet program and analysed using statistical software. Basic statistics and prevalence rates were calculated, with differences by gender evaluated using Pearson's chi square and Fisher's exact test. Data were further stratified by age range and career range during the analysis. Computed 95% Confidence Intervals (95% CI) were calculated for smoking prevalence rates using statistical software. Figures for smoking duration and severity were calculated as percentages of each subgroup, because not all nurses answered each question.

RESULTS

Questionnaires were distributed to a total of 1162 nurses, with 860 completed replies received, giving a high response rate of 74.0%. Their average age was 32.8 years (Standard Deviation: 8.8 years) and average career length 9.1 years (SD 8.7). The overall prevalence of smoking was 10.9% (95% CI: 9.0-13.2), with a further 2.9% (95% CI: 2.0-4.3) being ex-smokers. Five female nurses (5.3% of all smokers) had previously tried to quit smoking and failed, and were thus considered to be current smokers. When stratified by gender, the prevalence of current smoking was 10.8% (95% CI: 8.9-13.1) among female nurses and 18.7% (95% CI: 6.6-43.0) among males (a non statistically-significant difference: P=0.3116).

With regard to prior smoking habits, 2.7% (95% CI: 1.8-4.1) of females were ex-smokers, compared with 12.5% (95% CI: 3.5-36.0) of males (P=0.0211). Of those who smoked, the median number was 10.0 cigarettes per day for a period of 10.0 years. Male nurses were significantly more likely to smoke over 10 cigarettes per day, when compared to females (P=0.0071). The majority (63.0%) smoked between 5 and 15 cigarettes per day, for less than 20 years (48.2%) (refer to table 1).

Table 1: Smoking Prevalence, Frequency and Duration among Japanese Nurses

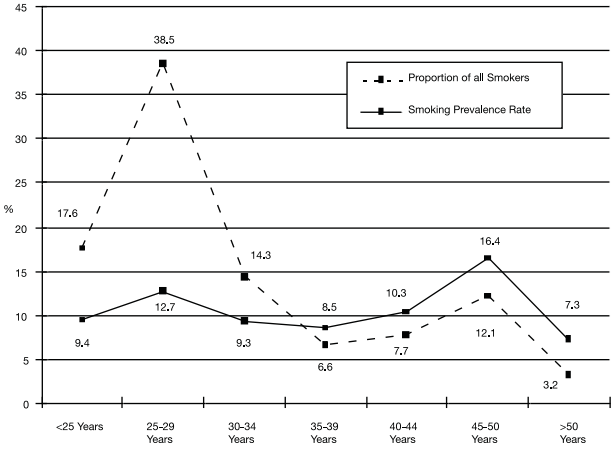
	%	(95% CI) [a]		n	(%) [b]
All Nurses			Smoking Rate		
Never Smoked	86.2	(83.7-88.3)	<5 per day	9	(9.8)
Current Smoker	10.9	(9.0-13.2)	5-15 per day	58	(63.0)
Previous Smoker	2.9	(2.0-4.3)	>15 per day	25	(27.2)
Females Only			Smoking Duration		
Never Smoked	86.5	(84.0-88.6)	<20 years	39	(48.2)
Current Smoker	10.8	(8.9-13.1)	20-30 years	18	(22.2)
Previous Smoker	2.7	(1.8-4.1)	>30 years	24	(29.6)
Males Only			Median Values		
Never Smoked	68.7	(44.4-85.8)	Smoking Rate	10.0 per day	
Current Smoker	18.7	(6.6-43.0)	Smoking Duration	10.0 years	
Previous Smoker	12.5	(3.5-36.0)	Quit Smoking	4.5 years ago	

[a] Computed 95% Confidence Intervals (95%CI) calculated for smoking prevalence rates;
[b] Percentage of nurses who answered each question (n = 92 and 81)

When stratified by age, the highest smoking prevalence (16.4%) was observed among those aged between 45 and 50 years, even though they only accounted for 8% of all

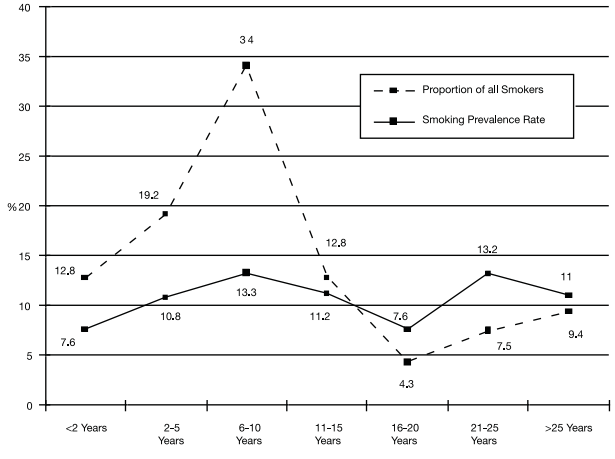
nurses. By proportion, more than one-third of all current smokers (38.5%) were aged between 25 and 29 years (refer to figure 1).

Figure 1: Smoking Prevalence among Japanese Nurses by Age Range



In relation to career length, the highest smoking prevalence (13.3%) was demonstrated among nurses who had worked between 6 and 10 years, and the lowest (7.6%) among those who had worked either less than 2 years, or between 16 and 20 years. Aside from having the highest smoking prevalence, nurses who had worked between 6 and 10 years also comprised the highest proportion of smokers (34.0%) and the largest proportion of all nurses (28.0%) (refer to figure 2).

Figure 2: Smoking Prevalence among Japanese Nurses by Career Length



DISCUSSION

The overall prevalence of smoking among rural Japanese nurses in this study was around 11%, which is lower than most contemporary investigations of this topic, as listed in table 2. As such, the study results tend to suggest that rural nurses in southern Japan smoke at fairly low rates, when compared to their international colleagues.

Table 2: Nurses' Smoking Prevalence

Country	Rate [a]	Subjects	Location	Author	Year
Spain	53%	1623	Health System	Torres Lana *et al*	2005
Balkans	51%	209	Medical Clinics	Hodgetts *et al*	2004
Italy	41%	2453	Hospital Study	Zanetti *et al*	1998
Denmark	28%	445	Hospital Study	Willaing *et al*	2003
Ireland	26%	1074	National Survey	McKenna *et al*	2003
Britain	20%	1069	Hospital Study	Hussain *et al*	1993
United States	18%	901	National Survey	Nelson *et al*	1994
New Zealand	18%	30 51	Census Data	Hay	1998
Finland	15%	727	National Survey	Heloma *et al*	1998
Canada	12%	1269	Postal Survey	Chalmers *et al*	2000
Japan	11%	860	Hospital Study	Smith *et al*	b

[a] Prevalence rates rounded to the nearest whole number; [b] The current study

In Spain (Torres Lana et al 2005) and Bosnia (Hodgetts et al 2004) for example, over half of all nurses may be current smokers. Other European research from Italy (Zanetti et al 1998) and Denmark (Willaing et al 2003) has also documented higher smoking rates than found in this study. Interestingly, the current smoking rate in this Japanese study (around 11%) was very similar to a previous investigation of Canadian nurses (around 12%) (Chalmers et al 2000). When stratified by gender however, the research suggests that a greater proportion of male Japanese nurses smoke tobacco, when compared to their female counterparts. This is similar to the current trend among Japanese physicians, where males smoke at much higher rates than women (around 7% for women and 27% for men) (Ohida et al 2001). Japanese nurses' usage of tobacco products also appears to be much lower than the community rate when evaluated as a group (11% among nurses of both genders and 33% in the Japanese community). Male nurses in rural Japan (19%) also appear to smoke at a rate less than half that of males in the wider Japanese community (47%) (WHO 2005). The picture is less encouraging among female nurses however (11%), who appear to use tobacco at a rate similar to the community level for Japanese women (12%). This is contrary to a previous study, where female Japanese nurses smoked at a higher rate (around 19%) than the general population of Japanese women at that time (between 10% and 15%, depending on data sources) (Ohida et al 1999a). Skewed gender distributions in Japanese nursing cohorts (where the majority of subjects are female) when compared to the general population (where only half would be women) however, make it difficult to directly compare smoking rates between these two groups.

Nevertheless, it is interesting to contemplate why smoking rates among Japanese nurses differ from the community in which they live, particularly among men. It is possible that male nurses accept the negative health impacts of smoking more quickly than the

general male population. Alternatively, there may be other workplace factors which make it difficult for them to smoke at high rates. Exactly what these factors may be is difficult to surmise however, as their female counterparts seem to smoke at a level roughly similar to that of the general community.

Stratification by age revealed that over one-third of all smokers were aged between 25 and 29 years, a subgroup which also comprised around one-third of all nurses. Nurses aged 45 to 50 years had the highest smoking prevalence (16.4%), and one which was higher than the community rate for Japanese women. Despite this fact, the downward trend for smoking prevalence by age was inconsistent, even though a large proportion of nurses and smokers were in the younger age range. This result is contrary to a previous study of smoking among New Zealand nurses, where a lower prevalence rate was seen among older nurses (Hay 1998).

The large proportion of young nurse smokers is consistent with recent trends in Japanese society, where an increasing number of young women are smoking. The high proportion of smokers in the 45 to 50 years age range however, is perplexing. It is possible that this age range coincides with a point in their career where nurses begin to experience extra stress from management and administrative issues. It may also be a time when middle-aged nurses are burdened with family stress from teenage children or other domestic issues. If so, they may be more inclined to begin smoking. On the other hand, it is possible that nurses aged older than 50 years are experiencing a (relatively) more stable period in their lives, and may therefore be less inclined to begin smoking, or alternatively, to give up their previous smoking habits.

Male Japanese nurses in the current study also appear to be heavier smokers than the women, with a higher proportion smoking over 10 cigarettes a day. The overall consumption of cigarettes among both genders (10 per day or 3650 per year) is slightly higher than the Japanese national per capita consumption rate (3023 in 2000) (WHO 2005). This suggests that although their overall smoking prevalence rate appears to be lower than the community average, nurses who do smoke, probably consume a greater quantity of tobacco when compared to the general Japanese population.

Why this phenomena occurs and why Japanese nurses smoke at relatively similar rates despite age and career length is difficult to understand, but is nevertheless worth exploring. There has been considerable debate in the international literature as to why nurses smoke (Rowe and Clark 2000a; Rowe and Clark 2000b). Some research suggests that a certain proportion may take up the habit before working as a nurse (Rowe and Clark 2000a), and that the smoking rate among student nurses is particularly high (Rowe and Clark 2000b). In a study of Irish nurses, McKenna et al (2003) suggested that the importance of addiction and enjoyment should not be dismissed. In this regard, it may also be difficult for Japanese nurses to quit smoking; even if they harbor a strong desire to do so.

In their previous study of Irish nurses, McKenna et al (2001) found that three quarters of current smokers expressed a desire to quit smoking within the next 6 months. In our study however, less than three percent of females were ex-smokers. The ex-smoking rate among males was more encouraging however, with roughly 13% having successfully given up. This benefit was partly negated by the fact that male nurses had a much higher smoking rate overall. It is possible that the unique stressors of nursing practice are a major contributor to smoking in Japan as elsewhere, although the health effects of such behavior would be well appreciated by nurses, and must create some psychological conflict. One possibility is that Japanese nurses may not see themselves as role models for healthy behaviour in the community. A previous study of Japanese physicians found this to be the case (Ohida et al 2001), a finding which may also help explain the relatively high smoking rates among Japanese physicians.

Whatever the reason, it is clear that the current smoking rate among Japanese nurses is unacceptably high. Tobacco consumption has now risen to become a serious public health issue in Japan, with an increasing proportion of the female population smoking tobacco and dying from it (WHO 2005). This in turn, represents an important consideration for nursing professionals, particularly those involved in public health and community nursing. In some sense, Japan has already led the way in certain areas of tobacco epidemiology. The Japanese scientist Takeshi Hirayama (1981) for example, is generally credited with being the first person to establish a clear link between passive smoking and lung cancer (Ong and Glantz 2000).

In recent years, the Japan Nursing Association has also become more active in helping to reduce the proportion of its members who smoke tobacco (Simpson, 2003). Given these achievements, Japanese nurses are in an ideal position to lead public health initiatives to help smokers quit, and also to prevent younger people from smoking. Helping to mobilize Japans' nurses with a focused and sustained anti-smoking campaign may be the key in controlling this current epidemic. Health promotion interventions to help decrease the rate of smoking and increase a nurse's awareness of their important community role may also be beneficial in Japan.

LIMITATIONS OF THE CURRENT STUDY

Although some important data on smoking habits among rural Japanese nurses has been presented, it is still worth considering the relative strengths and weaknesses of this study. Firstly, a large cross-section of over 1000 nurses were surveyed and an excellent response rate of 74% achieved, giving almost complete coverage of the target group. As most Japanese nurses work in large

hospitals such as the one studied, there is confidence that the results are fairly representative of rural nurses in southern Japan. On the other hand, there are always limitations in self-reporting studies, namely the fact that what is reported may differ from what is actually done. Current smokers may be disinclined to participate in smoking research.

Furthermore, there is the methodological issue of the cross-sectional research design, in that it captures only a 'snapshot' of the current situation, rather than describing emerging trends. Despite this fact, self-reporting surveys remain the cornerstone of international smoking research, and as such, there is confidence that this investigation accurately portrays the epidemiology of smoking within the target group. Nevertheless, the general limitations of this design are acknowledged, and it would be prudent to undertake future longitudinal research, preferably that which follows nurses from initial training and throughout their career. The exact risk factors for nurses' smoking in Japan as, elsewhere, would also need to be explored with further investigations of this nature.

CONCLUSION

Overall, this study suggests that around 11% of rural nurses smoke tobacco in southern Japan. When stratified by gender however, the prevalence among male nurses was almost double that of their female counterparts. These results indicate that the distribution of risk is not uniform, and that interventions to help reduce smoking are urgently needed. Any such, programs will only be successful however, if they consider the underlying social and cultural motivations for smoking among Japanese people, generally.

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RECOGNISING AND RECONCILING DIFFERENCES: MENTAL HEALTH NURSES AND NURSING STUDENTS' PERCEPTIONS OF THE PRECEPTORSHIP RELATIONSHIP

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ABSTRACT

Objective:

The main purpose of this study was to examine the preceptorship relationship between students' and mental health nurses' in the mental health setting.

Design:

This study used a qualitative research design: grounded theory. This type of research method was deemed appropriate due to the limited knowledge of preceptorship in mental health.

Setting:

One metropolitan area mental health service (AMHS) in Melbourne, Victoria, Australia agreed to participate in this study. The range of settings included adult acute, rehabilitation and community.

Subjects:

Twenty 2nd year undergraduates nursing students from one metropolitan university in Melbourne, Australia agreed to participate in the study. In addition, nine mental health nurses from the nominated AMHS also consented to be involved.

Main Outcome:

The development of a substantive theory to describe the preceptorship relationship as informed by the study participants, student nurses and mental health nurses. For the purposes of this paper the category of 'reconciling difference' is the focus.

Results:

The core category identified for mental health nurses was 'attempting to accomplish connectedness' and for the students, 'coping with uncertainty'. There were also many sub-categories, one of which was identified by both groups. This category is the main focus of this paper; reconciling difference.

Conclusion:

Dealing with the uncertainty of, and reconciling differences between, the general and mental health environments emerged as a strong theme from the research. Student nurses were faced with confronting situations within the environment and made various suggestions for improvement so that their learning could be enhanced rather than inhibited. These findings make an important contribution to the specific issues concerning preceptorship in the mental health environment.

INTRODUCTION

The introduction of comprehensive nursing education in Australia has created specific difficulties in recruiting sufficient graduates into the mental health nursing field (Happell 1998; Stevens and Dulhunty 1997), resulting in what has been described as a critical shortage of mental health nurses (Clinton 2001). Although graduates of undergraduate programs are theoretically prepared for practice in a wide range of practice areas, including mental health, the available literature from Australia clearly demonstrates current curricula offer insufficient exposure to the theory and practice of mental health nursing (Clinton and Hazelton 2000; Wynaden et al 2000; Happell 1998; Farrell and Carr 1996).

This concern is by no means exclusive to the mental health field. Recent Australian Government inquiries highlighted the inability of the current three year curriculum to provide adequate course content to introduce students to, and prepare them for practice in, the broad variety of health care settings (Clare et al. 2002; Bennett, 2001).

Far from being considered as just another area of nursing practice disadvantaged by the existing limitations, mental health nursing has specific issues that need to be addressed. There is currently a body of research which suggests that only a small proportion of nursing students plan to pursue a career in the mental health field on entry into the undergraduate nursing program, and that the

impact of nursing education is only minimal in increasing the popularity of this area of practice (Happell 1999; Stevens and Dulhunty 1997).

Clinical experience was identified in the research clearly as the most important determinant in changing students' attitudes about mental health nursing (Happell 2000; Rushworth and Happell 2000; Stevens and Dulhunty 1997; Pye and Whyte 1996). Positive clinical experiences provide the opportunity for undergraduate nursing students to increase their understanding of, and skills in, mental health nursing and the care of people experiencing a mental illness and to gain a more favourable view of this area of practice.

In maximising the potential of clinical experience in producing positive outcomes, preceptorship has been identified as an important strategy (Usher et al 1999; Byrd et al 1997; Coates and Gormley, 1997; Dibert and Goldenberg, 1995). Preceptorship is defined as an educational relationship, usually for a limited and fixed time period, where the preceptor provides support and role modeling to not only enhance the learning experience for the student, but to encourage socialisation into the specific area of nursing practice (Morton-Cooper and Palmer, 2000).

A substantial body of literature exists that supports the many benefits of preceptorship for both registered nurses and nursing students (Myrick and Yonge 2002; Ohrling and Hallberg 2000; Letizia and Jennrich, 1998; Beattie 1998; Byrd et al 1997; Ferguson 1996; Bain 1996) This literature primarily targets generalist settings.

There is considerably less literature relating specifically to the area of mental health. In order that preceptorship is maximised as an effective strategy, consideration must be given to the unique characteristics of mental health nursing. In Australia, undergraduate nursing students generally undertake their mental health placement in the second or third year of their program. By this time they have already undertaken clinical experience within the general hospital environment. This tends to be a more structured and task focused environment where nursing students focus heavily on developing the skills to perform a variety of tasks (Moir and Abraham 1996).

The mental health nursing placement is often perceived by nursing students as a stark contrast to the general nursing settings. There is less reliance of the performance of clearly identifiable tasks, and a greater reliance on the therapeutic use of self (Stuart and Laraia 2001). In addition, nursing students may be disturbed by the actions and behaviours of clients (Suikkala and Leino-Kilpi 2001), and by the nature of the treatment itself. Involuntary detention and forced treatment is frequently a cause of distress for the novice student (Suikkala and Leino-Kilpi 2001).

The following study was conducted in recognition of specific issues present within the mental health setting, as well as the paucity of preceptorship research specifically related to this area.

METHOD

In light of the limited research available on preceptorship in mental health settings, a grounded theory framework was adopted (Strauss and Corbin 1990). Grounded theory facilitated a process of discovery, theory development and verification of the experience being investigated as it occurred for the study participants (Strauss and Corbin 1990).

Setting

The study was conducted in one Area Mental Health Service located in metropolitan Melbourne, Victoria, Australia. The specific site was selected on the basis of its recognition for providing a positive and supportive learning environment for nursing students.

Sample

An invitation was extended to mental health nurses who had been actively engaged in the preceptorship process. Nine mental health nurses consented to participate. The participants were aged between 31 and 43 years of age and presented with a broad range of clinical experiences across a number of settings.

Nursing students were accessed through the university at which they were studying. Students who were undertaking their placement at the specified health service were invited to meet with the researcher to discuss the project. Twenty students consented to participate.

Ethical Considerations

Formal ethics approval was obtained from both the university and the mental health setting. All participants were provided with a copy of a plain language statement and given the opportunity to ask questions or seek clarification about the project. They were all informed that their participation was purely voluntary, and that they were able to withdraw at any time during the conduct of the research.

Establishing Study Rigor

It is essential that all studies adhere to a recognised process for ensuring study rigor. In this study the criteria outlined by Lincoln and Guba (1985) was employed. Key criteria include ensuring credibility, auditability, fittingness and confirmability. In this study interpretation of the data was returned to participants to allow for comments on truthfulness. Participants were asked to review the analysis sections and comment on whether the findings adequately represented their experiences of preceptorship in the mental health setting.

In terms of auditability, fittingness and confirmability the author developed an audit trail throughout the documentation of the study and enhanced this by using diagrams to link and demonstrate relevant concepts.

Current literature was used to confirm this study's emerging themes and confirmability is assured when the first three criteria are said to be met.

Study Limitations

Caution should be used when drawing broad and general conclusions from study findings. As with all research, this study comes with its own limitations. The inclusion of only one metropolitan mental health service as the research site has no doubt reduced the diversity of experiences which could potentially be obtained from other participants if numerous sites had been used. Small participant numbers in this study may also influence the findings in generalisable terms; however it is not expected that the study findings are generalised to other settings, rather that this information provides new insights and explanations inferred from the perspective of this group of participants.

Data Collection

Individual and focus group interviews were selected as the data collection tool. The mental health nurse preceptors were interviewed individually while the students were interviewed in focus groups. The use of focus groups was considered the most appropriate for the student group as this enabled access to a relatively large number of students within a limited timeframe. More importantly, focus groups provided the opportunity for discussion and debate amongst students on this topic (Morgan 1998). The mental health nurses were interviewed individually as it was felt that diversity in seniority and experience may have limited the ability of some participants to provide open and honest responses in the group setting (Happell 1996). The interviews were audio taped and transcribed as close to collection as possible to ensure clarity of the participants voice (Patton 1987).

Data Analysis

Data analysis proceeded in line with grounded theory method. This included the use of open, axial and selective coding as outlined by Strauss and Corbin (1990).

Through the coding process the data is 'unpacked' then re-sorted to identify connections between emerging categories and sub-categories. A core category emerged for each of the participant groups, however through the data analysis a category emerged from both the mental health nurse and nursing student data that related specifically to the unique issues present in the mental health environment. These categories are the primary focus of this paper and are discussed in the findings section.

FINDINGS

Mental health nurse preceptors

The preceptor participants discussed the need to reconcile difference: for the student, their colleagues and themselves, between the different work foci of mental health and generalist settings. The ability to reconcile this difference influences the image that students take from their mental health placements. There is ongoing dialogue around making comparisons between the areas, how there is less task orientated work in mental health and less focus on the person in general settings. The following participant contrasts the differences in experiences:

'I have actually had a preceptor in general medicine, it's much more task-focused … with mental illness it's harder … sometimes mental illness is vague, each person is not the same and that's confusing for the students'.

Stigma about mental illness also plays a role in influencing students' perceptions and degree of interest in this setting and further complicates the preceptor's role in reconciling difference. In this study, student's discussed the different way that stigma is perceived in both settings; especially highlighting that less stigma is attached to those in general settings.

It is important for the preceptor to help the student in reconciling the difference between settings so they feel comfortable working in the mental health environment and are able to learn from their experiences. Preceptors do this by providing support and encouragement, and by assisting the student to identify transferable skills that they can take away with them to whatever clinical setting they choose to work in during their career. Preceptors identify a starting point with students that consider the student's current perceptions of mental health nursing and then foster the connection between skills regardless of setting. Preceptors indicated that this is important so the student departs with a positive image of mental health nursing and the need to care for the 'person' in all settings.

Mental health nurse preceptors attempted to connect existing student knowledge with the realities of working in this setting. Common misperceptions about mental illness were challenged with the aim of reframing and influencing more positive attitudes toward both mental health nursing and mental illness. The focus on reconciling difference was identified along a continuum throughout the placement.

With support and encouragement to actively engage with clients, preceptors discussed the change in student attitudes over time. The students' ability to reconcile difference from the beginning of the placement in comparison to the end was obvious to preceptors. Preceptors highlighted the stark difference between commonly fearful and confused students at the start to more confident and aware students at the end. This was especially highlighted by a greater understanding of mental illness, the setting itself and the mental health nursing profession. Preceptors discussed how students' were able to acknowledge the substantial influence of the media and community perceptions in shaping their attitudes prior to commencing the placement and how the reality of working in the mental health setting had positively changed their views.

Nursing Students

Uncertainty also existed between students' occupational identity as a nurse in generalist acute care settings and that in mental health. In response to the question 'what is your understanding of the role of a mental health nurse?' the following comments were noted:

They look after loonies … hand out medication … give needles … manage aggression and put them (patients) to sleep.

Although these perceptions existed about the mental health nurse role, students still attempted to manage their environment like a general practicum. This was something more familiar as a construct they were comfortable with. For example, on day one, students automatically went to make beds; this was a task that was both familiar and safe to them. Conversely, in mental health this was actively discouraged as client independence is a primary goal of care.

Over time students' indicated a substantial shift in their understanding of the mental health nurses role by observing their preceptor and others around them. They also acknowledged the important skills and knowledge they had gained for practice in any setting. For example:

Spending time to actually communicate with somebody and understand why that person is saying, doing or acting the way they are … it's just appreciating that … I think you learn that (in mental health) it's a good thing to take into other areas of nursing.

The ability to reconcile difference and manage their fear of the unknown was directly linked by students to the actions or inactions of preceptors. Attitudes and behaviors heavily influenced the degree of change in student anxiety and confidence levels. Students described how positive interventions and learning strategies substantially improved the quality of their practicum in mental health. Not only did they feel more comfortable with clients, they also described a more positive attitude toward caring for those with a mental illness.

Students commented on preceptors' ability to create a relaxed environment which was more conducive to their learning and comfort levels. Preceptors checked in with students regularly and encouraged graded exposure to learning experiences that helped decrease their anxiety levels.

In addition to creating a relaxed environment, the unit culture and philosophy regarding teaching and nurturing of students was also crucial in securing a positive experience for students. Students gained greater support and satisfaction with the placement when teams communicated effectively, provided consistent and regular feedback and were inclusive of students in team work more broadly.

Following this preceptorship experience in mental health, students also indicated a more positive attitude toward mental health nursing as a career option:

Before I can honestly say for myself I didn't think psych nursing was anything that I wanted to touch or go into, but their (preceptors) passion for the job and what they do has influenced a different perspective … I would actually consider it now, whereas before I wouldn't even go near it …

Although the experiences of preceptorship for students were overwhelmingly positive in this study as demonstrated by the previous comments, there were a number of less than desirable experiences. Students described how inaction or negative attitudes of preceptors inhibited their learning and could make them feel isolated, despondent and devalued. In stark contrast to positive experiences, students were very clear that negative experiences significantly influenced their opinions of this setting. It is important for any health service to identify where students encounter negative experiences and address these in a fair and rigorous manner. In mental health nursing the aim must be to provide positive, learning placements for students, especially in light of the outcomes of this study.

DISCUSSION

The findings of this study support recent Australian literature by highlighting how important a high quality, supportive clinical experience can be in promoting a more positive view of mental health nursing (Fisher 2002; Happell and Rushworth 2000; Stevens and Dulhunty 1997). In particular these findings emphasise the important role of the preceptor in determining the quality of the clinical placement and its subsequent impact on nursing students.

The student participants expressed being more relaxed and able to learn when the attitudes, behaviour and support of the preceptor were welcoming, nurturing and inclusive of the student. Alternatively, when students were not provided with support or direction they felt distressed and overwhelmed. This scenario has particular implications for the image of mental health nursing and the development of subsequent attitudes that students may take from the practicum. With the current emphasis on recruitment it is imperative that student nurses are well supported and encouraged to view mental health nursing as a viable career option.

With regard to the study findings, reconciling the difference between mental health and general health settings was identified as a major category for both mental health nurses and nursing students. Within the relationship there was interplay between students struggling to cope with a new environment perceived to be substantially different to that of general acute care nursing, and mental health nurses attempts to rectify this. This was addressed by linking knowledge gained on this practicum to essential and transferable skills for any clinical setting. Importantly, the quality of preceptorship had a significant impact on whether the student developed a greater sense of comfort with the setting and a subsequent ability to relax and learn. For students with

role confusion, feeling less confident in mental health was heightened due to the contrast between this setting and the more familiar, highly structured nature of general acute care settings.

This supports the findings of Moir and Abraham (1996) in which undergraduate nursing students described acute care settings as technically orientated and more concerned with scheduled tasks, something quite different to the less structured environment in mental health. The way in which student nurses perceive mental health nursing, coupled with the expressed need for more structure to help reduce anxiety, is vital information for preceptors.

In terms of future planning, mental health nurse preceptors need to understand what the experience is like for the students. It is imperative that preceptors appreciate how uncertainty can interfere with the students' ability to perform and achieve quality results in this practicum, and how the students need to seek structure because it fits with their established perception of a nursing identity to date. Where armed with this knowledge, preceptors have a greater capacity to pre-plan practicum experiences, especially for the initial orientation period.

Organisations need policies and procedures to guide preceptorship; this may also be useful in promoting a culture of service for students and facilitating positive change where negative influences exist. Formalised processes need to be established in policy so that greater consistency exists in programs (O'Malley et al 2000). There will no doubt be implications, if and when mental health services choose to implement formal preceptorship programs both in terms of financial and human resources. However, existing literature indicates benefits where formal programs are in place (Trevitt et al 2001; O'Malley et al 2000; Dusmohamed and Guscott 1998; Smith 1997).

The fact that both the mental health nurse preceptors and the nursing students identified the difference between mental health settings and other areas of clinical practice is a significant finding of this study. Anecdotal evidence suggests that preceptorship is frequently viewed as a generic skill that can be learned by experienced nurses and readily adapted to a variety of practice settings. The authors do not dispute the validity of such a view, however, it is important to acknowledge that mental health practice presents its own issues and challenges not only for nursing students, but also for the preceptors themselves. This important finding is worthy of further exploration and should be borne in mind by mental health services.

CONCLUSION

This study has examined the preceptorship relationship from both nursing students and mental health nurses perspectives. A major category to emerge as a concern for both groups was the concept of 'reconciling difference' between general acute and mental health settings. Although preceptorship may be viewed by some as a generic role easily adapted across clinical settings, it is vitally important to acknowledge and learn more about inherent differences in mental health.

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UTILIZATION OF KING'S INTERACTING SYSTEMS FRAMEWORK AND THEORY OF GOAL ATTAINMENT WITH NEW MULTIDISCIPLINARY MODEL: CLINICAL PATHWAY

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ABSTRACT

Background:

The critical role of research in nursing practice is the application of nursing theories to discover new knowledge. This study uses King's interacting systems framework and theory of goal attainment to investigate the effectiveness of implementing clinical pathways for patients undergoing transurethral resection of prostate (TURP) at Aga Khan University Hospital (AKUH), Pakistan.

Objective:

To assess the impact of the implementation of a clinical pathway for the surgical procedure of TURP on clinical quality, cost, and patient and staff satisfaction.

Study Design:

Quasi-experimental, non-equivalent control group study design using clinical pathway intervention.

Setting:

Aga Khan University Hospital (AKUH).

Subjects:

The study population consisted of a convenience sample of patients undergoing surgery for TURP (control and experimental) and health team members (nurses, physicians and others).

Study Findings:

Findings showed a significant difference in variances and outcomes as a result of TURP clinical pathway intervention. The clinical pathway significantly improved all twelve nursing and physician related variances and outcomes, such as: complete documentation; delayed consultation; delayed education; and other variances. Clinical pathway intervention also significantly reduced hospital related variances, and post-operative problems such as electrolyte imbalance, phlebitis, constipation, and urinary tract infection (UTI). The findings also showed significant improvement in patient and staff satisfaction, however no significant difference was observed in patient, hospital and financial related variances.

The current investigation identified that successful implementation of integrated clinical pathways can help health professionals, managers and administrators to meet one of their biggest challenges in making optimal use of limited resources while delivering high quality and timely care.

INTRODUCTION TO KING'S THEORETICAL SYSTEMS

King first published her conceptual framework in 1971 and further developed it into the theory of goal attainment in 1981 (Johson and Webber 2001). King's systems framework is based on the assumption that human beings are the focus of nursing. The goal of nursing is health: its promotion, maintenance, and/or restoration; the care of the sick or injured; and the care of the dying (King 1992). Husting (1997) stated: 'King's theory evolved from the General Systems Theory of Von Bertalanffly. The components of a system theory are: (a) goal; (b) structure; (c) functions; (d) resources; and (e) decision making' (p.15). King (1996) further stated that the 'nursing domain involves human beings, families, and communities as a framework within which nurses make transactions in multiple environments with health as a goal' (Norris and Frey 2001).

HISTORICAL DEVELOPMENT OF KING'S THEORETICAL SYSTEMS

King (1964) spoke of the need to focus on and organise existing knowledge in nursing, as well as expand the knowledge base for nursing practice. She identified concepts of social systems, health, interpersonal

relationships and perceptions as universal to the discipline of nursing (King 1995; 1968).

In 1971, King published a conceptual framework for nursing organised around personal, interpersonal and social systems. The concepts were expanded to include communication, interpersonal relationships, information, energy, social organisations, role and status. A more formalised framework by King was published in 1981.

In 1978, King stated that nursing needed to be promoted as a science, and that the relationship between nursing and research should be seen as a way to build scientific knowledge.

King (1981) introduced a theory of goal attainment, a middle-range theory derived from the conceptual system. Central concepts in the theory of goal attainment are perception, communication, interaction, transaction, self, role, growth and development, stressors/stress, time and space. The concepts of interaction, transaction, and perception form the core of a transactions process model. Transactions are critical antecedents to goal attainment. King is one of the few theorists to generate both a conceptual system and a middle-range theory for nursing.

Although there have been few changes to the conceptual system or theory of goal attainment since 1981, King and others have provided ongoing discussion and clarification of these theoretical and philosophical positions through debates in nursing journals and presentations (King 1988, 1989, 1990, 1991, 1992, 1995, 1997, 1999, 2000; Norris and Frey 2001). Changes to the conceptual system include: the addition of the concept of the personal system; spirituality as a basic aspect of human beings; and the request to use the term conceptual system rather than conceptual framework or paradigm (King 1997). Recently, King further discussed her perspective of the philosophy of human beings and the theory of goal attainment (King 1997).

RATIONALE OF THE STUDY

The primary focus of this investigation was to assess the impact of clinical pathways on clinical quality, cost, and patient and staff satisfaction. Clinical pathways use a multidisciplinary approach to the delivery of patient care; therefore the researcher saw the value of testing this concept of patient care in her work setting and, in the event of supportive findings, changing the model of nursing practice at Aga Khan University Hospital (AKUH) from the traditional to the multidisciplinary approach.

The most significant gap in the literature was the absence of any Asia-specific research studies conducted by clinical nurses and exploring the role of clinical pathways in improving clinical quality, patient and staff satisfaction. An obvious omission in the literature was any testing of these concepts in other Asian hospitals, or any application of nursing theories as a conceptual framework to test this concept. This study applied and tested King's theory of goal attainment to assess the benefits of TURP clinical pathways.

LITERATURE REVIEW

The literature outlines several benefits of clinical pathways. Chang Gung Memorial Hospital used 18 clinical pathways for urological procedures on 1,784 patients. The length of stay (LOS) reduced significantly by 11% (from 5.5 to 4.9 days); admission charges by 12.9%; and average hospital charges decreased significantly by 12.9% (Chang et al 1999).

John (2003) stated that clinical pathway implementation saved US$5.2 million in costs from medical operations over six years in the Children's Hospital, San Diego, United States of America. Healy (2002) reported that clinical pathway implementation for knee implant standardisation reduced LOS from 6.8 days to 4.2 days and hospital costs by 19%. Calhoun (2000) in her cohort study found a statistically significant difference in LOS with the use of clinical pathways for women having a vaginal delivery, resulting in cost reductions from US$3.2 million to $2.4 million. Healy (2002) found that a clinical pathway and knee standardisation program in reduced average LOS from 6.79 days in 1992 to 4.16 days in 1995.

Balesky and Provenzano (1995) found that implementation of a clinical pathway reduced average LOS for patients from 6.5 to 5.7 days and achieved per patient cost savings of US$3,100. Kevin et al (2000) reported that using clinical pathways for asthma management decreased the beta-agonist medication use for inpatients with asthma.

METHODOLOGY

A quasi-experimental design with non-equivalent groups was used to answer the research questions, objectives and hypotheses. The target population was all patients requiring TURP in Pakistan. The accessible population was those patients admitted to AKUH for TURP, resulting in a convenience sample.

The inclusion criteria were: patients who were considered by the urology surgeon and anaesthetist to be fit for TURP. The exclusion criteria were patients who had undergone emergency TURP and patients having multiple surgical procedures with several co-morbidities.

The current investigation also collected data from 1 August 2000 to 31 December 2002 from the health care team members who were involved in the direct care of patients with TURP. They included nurses, physicians, dietitians, pharmacists, and physiotherapists.

The researcher used a power analysis procedure to estimate a sample size of 200 patients to achieve the research objectives. Statistical power was determined by three factors - (a) alpha: the criterion for significance was

set at 0.05; (b) effect size: the estimate of the mean difference between the populations was set at a 95% confidence level to account for sampling error at 0.05 on a –2 to +2 scale; and (c) sample size: calculated as 100 for each of two groups to give a statistical power of 88% to yield a statistically significant result, which is acceptable to most authorities (Heiman, 1992).

Written approval to conduct study was obtained from the Human Ethics and Research Committee of the University of Ballarat in Australia. In addition approval was also obtained from the Ethical Review Committee of AKUH.

Measuring validity and reliability of outcome related instruments

Construct validity was used for instruments of process and outcome measurement, which were variance-tracking instruments and the clinical pathway. For variance tracking instruments, content validity was also used as it contained all the important aspects of patient care. This instrument consisted of 57 items out of which 35 items were related to variances in patient care, 11 items related to monitoring clinical indicators, and 11 items related to monitoring financial variances.

Face and content validity was used for satisfaction surveys as formal validation of measuring instruments. Both survey questionnaires had content validity as they contained all-important components of patient and staff satisfaction such as: medical care, information and caring, promptness of service, courtesy of service providers, and comfort amenities provided.

Reliability of research instruments was achieved through modification of instruments on several occasions to make them more understandable, and the pilot phase of the study dealt adequately with the ambiguities in the variance monitoring instruments. Instruments were considered reliable as they showed stability by producing the same results with repeated testing and homogeneous as they measured the same concepts and characteristics.

Statistical analysis

Statistical Package of Social Sciences (SPSS) Version 10.0 was used to assist statistical analysis with an Alpha of 0.05 considered statistically significant. Various statistical tests such as: descriptive analysis for age and demographic data, inferential analysis, chi-square, t test and multivariate analysis were used to formulate conclusions. Standard deviation was used for age, measurement of waiting time, and length of stay. 'P'-values were calculated to determine the statistical significance of observed differences in variances and outcomes, such as: clinical indicators, cost of the treatment, patient satisfaction, and staff satisfaction. Chi-square test was used for categorical variables such as pre-admission, patient, nursing, physician, hospital, and discharge related variances, post-operative problems, and post-operative complications.

An independent t test was used for continuous variables. Multivariate statistical analysis was used for the analysis of financial variances. Finally, a detailed analysis was conducted on the comments and suggestions outlined by the study subjects in the patient and staff satisfaction surveys.

Data Collection

Considering the size of the project and the number of variables required to be measured, the data collection plan was thoroughly outlined, and all suggestions outlined during pilot phase of study were rigorously followed to ensure proper collection, recording and storing of data. The researcher also had ongoing dialogue with AKUH unit staff to explore any ambiguities in design and content of the clinical pathway and to ensure the successful implementation of the pathway.

RESULTS

There was no statistically significant difference found between the mean ages of the two groups. The age of subjects in the control group ranged from the lowest at 50 years to the highest at 95 years, with a mean age of 67.15 years, SD 8.85. The age of subjects in the experimental group ranged from the lowest at 50 years to the highest at 80 years, with a mean age of 65.78 years, SD 6.88.

Physician related variances such as: delayed consultation by physician; delayed evaluation; appropriate and complete written physician order; discussion of plan of care to the patients by physicians; delayed investigation orders written by physicians; delayed follow-up and delayed education by physicians to the patients; showed significant difference between both groups.

Nursing related variances such as: complete documentation by nurses in every aspect of patient care; discussion of plan of care with patients and families; appropriate assessment of patient; notification to physician by nurses about patient's condition when required; carrying out physician orders; and delayed patient education by nurses; indicated significant difference between both groups. For example, chi-square results of complete documentation X^2 (2, N=200) = 105.344, p=0.001; discussion of plan of care X^2 (2, N=200) = 76.133, p=0.001; and appropriate assessment X^2 (2, N=200) = 119.548, p=0.001. The pathway interventions introduced in the experimental group significantly enhanced the quality of care delivered by nurses.

Discharge related variances such as: discharge delay due to delivery of medications; timely documentation of discharge notes by nurses; time of discharge orders written by physicians; time of discharge procedure; time patient left hospital; and discharge delays due to family reasons after completion of discharge procedure. There was no significant difference between both groups in discharge delays due to non-availability of discharge medication X^2 (2, N=200) = 1.005, p=0.317. However there was a significant difference found in discharge notes written by

nurses X^2 (2, N=200) = 60.126, p=0.001. The experimental group showed comprehensive writing of discharge notes by nurses as a result of pathway intervention.

Post-operative problems indicated significant difference in electrolyte imbalance; constipation; and phlebitis between the groups. Post-operative problems were reduced in the experimental group compared to the control group as a result of clinical pathway intervention.

The incidence of post-operative complication of UTI was less in the experimental group X^2 (2, N=200) = 5.944, p=0.015, indicating significant difference due to clinical pathway intervention; whereas no statistically significant difference was found in the occurrence of haematuria X^2 (2, N=200) = 1.087, p=0.298.

Financial variances such as: bed charges; attendant fee; surgical fees; anaesthesia charges; pharmacy charges; and medical/surgical supplies charges; were the same in both study groups and there was only a difference of PKR 800 (AUD$20) in the average of total charges for both groups.

Patient satisfaction: t-test results showed significant difference between the patient satisfaction results of both groups t (200) = -5.695, p=0.001 (two-tailed). Subjects of the experimental group were more satisfied compared to the control group as a result of clinical pathway intervention.

Staff satisfaction was significantly different in the two groups, t (200) = -2.830, p=0.006 (two-tailed), indicating that clinical pathway intervention significantly improved staff satisfaction.

APPLICATION OF KING'S CONCEPTUAL FRAME WORK TO CURRENT STUDY

In the current study King's conceptual frame work and theory of goal attainment was applied to investigate the phenomena of interest. Communication is the main key for facilitating mutability and trust between patient and health care team. King (1997) stated that communication is the interchange of thoughts and opinions among individuals. Clinical pathways serve that purpose, where members of health care team communicate patient care goals with each other.

APPLICATION OF THEORY OF GOAL ATTAINMENT TO CURRENT STUDY

King's theory of goal attainment is based on her philosophy of human beings interacting with their environment. King has demonstrated linkages between her theory of goal attainment and the traditional nursing process. King (1993) views the traditional nursing process as a system of interrelated actions, the method by which nursing is practiced. In traditional practice utilisation of the nursing process enables nurse to conduct comprehensive assessments on patients, make diagnoses, set realistic goals, and evaluate outcomes. The nursing process in clinical practice creates a distance between nursing practice and the practice of other health professionals because physicians, physiotherapists, dietitians, social workers and occupational therapists do not review nursing records and remain ignorant of nursing actions and interventions.

This raises many questions for nurses such as: Who reads the care plans? Who benefits from them? And what if such plans are not made? In spite of such questions, nursing practice in Pakistan continues to use the same traditional ways of delivering and documenting patient care and experiences the breakdown of communications, interactions and transactions within the existing frameworks. Recently, clinical pathways have provided opportunities of interaction and transaction among the health team. Herring (1999) stated that clinical pathways provide a change in the traditional approach to nursing care, and are viewed as a new approach for planning, implementing and documenting nursing care.

King (1996) put particular emphasis on the nurse's ability for critical thinking, observation of behavior, and the collection of specific information essential for decision-making based to meet the needs of individuals at a particular point in time (Norris and Frey 2001). Clinical pathways serve this purpose. The delivery of nursing care to patients therefore becomes a process of thinking as well as doing, as nurses continuously monitor variances in the use of clinical pathways and work to prevent such variances recurring by monitoring patient outcomes. In contrast to the traditional approach to the nursing process as a system of interrelated actions, King's (1996) perspective of the process of nursing reflects the science of nursing, which enables critical thinking to discover the rationale for actions taken. Clinical pathways provide such qualities.

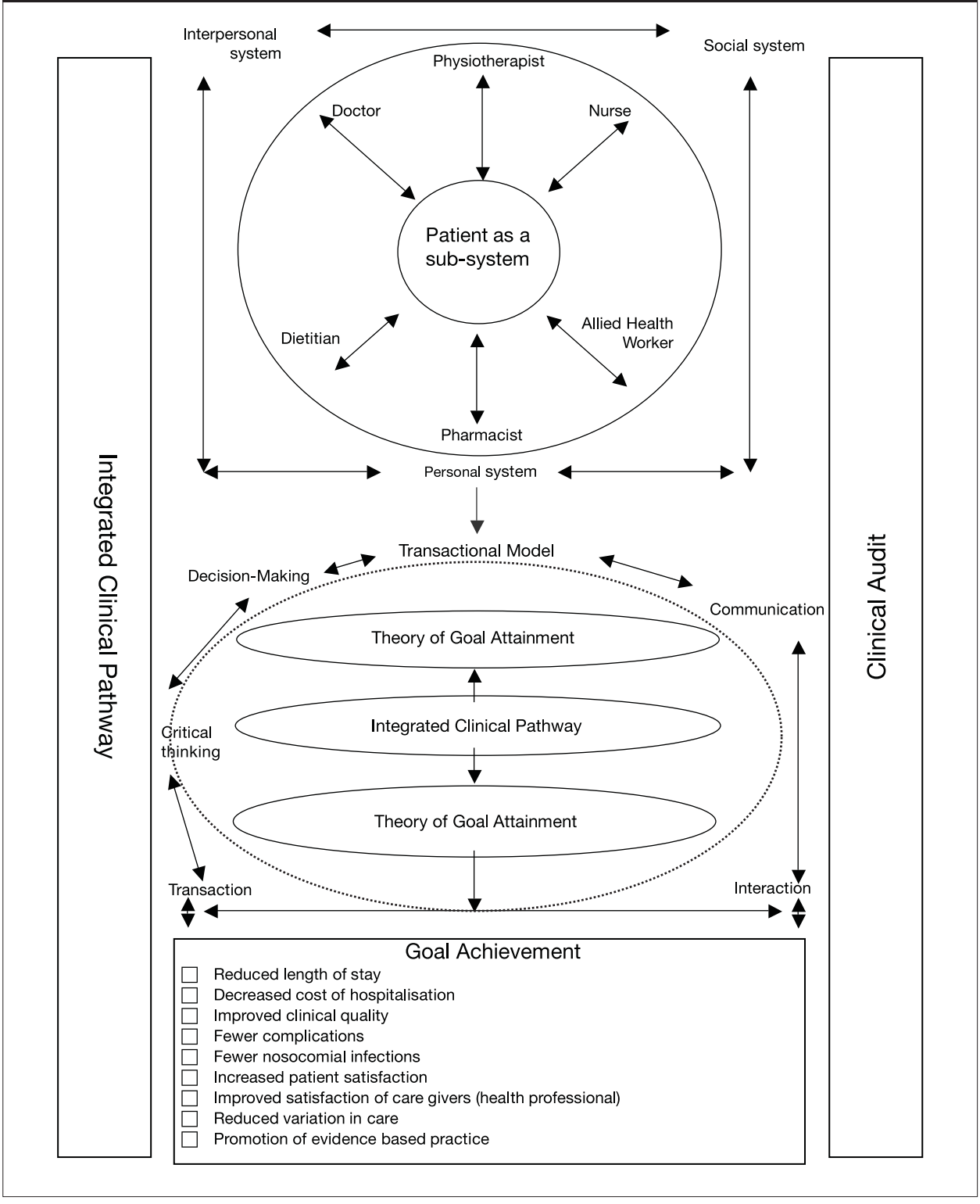
Goal attainment needs ongoing evaluation. According to King (1996), goal attainment can improve or maintain health, control illness, or lead to a peaceful death. If goals are not attained, the nurse needs to re-examine the process of nursing, critical thinking and transaction (Alligood and Tomey 2002). Similarly, the variance analysis process in clinical pathways is a goal evaluation tool. Cheah (2000) stated that analysis of variance is a powerful audit tool because all aspects of patient care are continuously reviewed and revised. Improvements in the quality of care are achieved through continuously redefining the pathways to reflect current best practices.

APPLICATION OF THE TRANSACTION PROCESS MODEL TO THE CURRENT STUDY

The final step in King's interaction process is transaction, which involves bargaining, negotiating, and social exchange. Goal attainment is the salient factor of King's theory, and it is only through nurse-patient interaction and transaction that mutual goals can be set. Once the goals are set, the nurse and patient collaborate to formulate the means by which the goals can be attained. Similarly, with clinical pathways the emphasis is on achievement of personal,

interpersonal, and social goals, which are based on the best evidence from the literature and are agreed on by all who are part of the conceptual system. Such a goal in TURP clinical pathway includes enhancing quality by reducing occurrence of complications, reducing length of stay, improving co-ordination among health care providers, reducing costs, and improving patient and staff satisfaction.

Figure 1: Conceptual framework



Adapted from King's conceptual framework and theory of goal attainment (Husting 1997, p.16-17).

DISCUSSION OF CONCEPTUAL FRAMEWORK

The conceptual framework for the current investigation, as illustrated in figure 1, was derived from the concepts underpinning King' conceptual framework and theory of goal attainment. The first part of the model shows that in the current investigation, the patient is the central focus of the system. Therefore the personal, interpersonal, and social systems should operate as a whole to achieve maximum benefit for the patient. When all members of the conceptual system communicate, interact, transact, and use critical thinking for decision-making, they design an integrated clinical pathway.

The researcher perceived that if the integrated clinical pathways are developed as suggested by the literature where all multidisciplinary team members play an active role in designing, implementing and evaluating the clinical pathway, and furthermore, the focus of the clinical pathway is on improvement of clinical quality, then the perceived benefits outlined in the last part of the model will be the outcome.

Nish (2000) stated that the benefits achieved from the use of clinical pathways include: enhanced multidisciplinary collaboration; increased consistency in practice; increased coordination in care activities; cost reductions; efficient and effective resource use; effective patient education and management of patient's expectations; continuous quality improvement; and ongoing review of practice and outcomes through variance tracking and variance analysis.

LIMITATIONS

Scope of study: The first and most obvious limitation of the study was its restricted scope. Clinical pathways can be applied to all specialty areas however constraints such as time, budget, and the size of the project, as well as the researcher's involvement, led the researcher to narrow the scope of the study to one disease and one discipline.

Research related literature: The literature review showed more emphasis on reduction in length of stay and cost of hospitalisation (Bankhead 1996; Browne et. al 2001; Calhoun 2000; Chang et. al 1999; Healy 2002; and John 2003), and the research could have included these other benefits of clinical pathways. It was also demonstrated in the literature that clinical pathways have been developed for surgical procedures, and in areas where length of stay can be predicted easily so as to evaluate outcomes faster, and included the clinical disciplines of medicine, psychiatry, and pediatrics.

Survey Sample: There is some doubt that the limitation in obtaining a convenience sample according to the selection criteria would have the potential to threaten the internal and external validity of the investigation.

Formulating actions for identified variances: The final limitation of the study was its inability to communicate the analysis of variances and feedback to the multidisciplinary team, which is a vital component of the entire clinical pathway program. The study did not include this component in the design where the results of variances could be shared with all stakeholders, particularly physicians and nurses, and practices modified to further improve them. This approach was omitted to prevent the occurrences of biases by the researcher.

CONCLUSION

King's conceptual framework and theory of goal attainment provides a useful structure for the current investigation by using a clinical pathway for the care of patients undergoing TURP. Study findings are supportive that clinical pathways would be an effective replacement for traditional nursing practice at AKUH, Karachi. King's theory provides direction for nursing practice by emphasising the processes of multidisciplinary collaboration, communication, interaction, transaction and use of critical thinking. Nurses who interact with other systems will influence the health outcomes of the patients/families during their hospital stay and beyond discharge, with the result that the patient becomes their own health manager.

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EFFECT OF LOCAL REFRIGERATION PRIOR TO VENIPUNCTURE ON PAIN RELATED RESPONSES IN SCHOOL AGE CHILDREN

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Key words: Local refrigeration, venipuncture, physiologic pain responses, behavioural pain responses, subjective pain responses, school-age children

ABSTRACT

Introduction:

Painful medical procedures are the major sources of distress among children; and for those with chronic diseases, the procedure-related pain can be worse than that of the illness itself.

Objective:

The purpose of the study was to determine the effect of local refrigeration prior to venipuncture on pain-related responses in school-age children.

Design:

Quasi-experimental study.

Setting:

This study was undertaken in a paediatric emergency ward of a paediatric centre.

Subjects:

The subjects were 80 children 6 to 12 years of age selected by purposive sampling after being referred to the paediatric emergency ward.

Interventions:

Two groups were chosen for the study: the test and control groups, in order to test the effect of local coldness in reducing the pain of venipuncture. In the test group, the injection site was refrigerated for three minutes using an ice bag. In the control group, the procedure was performed according to usual routine. Physiological responses (ie. blood pressure, pulse, and respiration), behavioural responses (using the Children's Hospital of Eastern Ontario Pain Scale: CHEOPS), and subjective responses (or intensity of pain using the Oucher scale) were measured in the two groups.

A non-invasive (electronic) sphygmomanometer was used before and 5 minutes after the procedure to measure the physiological responses. The measurement of behavioral responses by CHEOPS was done at two time points (during the procedure and 5 minutes after the procedure), measuring six areas of behavior: cry, facial expressions, child verbal, torso, touch and leg movement in reaction to painful stimulation. Finally, the subjective responses were measured at 5 minutes after the procedure.

Main outcome measures:

In this study the main outcome measures were: range of physiologic responses, and scores of behavioral and subjective responses. The study hypothesised there would be a lower score in the test group than the control group in behavioural and subjective responses and a lower range in physiologic responses.

Results:

Results showed no significant difference between the two groups for physiological responses (before and after procedure). However behavioural responses during and after the procedure (p=0.0011), and subjective responses after the procedure (p=0.0097) were significantly lower (ie. the test group had lower scores in behavioural and subjective responses compared to the control group.

Conclusion:

The results of this study suggest that the use of local refrigeration prior to venipuncture can be considered an easy and effective intervention of reducing venipuncture-related pain.

INTRODUCTION

Illness and hospitalisation expose children to unfamiliar and unpleasant feelings. Since children have little experience with and comprehension of the pain and disease process, such negative feelings cause intimidation and anxiety for them (Baucher et al 1994). Although the degree of pain during common medical procedures is less than during severe illnesses and injuries, millions of children experience these procedures which cause considerable distress. Children requiring needle sticks (injections, intravenous catheters, blood sampling) view this procedure as frightening and a significant source of pain (Kharasch 2003).The results of one study conducted on children who were inpatients in a tertiary care hospital (excluding neonatal ICU and psychiatry patients) and one parent per child, indicated that 49% of the 200 subjects (102 parent interviews for children less than 5 years of age and 98 child interviews for children 5 years of age and older) reported clinically significant levels of severe pain. Approximately 21% of these subjects had clinically significant levels of usual pain during the past 24 hours; the causes of pain were variable from such sources as disease, surgery, and intravenous (IV) lines (Cummings et al 1996).

Intrusive procedures such as venipuncture are well understood as stressful events for children (Caty et al 1997). Venipuncture in the paediatric population can be one of the most distressing events associated with medical encounters (Rogers and Lynne 2004). For example, in one study data were obtained by means of a projective technique and guided interview format using a set of black and white line drawings that depicted the three phases of venipuncture. These researchers found two thirds of the children (66.6% of 45 children) considered the anticipatory phase of venipuncture as a threat. Slightly more than half the children also appraised the impact phase as a threat (Caty et al 1997).

In another study when subjects were asked how the child in the picture (ie. an illustration of a gender-neutral, school-aged child standing in the doorway of a blood-collection room and poised to enter a room which was similar to that of the clinic used for the study) might perceive the impending blood collection, 82.1% of subjects expressed negative emotions such as nervous, scared, terrible, not good, angry and sad (Hodgins and Lander 1997). Furthermore, in a sample of 150 hospitalised children between the ages of 3 and 18 years, the three most commonly reported painful procedures were needle procedures, intravenous insertion, venipuncture and injections (Lewkowski et al 2003).

The role and responsibility of health care workers, particularly nurses, includes helping children through such procedures. The nurse caring for a child during a procedure is presented with a double challenge: helping the child and parents through the procedure effectively, and ensuring that the procedure is done as efficiently as possible (Breman 1994). Total pain relief during procedures should be the goal of methods to reduce the pain accompanying invasive procedures such as venipuncture, to help improve patient care and increase patient satisfaction.

Non-pharmacological techniques to reduce venipuncture related pain and avoid potential drug side effects are generally less costly and can be performed independently by nurses (Jacobson 1999). A number of non-pharmacological techniques, such as distraction, relaxation, guided imagery, and cutaneous stimulation provide coping strategies that may help reduce pain perception, make pain more tolerable, decrease anxiety and enhance the effectiveness of analgesics (Wong and Hockenberry 2003). Among these measures, the proper use of cutaneous stimulation can reduce pain perception (Crisp and Taylor 2005). Cutaneous stimulation is performed by several methods such as simple rhythmic rubbing, use of pressure or electric vibrators, massage with hand and application of heat or cold at the site before injection, which has been significantly valued in various studies (Wong and Hockenberry 2003).

Cold and heat application relieve pain and promote healing (Crisp and Taylor 2005). An application of cold is considered to slow the ability of pain fibres to transmit pain impulses (Ball and Bindler 2003). Although there is not any agreement on the pain transmission theory, Gate Control Theory is widely supported by researchers. According to Gate Control Theory, researchers have viewed pain as a multidimensional construct leading to improvements and advancement of many interventions (Abott and Fawler 1995). The results of one study indicated the reduction of pain at the injection area after applying skin refrigerant/anesthetic (Maikler 1991), whilst according to another study, refrigerant local anesthetic spray reduced injection pain during routine diphtheria, pertussis, and tetanus (DPT) immunisation (Abott and Fawler 1995).

Considering the anxiety due to painful procedures such as venipuncture, as well as the unpleasant feelings parents and children get, it was hypothesised that application of local refrigeration to the skin would decrease the pain-related responses associated with venipuncture.

METHOD

Study design

This research was a quasi-experimental study. Its purpose was to determine the effect of local refrigeration applied to skin prior to venipuncture on pain-related responses in school-age children.

Setting and sample

The study was conducted with 80 children aged 6 to 12 years that accessed the emergency ward in the paediatrics center in Ahwaz Jondishapour University of Medical Sciences, Ahwaz, Iran.

In this study, subjects were selected by purposive sampling and were divided into two equal groups: test and control.

The effect on the magnitude of pain severity reduction considered from a behavioural response was measured using a 13 point scale (CHEOPS) with a minimum of 4 points (meaning no pain). The subjective response was measured based on a 100 point scale (Oucher scale) with a minimum of 0 points (meaning no pain), with a significance level of 0.05 and test power of 0.8. A pilot study determined a standard deviation of 1.5 related to behavioral response in the test and control groups, and approximately 30 for the subjective response. The magnitude of pain reduction was at least 1 point and 20 points based on behavioural and subjective responses respectively.

Data collection

To facilitate a multidimensional approach, physiological, behavioural and subjective responses were collected from each child. Physiological responses consisted of pulse, respiration and blood pressure. Measurements were made manually for the respiratory rate and the non-invasive electronic sphygmomanometer was used for pulse and blood pressure by attaching it to the child's arm. The physiological responses were recorded just before the procedure and 5 minutes after procedure.

The Children's Hospital of Eastern Ontario Pain Scale (CHEOPS) was used to collect behavioural responses in children (Wong and Hockenberry 2003). The data was recorded during the procedure and 5 minutes after the procedure. The CHEOPS is one of the few behavioural tools developed to measure pain-related behavior in infants and children. It is based on pain behaviours observed most frequently in children in the first post-operative hours and measures six areas of behavior and each behavior value: cry (1-3); facial (0-2); child verbal (0-2); torso (1-2); touch (1-2); and legs (1-2). For example, the behaviour choices for the cry are: no crying (score 1); moaning (score 2); crying (score 2); and screaming (score 3) (Carter 1994). The possible global score range is 4 to 13.

Research results of one study have indicated an inter-rater reliability of 80% or higher (Van-Cleve et al 1996), while the inter-rater reliability for our study was 93%. Although CHEOPS is used frequently for children during the post-operative phase, some researchers studied 171 children and adolescents aged 3 to 17 years requiring venipuncture and concluded that CHEOPS is valid for use when there is short, sharp pain such as with drawing blood (Van-Cleve et al 1996).

The Oucher is a self-reporting instrument that measures pain intensity by verbal reporting in children aged 3 to 12 years. It has a vertical numerical scale (0 to 100) on one side and six photographs of a young child's face on the other side, arranged to convey increasing discomfort. The assumption is that children, who can count to 100, can use the numerical symbol scale and those who cannot, compare the intensity of their pain to the photographs (Beyer and Wells 1989; Wong and Hockenberry 2003). In this study for the collection of subjective responses, researchers ask the child about his/her intensity of pain after the procedure. The child then specified on the 0-100 Oucher scale (for children who can count to 100 or using pictures for those who cannot) his/her intensity of pain when venipuncture is carried out.

The Oucher has been tested for validity and reliability and is widely used for clinical and research purposes. The correlation between Oucher and the Visual Analog Scale for pain has been reported to be 0.89 ($p<0.01$) (Kleiber 2002).

Procedure

In this study, 80 subjects were selected from presenting 6 to 12 year olds and were divided into two equal groups: test and control. In the test group, physiological responses were measured prior to venipuncture at two time points. Then the skin on the area of intravenous insertion (antecubital fossa) was refrigerated by an ice bag for 3 minutes and the procedure was performed immediately after. The behavioral responses were also measured (CHEOPS 1) during the procedure. Five minutes after the procedure, the physiological responses, behavioural responses (CHEOPS 2) and subjective (self-reported) responses were measured. In this study CHEOPS and Oucher scales convert behavioural and subjective responses to numeric form. Finally after data collection, the t-test was statistically used to compare the means of the two groups using the SPSS program version 10.

Ethical considerations

According to the recommendation of the nursing department's ethical committee, the researcher fully explained the study and method of skin refrigeration to parents and their child, and assured the right of refusing to participate in study.

RESULTS

In terms of the physiological responses before and after the procedure in the test and control group, there was no significant difference ($p=0.07$) between the two groups (table 1, 2).

Table 1: Comparison of mean value of the physiological responses prior to venipuncture in the test and control groups.

Physiologic Responses	Control Group		Test Group		P-value
	Mean	Standard Deviation	Mean	Standard Deviation	
Systolic Pressure	108.700	15.252	106.225	14.795	0.07
Diastolic Pressure	74.525	13.247	70.450	11.710	
Pulse Rate	92.850	17.520	92.250	23.019	
Respiratory Rate	20.675	4.002	19.950	3.973	

Table 2: Comparison of mean value of the physiological responses after venipuncture in the test and control groups.

Physiologic Responses	Control Group		Test Group		P-value
	Mean	Standard Deviation	Mean	Standard Deviation	
Systolic Pressure	101.875	12.214	102.025	9.667	0.07
Diastolic Pressure	69.775	11.369	67.450	10.404	
Pulse Rate	89.725	20.278	92.675	18.115	
Respiratory Rate	21.150	4.953	20.100	4.244	

However there was a significant difference (p=0.0011) between the test and control groups (table 3) with regard to the behavioural responses (CHEOPS 1 and CHEOPS 2) to the painful procedure.

Table 3: Comparison of mean value of the behavioral responses during (CHEOPS 1) and after (CHEOPS 2) the venipuncture in the test and control groups.

Behavioral Responses	Control Group		Test Group		P-value
	Mean	Standard Deviation	Mean	Standard Deviation	
CHEOPS 1	9.950	1.796	8.475	1.501	0.0011
CHEOPS 2	6.000	0.905	5.325	0.797	

There was also a significant difference (p=0.0097) in the subjective (self-reported) data in the two groups after venipuncture (table 4).

Table 4: Comparison of mean value of the subjective (self - reported) responses after the venipuncture in the test and control groups.

Subjective Responses	Control Group		Test Group		P-value
	Mean	Standard Deviation	Mean	Standard Deviation	
Oucher Scores	42.750	32.501	30.750	29.732	0.0097

DISCUSSION

Health care professionals have a duty to provide compassionate care to all children (Zempsky et al 2004). Insertion of peripheral intravenous devices is one of the most painful and frequently performed invasive procedures by nurses. Effort should be made to assess and manage acute pain as, by doing so, nurses can reduce pain, increase patient comfort and satisfaction, improve patient outcomes, and shorten hospital stays (Jacobson 1999).

The purpose of this study was to evaluate the efficiency of local refrigeration of skin prior to venipuncture as a non-pharmacological and non-invasive intervention to reduce the pain related response to the painful procedure. In this study we anticipated that the physiologic response would change in the test group compared to the control group; however results showed no difference in physiologic responses. This finding was similar to one study where there were no significant differences in physiological variables before and after the painful procedure in pre-school and school age children (Van-Cleve et al 1996).

Therefore it may be said that in short painful procedures, it is possible to detect the physiological changes indicated in autonomic arousal, however adaptation rapidly occurs and the autonomic responses return to normal. For this reason, there are no physiological responses that directly reflect the child's perception of pain (Beyer and Wells 1989).

However in this study, we found significant differences in the behavioural and subjective responses between test and control groups with pain responses being lower in the test group. Several physical strategies have demonstrated efficacy in pain management for children. These include the use of heat, cold, and massage (Zempsky and Schenchter 2003). Cold application is also effective before invasive needle puncture (Crisp and Taylor 2005). Albeit not directly related to our study on venipuncture, results of other studies have shown that the application of refrigerant spray on the injection area is a simple and effective therapeutic method for pain relief before painful procedures (Abbott and Fawler 1995; Maikler 1991). Other authors argue for the therapeutic use of ice as a form of hyperstimulation analgesia (Davis 2000). Also, some consider that application of an ice cube on the site before giving an injection can be considered as a cutaneous stimulation technique for non-pharmacological pain relief (Wong and Hockenberry 2003). The application of ice relieves the pain. One possible option to minimise the effects of injection on children is immediate application of ice before injections (McCaffery 1994).

Finally, considering the fact that verbal reports are more widely used and considered standard, as well as behaviours being instinctive responses to pain (Tesler et al 1998), this study demonstrates that the application of local refrigeration by ice on the skin prior to venipuncture is a safe and simple method to reduce pain related responses in school-age children.

CONCLUSIONS

This study found that during venipuncture local refrigeration is effective in relieving pain associated with the procedure, however more research about the effectiveness of this intervention on other age groups in children, and on other painful procedures are needed. To enhance understanding of pain in children and the assessment of paediatric pain responses, especially physiologic responses, further research will be required. This study supports the assumption that paediatric nurses need to accept and assess a child's pain correctly, especially during painful procedures. However nurses need to expand their knowledge, increase their

responsibility and be more involved in relieving paediatric pain and suffering, including the exploration of non-pharmacologic interventions.

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THE CLINICAL NURSE SPECIALIST AND NURSE PRACTITIONER ROLES: ROOM FOR BOTH OR TAKE YOUR PICK?

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Key words: advanced practice, clinical nurse specialist, expanded practice, nurse practitioner, nursing roles

ABSTRACT

Objective:

The aim of this paper is to contribute to pertinent discussions regarding advanced practice nursing roles. In particular discussion will focus on the potential implications for the developing nurse ractitioner (NP) role on the existing clinical nurse specialist (CNS) roles.

Setting:

The literature presented originates primarily from the United States of America (USA), United Kingdom and Australia. Specific emphasis is placed on the psychiatric/mental health nursing context.

Primary argument:

Amidst the confusion in terminology to describe and explain advanced, expanded or extended nursing roles, and to distinguish between the clinical nurse specialist and the nurse practitioner, there is a need to establish clarity. The need for both clinical nurse specialist and nurse practitioner roles has been hotly debated in the USA.

Conclusions:

The roles of clinical nurse specialist and nurse practitioner may be complementary but fulfil different functions. It is therefore important that both roles be maintained and implemented in response to consumer and health service needs.

INTRODUCTION

In December 2005, the Productivity Commission released its report on the Australian Health Workforce (Australian Government 2005). This document has emphasised the need for reform within the health care system in order to ensure an adequate supply of health care professionals and address the serious issue of unmet health care needs (Gardner and Gardner 2005). Nursing roles, including but not restricted to nurse practitioner (NP), have been identified as an important contributor to necessary reform.

The identified need for reform is largely attributed to the changing composition and complexity of health care services. More specifically, the need for a strong multidisciplinary team approach to meet the needs of service users has been identified as essential. The skills and accessibility of the nurse practitioner (NP) is arguably highly suitable to the contemporary health care environment (Gardner, Gardner and Proctor 2004).

The development of the NP role has many potential benefits to the nursing profession, however the need for clarity regarding nursing roles becomes all the more urgent. The opening statement of the National Nursing and Nursing Education Taskforce Specialisation and Advanced Practice Discussion Paper: *A select analysis of the language of specialisation and advanced nursing and midwifery* (2006) succinctly describes the numerous terms used to denote the many different nursing roles:

An important contribution to understanding what nurses and midwives can do is consideration of the plethora of terms used to described advanced practice and specialisation. These terms include generalist, specialist, advanced, extended, expanded as well as less commonly used titles such as endorsed, enhanced, amended or maximised (Heartfield 2006, p.4).

It is not just the number of terms, but the variation in the meanings ascribed to them that is problematic. For example, advanced nursing and NP are now often used

interchangeably with little consideration of the potential impact on other advanced nursing roles (Elsom, Happell and Manias 2005). The aim of this paper is discuss the relevant literature pertaining to the clinical nurse specialist (CNS) versus the NP debate. While this debate remains in its infancy in Australia, this situation is likely to change in the foreseeable future as the NP role develops further. Although the main emphasis of this discussion relates to psychiatric/mental health nursing, it is likely to have relevance for all nursing specialties.

Advance practice has been defined by some authors in terms of the degree of autonomy enjoyed by the nurse in the form of extended and expanded practice roles (Daly and Carnwell 2003; Torn and McNichol 1998); whereas for others the scope of clinical practice is less important in defining advanced practice than the level of expertise of the nurse in performing identified nursing tasks (Manley 1997).

The lack of uniformity in definitions and terminology is particularly evident in the Position Statement on Advanced Practice Nursing published by the Royal College of Nursing Australia (RCNA 2000). The RCNA definition of advanced practice nursing states that it *utilises extended and expanded skills* and further, that advanced practice nurses *may work in a specialist or generalist capacity* (2000, p.1). The RCNA (2000, p.1) also asserts that *advanced practice nursing forms the basis for the role of nurse practitioner* and that *the nurse practitioner role is an expanded form of advanced practice nursing.*

In order to provide clarity to this problem, Daly and Carnwell (2003) developed a framework to overcome some of the existing confusion surrounding higher levels of nursing practice and the terminology used to describe them. They explain the concepts of role extension, role expansion and role development as a means to describe and categorise the changes in skills and boundaries of practice in nursing. Role extension is described as the inclusion in a nurse's role of a skill or responsibility which was not previously a nursing role and which typically has been regarded as the domain of another profession, for example, medicine, as in the case of the nurse practitioner role.

Role expansion occurs when additional skills and responsibilities are added to a specialist role giving greater autonomy and accountability while maintaining the core elements of nursing practice. The additional skills and responsibilities may also have been traditionally regarded as part of the domain of another profession. Educational preparation and assessment is more formalised than with role extension. Role development incorporates elements of both extension and expansion but includes greater clinical autonomy as a result of a demand to redress existing shortcomings in the provision of health care or for improved patient care. 'This advanced role would logically build on specialist practice and be coherent, with the development of expert practice based upon an extended period of professional experience' (Daly and Carnwell 2003, p.161).

DISCUSSION: CLINICAL NURSE SPECIALIST (CNS) VERSUS NURSE PRACTITIONER (NP) DEBATE

Gardner and Gardner (2005) argue that the confusion between the terms advanced practice and NP has contributed to difficulties in defining and articulating NP roles both in Australia and internationally. However the authors do not articulate the potential implications of this situation for other specialist nursing roles such as CNS. In the United States of America on the other hand a large volume of literature has been generated in the last decade about whether there should be a single advanced nursing practice role or whether there is a continuing need for both CNS and NP roles.

In order to further explore this debate from an Australian perspective a literature review was undertaken. CINAHL, Medline and Psych-Info data bases were searched using the search terms: advanced practice, expanded practice, clinical nurse specialist, nurse practitioner, nursing, psychiatric and mental health. Manual searches were conducted of all articles located through this process.

The predominance of this theme during the 1990s is reflected in the dedication to the topic of book chapters (Hamric et al 2000, Romaine-Davis 1997) and editor's introductions (Wolbert Burgess 1998). Although this debate has emanated from developments in the USA, it has important implications for the Australian context. The establishment of clinical nurse specialist positions in Australia is a relatively recent occurrence that was driven, to a large extent, by industrial processes. Nursing unions argued successfully for the creation of a clinical career pathway that would enable nurses to progress professionally without having to leave the bedside to take up positions in education or nursing administration.

Although there are some variations in focus, clinical nurse consultant roles in Australia have notable similarities with clinical nurse specialist positions in the United States of America as they are described in literature. Another parallel is seen in that the nurse practitioner role has emerged in both countries after the clinical nurse specialist had been established. It is predictable therefore that the conditions that generated the debate about whether the two advanced practice nursing roles should be blended will also emerge in Australia. An obvious example of these conditions is the current pressure on universities to rationalise postgraduate course offerings (Department of Education Science and Training 2002). The relatively small number of nurses seeking to undertake postgraduate studies at the masters level to prepare as NP or CNS may influence universities to choose one pathway over the other or to develop more

generic or blended programs in an attempt to meet the needs of both roles.

The majority of the published literature pertaining to the debate consists of commentary and position papers (Paisley 1998; Bjorklund 2003) but there are a few notable studies that have attempted to shed light on this much vexed issue by examining and comparing the two roles (Lincoln 2000; Mick and Ackerman 2000). The main arguments emerging from the articles are that the CNS role should be maintained and developed (Ebken 1998; White 2000); that the CNS role has outlived its usefulness and should be replaced by either the NP role (Davidson 1999) or the implementation of a blended advanced nurse practitioner role (Busen and Engleman 1996; Dunn 1997; Moller and Haber 1996; Quaal 1999; Wright 1997); and that both roles should continue to develop as they offer unique qualities in advanced nursing practice (Cukr 1996; Mick and Ackerman 2000; Mick and Ackerman 2002).

White (2000) describes an education program developed to prepare psychiatric mental health clinical nurse specialists and supports the continued development or re-development of the CNS role over the more favoured NP role. She views the NP as providing episodic mental health care in the context of providing broader primary health care whereas the CNS specialises in the care of mentally ill members of the community.

Moller and Haber (1996) present five main reasons for the need to blend the NP and CNS roles. The first is the need for recognition of title. Moller and Haber argue that the title of CNS is not well understood by legislators or the general public whereas NP has gained some recognition. Second is the fact that the NP has become more marketable with a public which demands safe and effective health care rather than being overly concerned with speciality care provided by elite clinicians. Third, identity issues have been further confused by the differing approaches to titling adopted by the various state regulatory authorities. This is further complicated by the adoption of different titles in association with the granting of prescriptive authority. Fourth, the fact that education programs for CNSs and NPs have traditionally emphasised different aspects of advanced nursing practice, does not mean that this needs to continue. Fifth, there remains confusion as to the real differences between CNSs and NPs in psychiatric-mental health nursing. This confusion is partially attributable to the concurrent existence of NPs who may have been prepared for primary health care practice but who now practice mainly in mental health nursing, and specialist psychiatric mental health NPs, some of whom were originally prepared as CNSs.

Quaal (1999) argues that the CNS role is outgrowing its usefulness as a result of changes in health service delivery, lack of third-party reimbursement and role ambiguity. She argues that the roles have developed concurrently and have contributed to each other's development. She further contends that the roles are 'professionally indistinguishable' (p.2) and that the advanced practice registered nurse (APRN) was the logical outcome of the inevitable merging of the CNS and NP roles.

The contention that the NP role evolved in response to physician shortages is advanced by Dunn (1997) who further claims that this was seen by some, particularly influential nurse educators, as an undesirable development. These nurse educators favoured the CNS as a nursing role and tended to view the NP as a quasi-medical role. As a consequence, the development of the CNS role and educational programs designed to prepare nurses for this form of advanced practice were more uniform than NP programs which tended to develop sporadically in response to local needs (Mick and Ackerman 2002). Dunn (1997) contends that there is evidence of a need for both CNS and NP roles and that many of the historical differences have largely disappeared as health care systems have changed over the years. Although the CNS has traditionally been associated with specialised acute care and the NP with generalist primary care, there are many areas of skill and knowledge that are shared between the two advanced practice roles.

On the contrary, Cukr (1996) argues that the roles of CNS and NP are different, having developed as a result of different historical forces (market, education, etc) and that both should be maintained. According to Cukr, the CNS of today is focussed primarily on quality of care issues at a system wide level rather than as an individual practitioner. The NP by contrast, offers advanced practice nursing as a cost effective alternative to physician care, especially in underserved populations. She points out that pressure on schools of nursing to rationalise course offerings and declining interest in CNS courses has led to the proliferation and dominance of NP courses at the expense of CNS courses.

Using a different approach to highlight the differences between clinical nurse specialists and nurse practitioners, Mick and Ackerman (2000) conducted a small scale study (n=18) comparing CNS and NP self-assessed clinical expertise and their valuing of a range of advanced practice role tasks. They found that the CNSs ranked their expertise higher in all domains of the Strong Model of Advanced Practice (Ackerman et al 1996). The Strong Model, so called because it was developed by advanced practice nurses and faculty of Strong Memorial Hospital, identifies five domains of advanced nursing practice: direct comprehensive care; education; research; support of systems; and publication and professional leadership. It is not surprising that the CNS in this study self-rated themselves more highly than did NPs since the Strong Model clearly focuses on domains of practice that are traditionally associated with the role of the CNS rather than that of the NP.

Lincoln (2000) replicated a study published in 1994 by Williams and Valdivieso, which compared CNS and NP roles in South Carolina. In this replication a large scale

survey was conducted of 610 CNS and NP practising in Minnesota. Lincoln concludes that there remain significant differences between the roles and that there is no evidence of a trend toward blending of the roles.

Paisley (1998) conceptualised the NP-CNS debate in psychiatry as a division of the mind from the body in that the CNSs have tended to be viewed as experts in psychotherapies whereas the NPs are seen as more prepared in neurobiology and physical treatments. She further argues that this division has been shown to be contrary to the interests of patients. In conclusion she contends that the role confusion which currently exists between the CNS and NP; between basic and advanced psychiatric, nurses; and between psychiatric nurses and other health professionals; need to be addressed.

CONCLUSION

It is a matter of conjecture as to whether the emergence of advanced and expanded practice nursing roles in Australia will lead to the same level of preoccupation with this issue as has been observed for over a decade in the United States of America. Certainly several of the conditions that generated the debate also exist in Australia. The NP role emerged after the CNS roles were already established. Furthermore, it would be more cost-effective for universities if a single graduate program for advanced nursing practice could be developed. It is also possible that nurses who were attracted to CNS positions will be attracted to NP positions for similar reasons, that is the desire to advance their nursing careers whilst maintaining a largely clinical role.

At the present time there is no tangible evidence that the questions of whether nurse practitioners will replace clinical nurse specialists or whether there is a need for a single advanced nursing practice role are of concern to the Australian nursing profession. However the fact that the establishment of these roles in Australia is a relatively recent phenomenon by comparison to the United States of America, provides the Australian nursing profession with an opportunity to learn from the experience of others and to plan for, and take control of, the direction in which it develops.

It has become clear that there exists a notable lack of uniformity in the definitions of such terms as expanded, extended, specialist, and advanced practice. It is important for the nursing profession in Australia to critically reflect on the terminology, in particular, advanced practice, which has the danger of being seen as synonymous with medical practice.

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