

EDITORIALS

- From the Editor** Jackie Jones 4

RESEARCH PAPERS

- Development and validation of a vein assessment tool (VAT)** 5
Joan Webster, Helen-Louise Morris, Kathernine Robinson, Ursula Sanderson
- The development of a tool to assess levels of stress and burnout** 8
Virginia Skinner, Kingsley Agho, Trish Lee-White, Judy Harris
- I don't want to hate him forever: understanding daughter's experiences of father absence** 14
Leah East, Debra Jackson, Louise O'Brien
- Women's perspectives of pain following day surgery in Australia** 19
Mridula Bandyopadhyay, Milica Markovic, Lenore Manderson
- A comparative study of patient perceived quality of life pre and post coronary artery bypass graft surgery** 24
Alicia Ballan, Geraldine Lee
- Patient advocacy and advance care planning in the acute hospital setting** 29
Marion Seal
- Nurses' attitudes toward elderly people and knowledge of gerontic care in a multi-purpose health service (MPHS)** 37
Prue Mellor, Daniel Chew, Jennene Greenhille

SCHOLARLY PAPER

- The impact of hospital structure and restructuring on the nursing workforce** 42
Christine Duffield, Mark Kearin, Judy Johnston, Joanna Leonard
- The importance of language for nursing: does it convey commonality of meaning and is it important to do so?** 47
Sonia Allen, Ysanne Chapman, Karen Francis, Margaret O'Connor
- Respiratory assessment skills for surgical ward nurses: does using a stethoscope make a difference?** 52
Beverly Duff, Glenn Gardiner, Margaret Barnes

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FROM THE EDITOR – Dr Jackie Jones RN PhD

RECOGNISING AND CELEBRATING NURSING AND NURSES

In recent discussions with nurses it has become apparent that more often than not nurses themselves are challenged when it comes to being able to recognise and celebrate the work that they and their fellow nursing colleagues do. Nurses seem more adept at criticising or naming what it is they have not been able to achieve rather than applaud their successes. When asking nurses to consider a 'reward and recognition' strategy as part of enhancing team vitality many nurses are silent or claim suggestions put forward by others as childish. It begs the question: 'What has happened to our sense of fun and adventure, our collegiality within our professional discourses?' In the day to day milieu of complex nursing work have we lost sight of the fact we are all social creatures, individuals but socially networked nevertheless?

Team vitality, the 'giest' of nursing, makes a significant contribution to the way in which work is experienced by nurses every day and the outcomes for patients that nurses are able to achieve and feel satisfied by. Paying attention to the little things like how do we say 'thank you' to each other and how do we celebrate a great moment within a shift, let alone the shift itself, can therefore make a significant contribution to the value-added for nursing and nurses.

International Nurses Day is a great way to recognise and celebrate nursing and nurses. Some health environments formally celebrate through clinical excellence awards; hold breakfasts or morning teas in honour of their nursing staff; whilst others provide the time honoured tradition of distributing chocolates. I would ask you to pause and reflect a moment on what you have achieved recently and furthermore, what your colleagues in nursing have achieved; then contemplate what you intend to do to celebrate. How will you recognise and celebrate nursing today?

International Nurses Day 12th May 2007 in arriving yet again marks not only the passage of time but also signals another era for AJAN. The theme for this year set by the International Council of Nurses is 'Positive practice environments: quality workplaces = quality patient care'. Here at AJAN we aim to support the development of quality patient care and inform positive practice environments through the publication of research and scholarly papers both of and within nursing. In this edition we have substantially increased the number of papers from 6 to 10 in an attempt to facilitate the transfer of knowledge to nursing practice environments as quickly as publication processes allow. In the near future AJAN will move into the online domain which will again mean our papers are more readily available and accessible. It is also a time of change for me personally as I will no longer be undertaking the stewardship of AJAN in the Editor role. I have enjoyed the privilege of being able to make a contribution to the development of ideas, scholarship, and reviewing the writing skills of nurses over the past three years. I look forward to a new era of online presence for AJAN.

This is a time for recognition and celebration of nursing and how we are developing. New directions bring fresh new perspectives and in this edition our papers present us with new perspectives on tools to facilitate our practice (Webster et al, Skinner et al, and Duff et al); insights into the perspectives of patients' experiences of the consequences of surgery (Bandyopadhyay et al, Ballan, and Lee); insights into the perspectives of nurses and the environments in which they work (Mellor et al, and Seal). Some important issues are also raised through an exploration of hospital restructuring on the nursing workforce (Duffield et al) and more intrinsically on the structure and impact of the language of nursing (Allen).

DEVELOPMENT AND VALIDATION OF A VEIN ASSESSMENT TOOL (VAT)

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Key words: catheterisation, peripheral, vein cannulation, vein quality, inter-rater reliability

ABSTRACT

Objective:

To assess the face validity and the inter-rater reliability of the Vein Assessment Tool (VAT) for classifying veins according to their level of intravenous insertion difficulty.

Design:

Prospective observational study.

Participants:

Eight nurses and two radiographers from the Medical Imaging Department and five nurses from the Haematology Day Patient Unit of a large tertiary hospital.

Intervention:

Assessments of veins in the upper limb were undertaken independently by nurses from two departments of a major tertiary hospital.

Main outcome measure:

Level of inter-rater agreement assessed using intraclass correlation coefficients (ICC).

Results:

A total of 125 independent assessments were made by 15 nurses. The mean percentage agreement between raters from Medical Imaging was 84% (SD 10.7; range 60% to 100%) and between raters from Oncology was 92% (SD 17.9; range 60% to 100%). The inter-rater reliability was very high for the ten medical imaging

raters 0.83 (95% confidence interval CI = 0.61 - 0.95) and for the Oncology raters 0.93 (95% CI = 0.77–0.99).

Conclusion:

The Vein Assessment Tool (VAT) has been validated by a sample of nurses with cannulating experience. Following broader testing it may be useful for research studies or by nurses who wish to objectively describe the condition of a vein for clinical purposes.

INTRODUCTION

Peripheral venous cannulas are commonly used in hospitalised patients for the administration of fluids, blood products, drugs and nutrition. It has been estimated that approximately 150 million peripheral intravenous catheters are placed each year in North America (Schmid 2000); similar data for Australia is unavailable. Nurses are increasingly responsible for placing and re-siting cannulas, particularly in specialty areas such as medical imaging, emergency departments, intensive care units and oncology day therapy units. Although guidelines for placing peripheral cannulas exist, their focus is on site selection, device selection and infection control precautions (Intravenous Nurses Society 1998); scant attention has been paid to vein quality.

VEIN QUALITY ASSESSMENT

The ability to objectively define vein quality became important when designing a study to identify risk factors associated with contrast media, or X-ray dye, extravasation. Clear and distinctive categories were required but

descriptions of how veins are selected or rated by nurses are often vague. For example 'healthy veins have the ability to distend with tourniquet pressure' (McDiarmid et al 1999) or, veins are selected by 'vision, palpation or a combination of both' (LaRue 2000). For the study a more precise measure was needed. Consequently an electronic literature search for specific vein quality assessment tools was conducted, which yielded two instruments.

The first of these instruments was in two parts. Part one of the assessment involved grading the vein using a 10cm visual assessment scale from 'as easy as it could possibly be to 'as difficult as it could possibly be'. In part 2, the assessor completed a 12 item check list about factors relating to IV insertion difficulty, for example rolling vein and tough skin (Jacobson 1999). After reviewing the instrument, it was considered to be too complex for use in the planned extravasation study.

Vein assessment in the second study involved a five level scale: 'veins neither visible nor palpable; veins visible but not palpable; veins barely visible and palpable; veins visible and palpable, and veins clearly visible and easily palpable' (Lenhardt et al 2002). No inter-rater reliability testing was reported for the scale and staff in the Medical Imaging Unit considered in practice that it could be difficult to differentiate between the five classifications. This led to the development of an assessment tool that met the needs of the study. Hence the aim of this sub-study was to assess the face validity and inter-rater agreement of the Vein Assessment Tool (VAT).

METHOD

Participants.

Patients

Inpatients, outpatients and members of the public were recruited from the waiting area of the Medical Imaging Department and from the Haematology Day Patient Unit of a large, tertiary care, public hospital. They were told about the purpose of the study and asked if they would agree to nurses making an assessment of the veins in their limbs. Verbal consent was accepted. There were no exclusion criteria. Demographic data was not considered relevant for the study, so none was collected. Nor was institutional ethics review required as volunteers were not being exposed to any intervention which was not a part of their routine care.

Raters

Fifteen raters participated in this study: eight nurses and two radiographers from the Department of Medical Imaging; and five nurses from the Oncology Day Therapy Unit. All of the raters were expert phlebotomists with many years of cannulation experience.

Instrument

The intention was to keep the instrument as simple and practical as possible. Definitions of vein quality were developed by the authors in consultation with other nurses on the unit. Following this, a group of expert cannulation

nurses examined the items for face validity and minor adjustments were made to the instrument. Figure 1 shows definitions for each level of vein quality and the level of experience required to cannulate veins at each level.

INTRODUCTION

Classification according to the Vein Assessment Tool (VAT)

Vein Assessment Tool (VAT)		
Vein quality	Definition	Management
Good	Vein is easily visible and/or easy to palpate when tourniquet is applied	Cannula may be inserted by any health care practitioner accredited to do so
Fair	Veins are small, scarred or difficult to palpate	Cannula to be inserted by an expert in venous cannulation
Poor	Vein unable to be seen or palpated (requires heat pack to aid vasodilation)	Cannula to be inserted by an expert in venous cannulation

PROCEDURE

Eight nurses and two radiographers from the Department of Medical Imaging (assessors) agreed to grade the quality of veins of ten volunteers using definitions on the Vein Assessment Tool (VAT) as a guide. Each volunteer was assessed by 10 assessors. Assessment of vein quality was restricted to upper limbs but not to a specific site. With the volunteer in a sitting position, a tourniquet was placed around the arm above the elbow of the arm in which veins were to be assessed. Each assessor made their assessment independently without any opportunity to discuss their assessment with other participants. The method was repeated in the Oncology Day Therapy Unit with five oncology nurses as the assessors and 5 oncology outpatients as volunteers (each volunteer was assessed by 5 nurses). Thus a total of 125 observations were made.

ANALYSIS

Inter-rater agreement was assessed in two ways. First by percentage agreement between raters; and secondly, by comparing the VAT ratings made by the nurses and radiographers on the 15 patients using Intraclass Correlation Coefficients (ICC's) with confidence intervals of 95% (95% CI). The ICC measures how much of the total variance of scores can be attributed to differences between subjects (Bravo and Potvin 1991) and is used when replicate measures have no time sequence; in this study when more than one assessment was made on the same vein (Pereira-Maxwell 1998). Poor correlation and systemic score differences result in reduced values. ICC values range from 0 to 1; values of 0.7 and over are considered to indicate 'substantial agreement' and values of 0.5 to 0.7 are considered to indicate 'moderate agreement' (Schene et al 2000). A sample of 15 patients is sufficient for a reliability study with 10 raters with an estimated ICC correlation of

0.9 (Bonett 2002). Statistical analyses were performed using SPSS for Windows® release 13.0.1 (SPSS Inc).

RESULTS

The mean percentage agreement between raters from Medical Imaging was 84% (SD 10.7; range 60% to 100%) and between raters from Oncology was 92% (SD 17.9; range 60% to 100%). The inter-rater reliability was very high for the ten medical imaging raters 0.83 (95% confidence interval CI = 0.61 - 0.95), and even higher for the Oncology raters 0.93 (95% CI = 0.77–0.99).

DISCUSSION

The aim of this study was to develop and validate a simple instrument for use as a guide for vein assessment. Results indicate that the Vein Assessment Tool is appropriate and suitable for this purpose. The validity of the instrument was supported by the mean percentage agreement between nurses using the scale and high intraclass correlation coefficients, indicating a high level of agreement between the nurses who independently assessed the quality of patient's veins.

Although other measures of vein assessment have been used for study purposes (Jacobson 1999; Lenhardt 2002) to our knowledge, this is the first, published attempt to validate such an instrument. The VAT is also simple to use. There are only three categories and they are clear and unambiguous. By comparison, the methods described by Jacobson (1999) for describing vein quality are complex and time consuming and those used by Lenhardt et al (2002) are unclear and capable of misclassification.

The VAT has now been in use for over six months in the Department of Medical Imaging for the assessment of patients recruited into the extravasation study. Many nurses and radiographers have been involved in the assessments and when asked, they find the instrument easy to use. Specifically, there have been no reports of any difficulty in classifying patients' veins in one or other category, suggesting that the tool could be useful for other research purposes.

The VAT also indicates the type of competency required to insert a cannula at each level making the instrument ideal for standardising care and for teaching new staff. It could be used in any area of clinical practice where the documentation of vein assessment is required. For example, many hospitals support or utilise a specialist intravenous (IV) service to access difficult to cannulate veins. Use of an objective instrument, such as the Vein Assessment Tool, could guide decisions about when to call in such a specialist. This in turn may reduce the incidence of failed IV cannulation, which is

as high as 28% in some series (Lenhardt 2002), causing considerable distress for patients.

LIMITATIONS

The tool has been tested on only two groups of nurse clinicians who regularly insert peripheral intravenous lines. It is likely that these nurses are more skilled than generalist nurses in identifying and classifying vein quality (Palefski and Stoddard 2001). The study would have been strengthened if nurses who were not as familiar with vein assessment had been included. It would also have been useful to correlate the vein assessment rating with the actual level of difficulty with vein cannulation in order to assess the sensitivity and specificity of the instrument.

CONCLUSION

The Vein Assessment Tool (VAT) has been validated by a sample of nurses with cannulating experience. Following broader testing it may be useful for research studies or by nurses who wish to objectively describe the condition of a vein for clinical purposes.

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THE DEVELOPMENT OF A TOOL TO ASSESS LEVELS OF STRESS AND BURNOUT

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Key words: face validity, internal consistency, test re-test.

ABSTRACT

Objective:

To pilot test the reliability and validity of a newly developed tool measuring nursing and midwifery staff stress and burnout.

Design:

Descriptive survey.

Setting:

Public hospital, aged care facility and university.

Subjects:

For the pilot study a total of forty-nine (n=49) nurses and midwives, selected by convenience sampling, were sent an initial pilot questionnaire. The return rate was seventy per cent initially and the return rate on the second mail out was forty-nine per cent.

Main outcome measure:

To determine reliability and validity of a new tool that explores nurses' and midwives' perceptions of stress, burnout and control over their working environment.

Results:

Face validity, test-retest reliability, internal consistency and principal component analysis were established. Overall Cronbach's alpha was 0.87 indicating good internal consistency for the stress/burnout element of the questionnaire. The test-retest reliability intraclass correlation coefficient

reported 0.30 - 0.90 for all six sub scales which were developed for both parts of the questionnaire.

Conclusion:

The pilot study indicates that it is possible to construct a valid and reliable instrument to assess nurses' and midwives' perception of stress and burnout.

INTRODUCTION

There have been various tools and instruments used previously in the literature to assess stress (Maslach and Jackson 1981; Jewell and Siegall 1990; Stordeur et al 2001; Goldberg 1978; Rahe and Tolles 2002). These tools were reviewed but seemed dated and no longer pertinent to current issues and concerns faced by midwives and nurses in their challenging contemporary clinical work environments. Tools must possess basic attributes (validity and reliability) that assure dependable measurement of the variables under investigation (Waltz et al 1991).

Norbeck (1985) suggests that there are four minimum standards necessary for the adequate evaluation of an instrument for use in research. These standards should include at least one type of content validity, one type of construct (or criterion-related) validity and two types of reliability testing (internal consistency and test-retest). This paper will explore the issues concerning validity and reliability as they relate to the development of a new, original questionnaire.

RELEVANT LITERATURE

Validity and reliability

Validity is the extent to which a study using a particular tool measures what it sets out to measure (Polit and Hungler 1997). The testing of validity is not exactly proven but rather supported by an accumulation of evidence. A researcher does not totally validate a tool per se but more an application of the tool. Unlike reliability, there are no simple statistical calculations to assess validity (Polit and Hungler 1997).

Polit and Hungler (1997) define content validity as the adequacy of the content area being considered. A subtype of content validity is face validity and this investigates whether an instrument is calculating the appropriate construct (Dempsey and Dempsey 1992). Dempsey and Dempsey (1992) define face validity as whether the items within an instrument measure the variables in a specific content area. Construct validity is another standard to be achieved in developing a new tool. It measures a specific construct or hypothetical trait, such as: grief, intelligence or prejudice pertaining to an instrument (Dempsey and Dempsey 1992). Factor analysis is one way of establishing construct validity. Factor analysis is calculated to statistically define subgroups for the indexes created by the researcher (Field 2005).

The reliability of a tool is a criterion for assessing quality (Polit and Hungler 1997). A tool is reliable when a repeat use of the tool consistently measures what it is measuring in exactly the same way (Dempsey and Dempsey 1992). This is also an assessment of the stability of a tool. This approach has certain disadvantages. Mood, physical condition, knowledge and attitudes do change between measurements despite the stability of a tool (Polit and Hungler 1997). The time period for test-retest reliability was chosen (two weeks) so that it was long enough for individuals not to remember specific responses and not too long so that maturation and learning would most likely not occur in this time frame, affecting the answers. Reliability is expressed as a number (a coefficient). The higher the number the more reliable. Rarely is a tool perfectly reliable and is often reported as 0.80, 0.70 or 0.60, as opposed to 1.0 (Dempsey and Dempsey 1992).

Other tools used in the literature

The Maslach (Maslach and Jackson 1981) Burnout Inventory primarily studied three dimensions of burnout in nurses. These included: providing nursing care in an atmosphere of depersonalisation; depicting nurses attending to tasks and patients without any emotional feeling; emotional exhaustion and perceptions of reduced personal accomplishment; all indicative of feelings of low morale. It did not study specific stressors such as high patient acuity or low

staffing levels. Jewell and Siegal's (1990) Nurse Stress Index correlated stress scores with job satisfaction, not behavioural aspects. It aimed to identify issues of occupational stress.

Stordeur, D'Hoore and Vandenberghe (2001) used a nursing stress scale which identified three sources of stress: physical, psychological and social environments. They conducted their study on leadership, organisation stress, and emotional exhaustion among nursing staff. These researchers did not look at the behavioural aspects of individual nurses. Goldberg (1978) designed the General Health Questionnaire-12 which detected psychological indicators of ill health. It was used in occupational and community settings as opposed to nursing workplaces. The questionnaire's main purpose evaluated psychiatric morbidity.

AIMS

A pilot study undertaken before embarking on a main study is of the utmost importance (Hundley and van Teijlingen 2002). A pilot study was undertaken to primarily establish a feedback mechanism, ensure the survey was user-friendly, ensure the items in the survey covered the content area of interest and establish a degree of reliability. This paper explores issues associated with the development of a new, original questionnaire and reports on reliability and validity determined by a pilot study. The paper discusses the imperative issues of a comprehensive pilot process that assesses not only the questionnaire but ensures that it is possible to acquire meaningful data and analysis.

METHOD

Development of survey

Generation of items for the draft questionnaire

The process of developing a comprehensive questionnaire commenced with the accumulation of literature and other questionnaires from the area of interest. The questionnaire was designed and developed specifically for the study. Items were generated from a literature review. Search terms used were: stress, burnout, personality, and behavioural characteristics. The questionnaire consisted of three sections. The first section obtained demographic information. The second section comprised thirty-eight items related to stress and burnout. The third section comprised fifteen questions related to personality and behavioural aspects exhibited in particular scenarios, known as vignettes (Polit and Hungler 1985). Additionally a comprehensive accumulation of information from the area of interest came from the first hand knowledge and experience of the researcher in the health care workforce.

Expert advice from academic and clinical experts in the field included a university presentation feedback session. The questionnaire was presented for comment to a post-graduate research residential school in October 2003 which included students and lecturers at the university. This university research residential school is an opportunity for students to present their research and receive feedback, which provided an excellent venue to present the questionnaire in its first draft form. The original questionnaire was presented and many changes were implemented from this presentation.

Changes to questions relating to stress and behavioural aspects

The residential school feedback provided a comprehensive list of changes and additions from the original draft questionnaire. All changes suggested were incorporated into the new questionnaire. The first addition included: 'Tick one box' to ensure participants answered single responses only. The word 'inefficient' replaced 'poor'. The words 'In your work' were added to the question: 'Are you constantly looking for a challenge?' The word 'suffered' as in suffering pain was changed to 'experienced'; 'stress that keeps you moving' was changed to 'stress that keeps you motivated'.

The questions: 'How long was your holiday at one time over the last year?' and 'How often did you holiday for more than one day over the last year?' were condensed into one question: 'How long was your longest holiday at one time over the last year?' One of the options for this question was changed to 'seven to ten weeks' from 'seven or eight weeks'. The phrase 'not having enough time to attend to the quality of care of clients' was changed to 'is your workload too excessive at times to provide quality of care for clients'. The question: 'Do you think you are well-suited to this particular type of work?' was changed to 'Do you think you are suited to the particular type of work you are doing?'

Changes to questions relating to demographics

Changes were made as indicated. The area of 'nursing management' was included in the 'areas of work' which had not been included in the original draft questionnaire. The sentence: 'If you work in more than one area please write in the space provided starting with the most predominant area first' was added to elicit the predominant area. It was recognised that nurses often work in many different specialties and it was considered important to know the primary or most usual specialty work place. Added to the demographics were: the hours worked and whether the nurse or midwife worked permanent, fulltime, part time or casual.

Sampling population

Forty-nine respondents were included in this pilot study. The sample size was chosen to provide adequate information on reliability and a certain degree of face validity. Respondents included eighteen registered nurses from aged care facilities, thirty midwives from the central coast of New South Wales and one doctoral student (who was a registered nurse) from the university. The subjects were selected by convenience sampling. The sample was selected because of geographical accessibility. Ethics approval was received from the appropriate authorities.

Although the sample was a mixture of midwives and registered nurses working in completely different areas, the sample seemed indicative of what the main study sample would resemble. The surveys were distributed through the nursing unit managers to the registered nurses and midwives and directly to the university student. The main study could have included some of the pilot study respondents, but the researcher was unable to determine if there was such overlap.

Classifications and coding legends for questionnaire

Classifications or categories were developed for the first two parts of the questionnaire with numerical values attached to extreme, moderate, fair and nil/negligible levels of stress, control and self-imposed pressure. Questions from each part of the questionnaire were categorised into the following sub-scales: work environment, burnout, control, job satisfaction, stressors and prefers working alone. Ordinal data for the stress/burnout and personality surveys was obtained using a Likert ranking scale which designated level of stress or behaviour expected to be found in that situation. For example, the answers were: 'never', 'occasionally', 'frequently', 'most of the time' and 'always'. The answers were ranked from nil stress to extremely stressed on opposite ends of the scale.

There were eight questions which included 'never/occasionally' in the same box as the answer or option. For example, the question: 'How often do you feel emotionally drained at work?' would rate a high stress rating if the respondent answered 'always' and a nil/negligible stress rating if the answer was 'never/occasionally'.

All parts of the survey used different indexes of coding to accommodate the varying, required levels. For both the stress/burnout and personality/behaviour components of the survey, specific indexes were used for the subscales (see table 1).

Table 1:

Stress/burnout and personality/behaviour subscales/indexes

Subscales	Questions / Indexes
Work environment	Frequency of stress / 0-4 Excessive workload / 0-4 Rush to complete tasks / 0-4 Finishing late / 0-4 Treated with respect by clients / 0-4 Organisational support / 0-4 Work colleagues unsupportive / 0-4 Expectation of 'stress' free environment / 0-2
Burnout	Apathy / 0-4 Low morale / 0-4 Feeling undervalued / 0-4 Feeling overwhelmed / 0-4 Feelings of incompetence / 0-4 Increasing anxiety / 1-6 Fatigue / 1-5 Emotionally drained / 1-5 Loss of empathy for colleagues / 0-2 Loss of empathy for clients / 0-2 Burnout unavoidable / 0-2
Control	Powerlessness / 0-4 Decision-making / 0-4 Motivated by maintaining control / 0-4
Job satisfaction	Suited to work / 0-4 Enjoying type of work / 0-4 Change area of practice / 0-3 Leave professional discipline / 0-3 Frequency of job dissatisfaction / 0-7
Psychosocial stressors and symptoms	Sleeplessness / 1-6 Depression / 1-6 Frequency of sleeplessness / 1-5 Headaches / 1-5 Stress considered healthy / 0-2 Stress requiring treatment / 0-7 Mental health leave / 0-6 Helplessness / 1-7 Frequency of depression / 0-6 Length of holiday / 0-8
Personality / behaviour	Working independently / 0-4 Achieving more than time allows / 0-4 Expect more than reasonably possible / 0-4 Irritability / 0-4 Pushed for time / 0-4 Difficulty slowing down for procedures / 0-4 Working at high performance / 0-4 Arriving early for appointments / 0-4 Reporting sick if unwell / 0-4 Continuing work if unwell / 0-4 Keyed up on most days / 0-4 Tendency to perform many tasks / 0-4 Constantly looking for challenge / 0-4 Strong sense of commitment / 0-4 Reactions when irritable / 0-4

PROCESSES FOR DETERMINING TEST-RETEST RELIABILITY

For test-retest reliability, scores on the two sets of responses are correlated statistically to yield a coefficient referred to as the correlation coefficient. If the results are the same or similar, the coefficient will be high – say 0.90 and the instrument is said to have high test-retest reliability. The first survey was distributed by the nursing unit manager and the second survey was mailed by the researcher. There was no way of controlling the location where the respondent completed the survey. The directions to complete the survey were exactly the same.

RESULTS

Response rate

The average age of the pilot respondents was 47.9 years and the average number of years in the nursing profession was 24.2 years. Thirty-five questionnaires were returned out of forty-nine distributed resulting in a seventy-one per cent return rate initially. A test-retest procedure was followed. Eight respondents remained anonymous and necessarily these respondents were not sent another questionnaire. Respondents were able to be identified by placing their contact details on the questionnaire. The remaining twenty-seven respondents were sent another questionnaire two weeks later. Twenty-four respondents returned the second questionnaire, giving a test-retest return rate of forty-nine per cent of the postal questionnaires distributed. Twenty-four respondents were therefore used in the pilot data analysis.

Data analysis

As the sample was small, an average was calculated for any numerical data that were missing (mean imputation method). Overall reliability of the scale was calculated by Cronbach's alpha indicating internal consistency. The Spearman's rank order correlation was employed to analyse inter-item, item-total correlation and correlations between subscales. Spearman's rank order correlation was also used with the intraclass correlation coefficient to estimate the degree of resemblance or reliability of the subscales for the preliminary and final versions of the pilot questionnaire (that is, the test and retest scores). The intraclass correlation coefficient was used with the continuous data. Principle component analysis using factor analysis was employed to produce the variables that are highly loaded or pertinent to midwives and nurses.

Internal consistency

The overall Cronbach reliability level for internal consistency for the total and subscales between the preliminary (first test) and final (second test) versions of the questionnaire were calculated. The result for the first test was 0.87 and 0.82 for the second test for the stress and burnout component of the questionnaire. The second correlation coefficient is only marginally lower than the first, to be expected when questions pertain to aspects of behaviour and stress. This level should be at least 0.70.

One question was not included because one hundred per cent of the nurse and midwife participants responded 'no' to the question: 'Would you expect your environment to be 'stress' free?' Nurse and midwife respondents perhaps felt there is an expectancy that there will be certain levels of workplace stress with which to contend. For the personality traits component of the questionnaire, only the first five questions were used as they showed good reliability for internal consistency (> 0.70) for the preliminary (first test) and final (second test) versions of the questionnaire (see table 2).

Table 2:

Internal consistency reliability values (Cronbach's alpha) for preliminary and final versions of personality/behaviour component

Question	Preliminary	Final
Achieving more	0.8354	0.7957
Unreasonable expectations	0.8146	0.7671
Irritability	0.8454	0.736
Pushed for time	0.8387	0.7938
Difficulty slowing down	0.8781	0.826
Total	0.8708	0.8208

Test-retest reliability

Table 3 shows the test-retest reliability estimates (see column 3). From the table, all subscales in retest reliability were moderately correlated ($r = 0.47 - 0.69$) (see table 3, column 2) and the correlation coefficients are between 0.30 - 0.62 (see table 3, column 1) for the preliminary version of the test however stress and burnout subscales show lower correlation coefficients. This fact is supported by Stevens (1992) who reports that the strengths of the relationship or association depends on context and in some cases where the correlation is low does not imply that the outcome has no useful significance. Kline (1999) reaffirms this by reporting that when looking at psychological constructs, realistically lower correlation coefficients are more acceptable because of diversity of constructs being measured. This may be an indication that the data aggregated for these particular questions were multi-dimensional, not uni-dimensional. Stevens (1992) reports that most things have multiple causes and in these cases it is difficult to account for a big variance with just one single cause. Even though a small correlation is identified, this could make a substantial contribution for determining and evaluating strategies for reduction of stress. Losing this descriptive information might be detrimental for understanding symptoms of stress. For example, if high correlation coefficients are identified, these areas may be easier to address in possibly alleviating stress areas. The intraclass correlation coefficient ranged from 0.30 to 0.92 with stress and burnout showing a high resemblance between pre and post test (see table 3, column 4) which indicates that the instrument has high test-retest reliability for these two subscales. Average paired responses (for test-retest scores) were 27.5 out of 38 (73%) the same for the stress/burnout component of the questionnaire and 9.3 out of 15 (61%) the same for the behavioural aspect.

Table 3:

Spearman's rank order correlation- rho, intraclass correlation coefficient (ICC) and factor analysis method for the six sub-scales

Subscales	Consistency (Spearman's rho)	Retest	ICC	Factor1
Work environment (8-item scale)	0.62	0.70	0.44	0.33
Burnout (11-item scale)	0.35	0.47	0.92	0.90
Control (3-item scale)	0.62	0.74	0.30	-0.30
Job satisfaction (5-item scale)	0.58	0.68	0.73	0.54
Stress (10-item scale)	0.30	0.50	0.81	0.91
Personality (15-item scale)	0.52	0.64	0.52	0.53

Factor analysis

In social sciences, issues or items are often measured that cannot be directly measured (latent variables). Stress and burnout cannot be measured directly: they have numerous facets. However different aspects of stress and burnout can be measured. Stress levels, ideas of motivation, and enthusiasm can be assessed. Factor analysis shows whether these measures reflect a single variable. Specifically to test whether these numerous variables driven by one underlying variable. Principal component analysis and factor analysis are techniques for identifying clusters or groups of variables (Field 2005). The factor analysis for this pilot exercise indicated that stress and burnout had high loading factors (see table 3, column 4). The principal component analysis identified stress and burnout to be two major factors that nurses' and midwives' experience in their work environment.

DISCUSSION

Based on feedback from respondents in the research residential school, the format was changed to enhance user friendliness. The initial questionnaire contained the demographic information at the beginning, which was then placed at the end of the document. The residential school respondents suggested that immediately requiring personal details to be divulged might inhibit or restrict subsequent responses.

The pilot study and accompanying analysis for this newly devised questionnaire showed good overall reliability. For the personality/behaviour component of the questionnaire, only the first five questions were found to be reliable based on test-retest processes. Despite this finding, the remaining eleven questions were not deleted from the final version of the questionnaire as it was believed that these questions could also provide a basis for descriptive statistics. If reliability is found to be low in the main study, this would be a limitation of this tool. It was concluded that there was a strong statistical correlation ($X = 0.86$)

between stress and burnout ($p < 0.05$) which suggests that nurses and midwives experiences of stress may increase burnout levels.

Limitations

Meticulous attention to appropriate piloting strategies identified weaknesses in the original questionnaire discussed in this paper. If not addressed, questions regarding coding, classifying, analysing and discussing subsequent findings could be expected. One of the limitations of this tool was the inclusion of questions with low correlation coefficients. The sample size of the pilot survey would probably not be indicative of the general population, but increased numbers in the main study could address this issue. The effects of or reasons for non-responders cannot be analysed as who was given the questionnaires was not known.

A forty-nine per cent return rate was considered adequate for this pilot study but non-response bias needs to be considered (Polit and Hungler 1997). Those who returned anonymous questionnaires but did not want to participate in the second test were of varying characteristics to those who participated. They were mostly in the aged care, neonatal or midwifery professions and had worked in the profession anywhere from two to forty-one years.

The final questionnaire was distributed to 1366 nurses and midwives in Australia and ultimately achieved a forty-one per cent response rate. The time, cost and energy to reach the distribution and collection stage of this research project warranted careful piloting as described here. It is expected that the findings will include information useful to the nursing and midwifery professions, as well as employers in the Australian health care industry.

CONCLUSION

The pilot study associated with the development of a new questionnaire demonstrated that it is possible to construct a reliable instrument to assess nurses' and

midwives' perceptions of stress and burnout in their working environment. Comprehensive attention to careful survey development, adequate feedback from appropriately selected pilot respondents and detailed adherence to high quality piloting principles and strategies yielded significant information that informed the final survey. Future studies with this instrument on bigger populations and in different cultural and socio-economic settings are needed to develop a generalisable conclusion about this questionnaire as well as on nurses' and midwives' perceptions of stress and burnout.

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'I DON'T WANT TO HATE HIM FOREVER': UNDERSTANDING DAUGHTER'S EXPERIENCES OF FATHER ABSENCE

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ABSTRACT

Objective:

Father absence is associated with negative child and adolescent outcomes, including early sexual activity, teenage pregnancy, behavioural difficulties and life adversity. However there is a lack of literature that explores the lived experiences of daughters who grew up in father absent environments. This study aimed to generate insights into the lived experience of being a girl-child growing up in a father absent environment through the perspectives of daughters who experienced father absence during their childhood and/or adolescent years.

Design:

Van Manen's phenomenological research approach informed this study. Participants were recruited through the news media and took part in phenomenological interviews. Narrative was transcribed and analysed using Van Manen's thematic approach.

Participants:

Nine women aged between 22-46 years who had been raised by their biological mothers and who had experienced father absence due to parental relationship breakdown participated in the study.

Results:

Four themes that captured the participants lived experiences of father absence were revealed. These are: *He always let me down: a constant source of hurt; I have no feelings of closeness: father as a stranger; All men are*

bastards: negotiating relationships with men; and, I don't want to hate him forever: reconstructing the relationship.

Conclusions:

Nurses and other health workers are challenged to meet the needs of increasing numbers of father absent children and young people and to develop supportive strategies to ameliorate the effects of father absence so as to contribute to the best possible outcomes for young people and their families.

BACKGROUND AND AIM OF THE STUDY

Increasing numbers of children and adolescents are growing up in father absent homes and this has created a need for nurses and other health workers to develop understandings about the experiences of the children and young people who grow up in father absent environments. Father absence is associated with difficulties including; health and welfare related problems, such as early sexual activity, greatly increased rates of adolescent pregnancy (Ellis et al 2003), poor school performance (Ackerman et al 2002), lowered self-esteem, increased risk of incarceration (Harper and McLanahan 2004) and an increased in likelihood of demonstrating adverse behaviours compared to adolescents of intact dyadic families (Spruijt et al 2001) (see East et al 2006a for a comprehensive review). These problems may be deleterious to health and well-being when considering health in broad terms.

The literature suggests a link between father absence and life adversity in both male and female children, though some literature suggests that it is the social factors (such as poverty, lack of resources) associated

with single female-headed families that may cause negative well-being in father absent children, rather than the father absence itself (McMunn et al 2001).

The discourses around father absence and its effect on young people are incomplete. Rohner and Veneziano (2001) note that the literature fails to elucidate precisely why and how fathers influence childhood development and psychological wellbeing, and why the absence of fathers can possibly lead to unfavourable outcomes. No previous literature could be found that explored the lived experiences of women who grew up in father absent environments. Furthermore, most of the literature emanates from the psychological literature with few other perspectives visible.

Defining father absence

The term 'father absence' is ill defined, being variously referred to as a father simply not being present in one's life, a father being deceased, or a father being lost through family and or social circumstances (Spruijt et al 2001; Silverstein and Auerbach 1999; Phares 1993; Jensen et al 1989). This lack of clarity can result in shortcomings of research findings. Furthermore, the ambiguity around father absence also extends to the issue of contact between father and child; 'contact' could be infrequent or daily (Phares 1993) and could be in person or through letters and phone calls. For the purpose of this study, father absence was defined as a father being absent from the family home because of parental relationship breakdown.

THE STUDY

Aim

This paper is drawn from a study that aimed to develop insights into the lived experience of growing up in a father absent environment through the perspectives of women who have experienced father absence during their childhood and/or adolescent years. Elsewhere we have reported findings about these women's perceptions of their relationships with their fathers since the time of family breakdown (see East et al 2006b). This current paper focuses on the women's experiences of father absence and aims to reveal the feelings and meaning this had on the lives of participants as girl-children and young women.

METHODOLOGICAL ISSUES

This study was informed by Van Manen's hermeneutic phenomenological research approach which aims to gain insight and understanding of human experience through retrospective reflection and describing and interpreting these experiences through the exploration of emerging themes (Van Manen 2006; Van Manen 1990).

The participants

Nine women were recruited into the study. Inclusion criteria required participants be able to converse fluently in English, be women aged 21 years or older who had

lived in a father absent environment for a minimum period of four years during their childhood and/or adolescent years due to parental relationship breakdown. Participants were required to be at least 21 years old as the authors wanted the participants to reflect and elucidate on their father absence from their childhood as well as adult life experiences.

All nine participants were raised by their biological mothers and seven of the nine daughters described having on-going strong and loving relationships with their mothers. None of the participants identified as being socially disadvantaged – a number had academic qualifications, all were in employment, engaged in home-making or studying, with none being welfare dependent.

The age of onset of father absence also varied among the participants. One participant did not know her father until she was approximately 11-12 years of age, six of the participants' fathers left the family home before 9 years of age, and two of the participants' fathers left when they were aged 13-14 years. At the time of the study, participants ranged in age from 22-46 years and all experienced some form of contact with their fathers throughout their lives although the frequency of contact varied greatly from weekly to very infrequent contact. This contact declined with age and independence and at the time of the study the majority of participants had infrequent contact with their fathers.

Data collection

During 2005 participants engaged in phenomenological interviews lasting between 60-120 minutes focusing on their lived experience of father absence. A range of specific techniques were used to elicit information, including use of initial open-ended and trigger questions, followed up by use of probing, specific, and interpreting questions (Kvale 1996). Interviews were audio taped and transcribed into written text.

Ethical considerations

All ethical considerations were addressed to the satisfaction of the relevant Human Research Ethics Committee including informed consent and confidentiality. Pseudonyms are used to protect participant identities. FINDINGS

Father absence was experienced as a sad and traumatic aspect of life that cast a shadow over the childhood and lives of these women and had caused ongoing distress, not only affecting their relationships with their fathers, but also the emotional relationships they developed with others. Their narratives revealed four main themes that captured the participants lived experiences of father absence. These are: *He always let me down: a constant source of hurt; I have no feelings of closeness: father as a stranger; All men are bastards: negotiating relationships with men; and, I don't want to hate him forever: reconstructing the relationship.* Each of these themes is discussed in detail below.

He always let me down: a constant source of hurt

Participants described feeling let down by their fathers. The narratives were replete with descriptions of abandonment, hurt, resentment, anger, and feelings of being deceived and unloved. Despite the very young age of some participants when their fathers left the family home, they were still able to recall their feelings when they realised their fathers were not coming home.

Participants did not experience their fathers leaving the family home as being an issue between their parents; rather they felt as though their fathers leaving home was a statement about not wanting to be around them or not wanting to parent them. Louise (whose father left when she was aged 13-14 years) felt that in comparison to her siblings, she missed out on having her father participating in her life:

It was almost as if, he thought that his job of raising me had ended when he left the family home and that really sort of hurt me deeply. Like I saw my sister and my brother being raised with two parents in the home and then Dad sort of left the home ... It was just another source of hurt for me really, yeah just felt totally abandoned then ... he didn't have any desire to spend any time with me or even really get to know who I was.

Narratives revealed that feelings of betrayal and being let down went beyond the immediate period in which their father left – rather, these feelings continued to mark the relationships between them and their fathers. Kate described her feelings toward her father and the feeling of being let down by him. Her father's suggestion of taking Kate's brother to live with him, while not showing any inclination to take Kate as well, was a source of hurt for her. Being let down in this way affected Kate's feelings and attitudes toward her father:

My dad, letting everybody down ... it was like he just took the easy way out. ... Then when he decided that he was, that was it, there was no more, he couldn't work it out, he got us all in the kitchen and said, "OK I am leaving, I would like John [participants brother] to come and live with me" and that made me feel absolutely second class. That definitely, that was the catalyst of, things just became really crystallised from then. I really hated my dad. He was a very selfish person.

I have no feelings of closeness: father as a stranger

Participants felt that growing up with an absent father affected the relationships they held with their fathers. Rather than feeling the intimacy and closeness that normally defines relationships between parents and children, these daughters described relationships with their fathers as being diminished by their own feelings of hurt. The notion of their fathers being a stranger to them was reinforced by irregular contact, a lack of communication and perceived disinterest (East et al 2006b). Because of these feelings, participants stated that they developed little respect for their fathers. These feelings stood in the way of the development of a 'father and daughter bond' (East et al 2006b) and were contrary to the expectations and

fulfillment of what participants felt a father figure should be. Amy explained what she expected from her father:

I expect a father to ... take us out on weekends and do stuff with us even if it's taking us to the swimming pool... I have no memory of doing anything with dad.

Participants had a lack of shared history with their fathers and there were whole chunks of their lives that did not include any shared memories between these daughters and their fathers. Cheryl's only memories of her father are in photographs; she has never shared closeness with her father:

I can't remember my father except from what I see in photos. ... My paternal grandmother; she showed me photos of times when we were young and he [father] was mucking around giving us piggybacks and I just thought I was actually shocked, and thought oh my goodness- there was a photo of him cuddling me and I just thought that's really - it just really shocked me - a foreign concept that my father could actually have that close relationship with me and I have no feelings of closeness.

All men are bastards: negotiating relationships with men

Participants expressed difficulties constructing relationships with men and they linked these difficulties to their experiences of father absence. Participants expressed a range of feelings and difficulties around their relationships with men including; having distrust in men; fear of abandonment; having negative feelings toward men; and not knowing or understanding the relationship dynamics between men and women, which they attributed to not seeing this type of relationship while they were growing up.

The narratives also revealed a sense of 'craving' male attention and male affection which participants linked to the lack of affection received from their fathers. This made these daughters vulnerable to male attention in which they were potentially exploited by any male who showed them any positive interest. Participants attributed some of the perceived poor decisions they had made around relationships with men to this vulnerability.

Sue stated that her relationship with her father affected both her and her sister's relationships with men. Sue gives an account of her first sexual relationship and stated that this encounter with a friend's father arose due to her seeking affection and attention from a father figure:

My first sexual encounter... I felt that I had seduced a friend's father ... And I thought, no I'm not punishing father by sleeping with someone else's father. Dad will never know this. Why did I do this?

Cheryl did not have contact with her father from approximately the age of 7 until she was 21 years of age. She felt resentful toward her father for leaving and having no contact with her. Cheryl attributes this to her holding the same negative feelings about men that she previously held for her father. Cheryl's experience of father absence had greatly affected her views on men generally and her

life path. On reflecting on some of the attitudes she had as a much younger woman, Cheryl stated:

I was never going to be married ... never going to be tied down. All men are bastards ... every other guy I had in my life were bastards ... so every guy that came into my life has lived up to the expectation of all men are bastards. ... I suppose I had no other role models ... I still don't trust men, I don't really respect them, I always think the worst of them and they have to prove themselves.

Sarah had a pessimistic view of males and intimate relationships with men. She felt that this was a consequence of her parent's relationship breakdown and her father's absence from her life and the poor quality relationship she shared with him. Sarah felt that she developed negative feelings toward relationships.

When I got seriously involved with someone and that added to my prior experiences, it really convinced me that there aren't really good men out there. ... So unfortunately, instead of having a rosy expectation of relationships, I developed another one, which was wrong; which was expecting people to do wrong by you. So, if you're in love with someone you can go along and be in love with them, but not expect them to be good to you...I just felt that love and commitment were not real. ... In my head, somehow I couldn't accept a good relationship.

I don't want to hate him forever: reconstructing the relationship

These daughters related stories of their hopes for a meaningful relationship with their fathers; meeting and having contact with their fathers; and the challenges of initiating and maintaining relationships with them. Although the women in this study had experienced hurt and pain related to both the absence and the subsequent relationships they have held with their fathers, they all spoke of the importance of having a relationship with their fathers and at some point, each daughter had aspired to build a positive relationship with their father.

However building a relationship with their fathers meant that these daughters had to be prepared to let go of the past and suspend the expectations they had held of a father/daughter relationship. Belinda feels she no longer needs a father figure and this has helped her to let go of her own needs and expectations and accept what her father can give her, even though this means that her own needs for the relationship will never be fulfilled.

I have kind of a little bit, come to terms, now that I don't need a daddy anymore... if you saw us together now, you would go: 'wow they are close'. Because we talk about whatever he wants to talk about. I have let go of that kind of need for him to hear me...

Kate expressed the importance to her of establishing and maintaining a meaningful relationship with her father. Kate stated that she will continue to give her father chances to establish and maintain their relationship, despite the hurt and pain inflicted on her by her father. Kate does not want to hate her father for the rest of her life:

Purely and simply just he is my dad and he brought me into the world and I do want to make him proud and I want to be proud of him and I do want things to work out in the long run, despite all the pain and shouting and things like that. ... I don't want to hate him forever, I don't want to have to go to his funeral and go, I wasted the last 30 years of my life hating this person, I don't want that. I don't expect us to be best mates and I know that is not possible but it would be nice to have some sort of dialogue with him and for him to respect me.

DISCUSSION

Narratives from these daughters suggest that their experience of father absence strongly influenced their life path. This finding resonates with Wade's (1995) assertions that children of absent parent/s can experience feelings of abandonment that can shape their lives. Seven of the nine daughters in this study described having loving and nurturing relationships with their mothers. However despite this, the absence of their fathers and the feelings associated with this were not overcome by and through the mother/daughter bond (East et al 2006b). This finding concurs with Wade (1995) who states that having loving, nurturing and supportive relationships with others does not fill the void associated with the feelings of abandonment, loss, grief and unworthiness felt by children who experience the absence of a parent.

Furthermore, findings of this study support Wade's (1995) suggestion that individuals experiencing parental absence and the ensuing feelings of abandonment can also develop negative views of others. The participants in this study felt abandoned and let down by the fathers and subsequently developed negative attitudes and feelings toward their fathers and at times, these feelings were extended to males in general. These negative feelings included: feelings of mistrust; lack of respect; and not being able to believe that a supportive, loving intimate relationship with a man was possible. These findings support the suggestion by Hetherington et al (1998) that youths of divorced and remarried families experience greater difficulty in establishing intimate relationships than those of intact families.

Rohner and Veneziano (2001) emphasised the importance of father love and recognised that the father of a child potentially contributes to its healthy development. They acknowledge that the quality of a parent and child relationship (or the lack of) does shape the life of an individual, both as a child and as an adult (Rohner and Veneziano 2001). One consequence of having an absent father was the difficulty in holding the type of close and intimate relationship with their fathers that is usually associated with a parent and child. The daughters in this study voiced this, through describing their relationships with their father as that of a stranger or acquaintance, rather than family.

Furthermore, many disclosed having little or no memorable childhood experiences, having lack of communication, having little involvement with their fathers and in a sense not knowing their fathers; their fathers were ultimately strangers.

Although the relationships the participants held with their fathers were not characterised by warmth, love and affection, this was something participants wanted and their relationship with their father was something deeply valued (East et al 2006b). Findings thus concur with Rohner and Veneziano's (2001) assertions of the importance of father love.

Ellis et al (2003) suggests that father absence is a significant risk factor for teenage pregnancy and early sexual activity. The daughters in this study experienced vulnerability and difficulty in constructing relationships with males and felt that these difficulties were closely associated with their experiences of father absence. They held pessimistic views of men which they attributed to their experiences with their fathers. These negative views were perceived to have had a deleterious impact on the development of their intimate sexual relationships.

It must be noted that the findings of this study do not conclude that the participants of this study were disadvantaged or had poorer academic achievement or maladaptive behaviour through growing up without their father as Govind and Stein (2004), Lang and Zagorsky (2001) and Pfiffner et al (2001) have suggested is associated with father absent children. A number of the daughters in this study had gained academic qualifications or were pursuing graduate qualifications at the time of their participation in this study. None of the participants identified themselves as being socially disadvantaged and none were welfare dependent.

CONCLUSIONS

Implications for practice

The research literature clearly identifies the implications of father absence to the health and well-being of girls and young women, so it is important that health care professionals have insight and understanding of what it is like to experience father absence. Such understandings could contribute toward enabling health care professionals to better provide for the needs of father absent girls, adolescents and young women. Nurses and other health workers could provide opportunities for father absent girls, adolescents and young women to discuss their feelings about having an absent father. In this way, issues could be clarified, feelings validated, and young women encouraged in reflecting on and exploring safe and healthy ways of dealing with their feelings and experiences. This could be particularly important in reducing father absent young women's vulnerability to early sexual activity.

There is also a need to support parents experiencing relationship breakdown and to assist them to continue to strive for the maintenance of loving and nurturing family relationships. Nurses and other health workers are ideally placed to support families experiencing parental relationship breakdown and may be able to reinforce the importance of strong and loving relationships with both parents to child and adolescent well-being.

Implications for further research

The findings raise a number of areas for further research. It would be of interest to explore experiences of father absence for reasons other than parental relationship breakdown, for example, absence due to incarceration, death or long periods of working away from home. Further research needs to identify the factors that can facilitate father-child relationships when the father is no longer resident in the family home and to identify and test supportive strategies that could be introduced to ameliorate the effects of father absence on children and adults. In situations where the father-child relationship is not possible, for instance in situations of abuse or domestic violence, research to explore how children can be protected from the negative consequence of father-absence is needed.

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WOMEN'S PERSPECTIVES OF PAIN FOLLOWING DAY SURGERY IN AUSTRALIA

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ABSTRACT

Objective:

To investigate the incidence of pain following discharge from reproductive day surgery.

Design:

Cross-sectional descriptive study.

Setting:

A public hospital for women in Melbourne.

Subjects:

315 women participated in phone interviews and 10 in face-to-face interviews.

Main Outcome measure(s):

Self-reports of pain were assessed in relation to age, English and non-English speaking background, prior experience of day surgery, type of surgery, time in recovery, information provision prior to surgery, and access to significant others at home.

Results:

Older women were less likely to report having pain immediately following discharge (regression coefficient = -0.72, 95% CI, 0.58 to 0.88, $p \leq 0.01$), or within 48 hours following discharge (regression coefficient = -0.71, 95% CI, 0.57 to 0.88, $p \leq 0.05$). Women with a prior experience of day surgery were 1.9 times more likely to be in pain within 48 hours following surgery (regression co-efficient 1.88, 95% CI, 1.134 to 3.10, $p \leq 0.05$). Women who understood information were less likely to report that they experienced pain within 48 hours of discharge (regression co-efficient -0.74, 95% CI, 0.24 - 0.95, $p \leq 0.05$).

Conclusions:

Younger patients, those who have had prior experience of day surgery and those who received inadequate information prior to surgery were most likely to report pain. Adequate individual patient assessment will ensure that patients' experience of pain following day surgery is minimised.

INTRODUCTION

Day surgery has increased worldwide with changes in anaesthesia practices, technological advances in medicine (eg laser), a need to improve the cost-effectiveness of health services, and an emphasis on reducing waiting times for elective surgery. By the late 1990s, 60% of elective procedures in the UK and the US and 50% in Canada were conducted as day surgery. In Australia, day surgery as a percentage of all surgical procedures increased significantly from 7% in the 1980s to about 41% in 1997/98 and 55% in 2001 (Millar 1997; Australian Government Department of Health and Aged Care 1999; Mitchell 2000).

Pain is documented as being the most intense and disabling postoperative symptom experienced following day surgery, immediately and after discharge when the patient is expected to resume responsibility for his or her own care (Carr and Thomas 1997). Some patients still report pain a week after surgery (Agboola et al 1999). Health professionals may underestimate patients' pain and prescribe inadequate analgesia (Callesan et al 1998; Watt-Watson et al 2001) leading to hospital readmission (Tham and Koh 2002). Limited research has been conducted in Australia on day surgery (Donoghue et al 1995; Roberts et al 1995); none in relation to the incidence and management of pain immediately or on return home.

While both qualitative and quantitative research studies have been conducted to explore pain associated with surgery and day surgery, a universal day surgery

pain measurement tool does not exist (Coll et al 2004). In quantitative studies, various methods, including a Visual Analogue Scale (VAS), a verbal rating system, and a structured questionnaire, have been used to explore pain in the fields of orthopaedics, urology, ophthalmology, otorhinolaryngology, gynecology and general surgery (Roberts et al 1995; Gagliese et al 2000; Taenzer et al 2000; Jakobsen et al 2003;). Qualitative research has also been conducted on experiences of postoperative pain in relation to ophthalmologic, gastroenterologic, and gynaecologic surgery, with patients in recovery or on the ward (de Beer and Ravalia 2001); immediately before discharge (Burmdayal and MacGowan-Palmer 2002); within two days (Stockdale and Bellman 1998; Gagliese et al 2000;); five days (Roberts et al 1995; Taenzer et al 2000); eight days (Agboola et al 1999; Barthelsson et al 2003); and four weeks following surgery (Callesan et al 1998).

Adequate information has been shown to reduce self-reported pain and its intensity (Linden and Engberg 1996) and to ensure realistic patient expectations with regard to resuming activities postoperatively (Jakobsen et al 2003). Callesan and associates (1998) and Yellen and Davis (2001) and have reported that with increased age of patients, reporting of postoperative pain decreases. In contrast, Gagliese and colleagues (2000) found that while older patients expected less intense pain than younger patients following surgery, there were no statistically significant differences in the experience of pain by age.

Medical anthropological research (Lipton and Marbach 1984) points to cultural background as influencing the communication, expression and responses to pain. However this need not imply homogeneity in response, since pain experience is also affected by life experiences, coping mechanisms, social roles and relationships, and socioeconomic and demographic circumstances such as age, class and gender (Bates 1996). Studying the impact of these factors, as well as culture, on the experience of pain is important to avoid reinforcing cultural stereotypes resulting in sanctioning stoicism.

Gender affects day patients' ability to draw on personal support following surgery. Mitchell (2003) suggests that increased day surgery has led to greater lay caregiver involvement postoperatively. Women fare worse; as patients they cannot or are unable to rely on personal networks in the way that men can. A study in Europe, for example, demonstrated that women who had been under a general anaesthetic resumed household chores (eg. cooking, cleaning) and care giving (eg. childcare) within 24 hours of discharge, and this may have contributed to their pain experience (Jakobsen et al 2003).

Women report high pain levels following day surgery for reproductive health (Coll et al 2004). Previous studies have focused on specific procedures, predominantly laparoscopy (Donoghue et al 1995; de Beer and Ravalia 2001) and laparoscopic sterilisation (Agboola et al 1999; de Beer and Ravalia 2001; Burmdayal and MacGowan-

Palmer 2002; Jakobsen et al 2003), but also termination of pregnancy (Hein et al 2001), tubal ligation (Fraser et al 1989), and breast surgery (Stockdale and Bellman 1998). The exception is a study conducted by Roberts and colleagues (1995) on various gynaecological surgeries which compared the pain experiences of patients with an open versus closed surgery rather than according to procedure. Their focus, on type of surgery and pain levels, overlooked social, demographic and economic characteristics of the patients. The present study, by contrast, examines pain experiences of women in relation to their socio-demographic characteristics; this includes by English or non-English speaking background as a simple but feasible proxy of patients' culture.

METHODS

This descriptive correlational study aimed to explore the experience of pain at, and within 48 hours, of discharge from day surgery, and to investigate patients' management of pain. The objectives were to explore the impact of sociodemographic characteristics (age and cultural background), surgery status (day surgery on a previous occasion, type of surgery), informal support (access to significant others at home), and quality of care (time in recovery, adequate information provision) on women's perceptions of pain and pain management strategies. Ethics approval for the study was granted by the relevant hospital and university committees.

Sample

Study participants were women who had undergone day surgery in an Australian women's public hospital and included both private and public patients. Between August and October 2000, women were recruited on the day of their surgical procedure in the area where they were required to wait for surgery. A small number of women (n=58, 11.4% of all women approached) declined to participate. From 451 women who agreed to participate (about 27% of total planned surgeries), 315 women were followed up (70%; about 19% of total surgeries in the study period). The remaining women were not followed up due to inability to establish contact within 48 hours of surgery (26%), overnight stays due to complications from surgery or additional surgery indicated as a result of the day procedure (2.6%), and withdrawals from the study (1.1%).

Data collection

Quantitative and qualitative methods (telephone survey and in-depth interviews) were used. The questionnaire, comprised of open-ended and closed questions, was piloted with 20 day surgery patients, born in Australia (n=11) and overseas (n=9), prior to being administered. Data were gathered on socioeconomic background, general health (self-rated), information provision and its adequacy prior to day surgery, support and help at home following discharge, and advantages and disadvantages of day surgery. Information was collected on whether women had pain following discharge, management of

pain at home (pain killers, alternative remedies, nothing), whether they were in pain at 48 hours of discharge, and the level of pain. Women who reported being in pain within 48 hours of discharge were asked to indicate its level on a Likert scale (1-5), where one indicated that the patient had little pain and five that the patient had the worst pain imaginable. On average, a telephone interview lasted for about 16 minutes. SPSS software was used for data entry and descriptive, bivariate and multivariate statistical analysis.

To complement and corroborate the survey data, face-to-face in-depth interviews were conducted with ten women recruited through purposive sampling to include different socioeconomic backgrounds and different surgical procedures. Interviews, lasting for about 60 minutes, were conducted at a woman's home or another place of her choice. Interviews explored women's pain management strategies and the experiences of recovery at home. Qualitative data collection and data analysis were conducted concurrently, allowing for the refinement of interview guidelines and cessation of interviews with data saturation.

Data analysis

Thematic analysis was conducted with the use of ATLAS-ti software (Scientific Software Development 1991-2004) using a grounded-theory approach (Strauss and Corbin 1990). This was an iterative process in which all authors read the transcripts and developed the coding book, identifying the themes within individual transcripts and cross-checking them across narratives (Ryan and Bernard 2003). To illustrate women's experiences, we use excerpts from interviews.

FINDINGS

The majority of women in the sample were born in Australia (62.5%). Most women were aged 26-45 years (58.4%, mean age 36.68 years), and had completed secondary schooling (56.8%). Almost 60% were married or in a de facto relationship and about 80% lived with their family. The majority (63.8%) was employed, but almost a quarter was full-time homemakers (23.2%). Nearly three quarters ($n=234$, 74.3%) were public patients, the remainder private ($n=81$, 25.7%).

Overall, 69.5% of the women experienced pain following discharge. There was a statistically significant negative association between age and pain (see table 1): with increased age, women were less likely to report having pain immediately following discharge (regression coefficient = -0.72, 95% CI, 0.58 to 0.88, $p \leq 0.01$), or within 48 hours following discharge (regression coefficient = -0.71, 95% CI, 0.57 to 0.88, $p \leq 0.05$).

Table 1:

Pain following discharge and within 48 hours of hospital discharge and patients' age

Patients' age	Pain following discharge from hospital		Total	Pain within 48 hours of discharge		Total
	Yes	No		Yes	No	
16-25	48 (84.2%)	9 (15.8%)	57 (18.1%)	33 (64.7%)	18 (35.3%)	51 (19.8%)
26-35	74 (74.0%)	26 (26.0%)	100 (31.7%)	52 (59.8%)	35 (40.2%)	87 (33.7%)
36-45	50 (59.5%)	34 (40.5%)	84 (26.7%)	29 (46.8%)	33 (53.2%)	62 (24.0%)
46+	47 (63.5%)	27 (36.5%)	74 (23.5%)	24 (41.4%)	34 (58.6%)	58 (22.5%)
Total	219 (69.5%)	96 (30.5%)	315 (100%)	138 (53.5%)	120 (46.5%)	258 (100%)

No statistically significant differences were observed among women by country of birth or background: Australia-born, English-speaking background overseas-born and non-English speaking background overseas-born women reported similar experiences of pain. Within 48 hours of hospital discharge, 53.5% of women still experienced pain, and again no statistically significant differences were noted. The mean pain score was 2.6 (SD = 1.02), with no significant differences between English speaking and non-English speaking background women (2.7 and 2.5 respectively).

More than half of the respondents (57.1%) had previous day surgery. These women were 1.9 times more likely to report pain within 48 hours of surgery (regression coefficient 1.88, 95% CI, 1.134 - 3.10, $p \leq 0.05$). Previous day surgery however had no impact on experiencing pain immediately following discharge.

Whether a woman had undergone a single procedure or multiple procedures did not significantly alter pain intensity levels. However specific procedures were statistically significant in terms of experience of pain following discharge and within 48 hours of discharge; these were breast biopsy, dilation and curettage combined with laparoscopy, hysteroscopy or pelviscopy, and medical termination of pregnancy. For all surgeries apart from breast surgery, most women reported pain following discharge (see table 2).

Table 2:

Type of operation and pain following discharge and within 48 hours of discharge

Type of operation	Any pain following discharge		Any pain within 48 hours of discharge	
	Yes	No	Yes	No
Dilation and curettage + LHPa	36 (11.4%)	25 (7.9%)	20 (7.8%)	27 (10.5%)
Breast biopsy	7 (2.2%)	7 (2.2%)	5 (1.9%)	3 (1.2%)
Medical termination of pregnancy	29 (9.2%)	17 (5.4%)	13 (9.4%)	25 (9.7%)
Any other procedure	147 (46.7%)	47 (14.9%)	100 (38.8%)	65 (25.2%)
Total	219 (69.5%)	96 (30.5%)	138 (53.5%)	120 (46.5%)

a Note: LHP = laparoscopy, hysteroscopy, pelviscopy

Women who felt that the information provided was easy to understand were less likely to report pain following discharge from hospital (regression co-efficient -0.334, 95% CI, 0.14 - 0.85, $p \leq 0.05$), regardless of type of surgery and within 48 hours of discharge (regression co-efficient -0.74, 95% CI, 0.24 - 0.95, $p \leq 0.05$). However no statistically significant association was found between understanding information and reporting pain levels on the Likert scale.

Most women (83.8%) reported that it was easy to follow the information provided. Private patients were about three times more likely than public patients to find information inadequate ($X^2 = 9.67$; $p \leq 0.01$). Based on information received, most patients expected little pain associated with day surgery, and persistent pain led them seek medical advice and reassurance that their pain was 'normal'.

Bivariate analysis indicated a statistically significant association ($X^2 = 13.25$, $p \leq 0.001$) between time spent in recovery and reporting pain 48 hours following discharge (see table 3). Continuity of nursing care in recovery and rapport with the nurses influenced women's ability to negotiate the length of their stay in recovery, and ultimately pain free recovery at home: *'In recovery, I had two nurses in particular... they were really good with me, let me stay in bed because I wanted to... I only had painkillers at hospital, not at home, not even the next day; I didn't take anything'* (23 years, Australia-born, medical termination of pregnancy).

Table 3:

Time spent in recovery room and pain within 48 hours of discharge

Still in pain	Time spent in the recovery room		Total
	Adequate	Inadequate	
Yes	87 (33.7%)	51 (19.8%)	138 (53.5%)
No	100 (38.8%)	20 (7.8%)	120 (46.5%)
Total	187 (72.5%)	71 (27.5%)	258 (100%)

Most respondents self-managed their pain (80.8%), relying on analgesics (78.5%) or alternative remedies (eg. massage and/or herbal medicine) (2.3%). About a fifth of the sample (19.2%) did nothing to cope with the pain. No statistical differences emerged in factors influencing pain management and in-depth interviews revealed that the pain management depended on a woman's individual preference. There was a statistically significant association ($X^2 = 9.33$, $p \leq 0.05$) between women reporting the purchase of non-prescription analgesics (31.2%) and type of procedure; women with dilation and curettage combined with laparoscopy, pelviscopy or hysteroscopy (50%) were most likely to self-medicate than those undergoing medical termination of pregnancy (38.5%), multiple surgeries (27.5%), and various single procedures (23%) such as cone biopsy, laser treatment, or sterilisation.

In total, 86% of women received help at home. Women who reported pain 48 hours following discharge were about 2.3 times more likely to receive help at home from significant others (regression co-efficient 2.34, 95% CI, 1.26-4.36, $p \leq 0.01$). Women who reported that it was inconvenient for their caregivers to take care of them (1.9%) were more likely to resume their own caregiving roles following discharge ($X^2 = 18.21$; $p \leq 0.001$), with some respondents reporting difficulties in caring for small children following day surgery, and identifying this as a disadvantage of day surgery (see also Barthelsson et al 2003). This was compounded for those who received inadequate help, or for those whose caregivers were unable or reluctant to be available to them following discharge: *'I had to pretend a little bit at home, in front of my little girl, that I was feeling alright ...you know, you have to'* (38 years, Australia-born, multiple procedures).

DISCUSSION

The experiences of women in Australia undergoing reproductive health day surgery resemble those of women internationally: day surgery is not pain-free and there is scope for improving discharge assessment and pain management. The majority (69.5%) reported pain following discharge from day surgery and more than a half were still in pain 48 hours after surgery. The experience of postoperative pain varies greatly however and it may be difficult to predict pain-related experiences of patients (see also Barthelsson et al 2003; Burumdayal and MacGowan-Palmer 2002). Factors that may be relevant include age, previous day surgery experience and information provision prior to surgery.

Our research corroborates other accounts of an inverse relationship between reports of postoperative pain and age (Callesan et al 1998; Yellen and Davis 2001), raising questions about changes in reporting patterns. Burumdayal and colleagues (2002) argued, 'some patients may believe that pain builds character and feel ashamed to admit pain unless questioned in depth or indirectly.' Our findings demonstrate that the pain experience may be worse for women with more than one experience of day surgery than those without, suggesting that patients' previous experience with pain may cloud their postoperative pain perception' (Magnani et al 1989) and 'might well alter their pain threshold' (Burumdayal et al 2002), suggesting the value of demographic and medical data for pain assessment.

Our data also indicate the positive role of information provision on patients' experience of pain (Kratz 1993; Linden and Engberg 1996): women who felt that the information provided was easy to understand were less likely to report having pain following discharge or within 48 hours of discharge from hospital. As reported, private patients were more likely to report that day surgery information was inadequate. It is therefore necessary to improve information provision, particularly given the 'push' of the current Australian government

for people to access private health insurance and seek health care as private rather than public patients (Moorin and Holman 2006).

CONCLUSION

Given the diversity of patients' experiences, individual assessment of each patient is necessary. Information provision needs to be improved for all people undergoing day surgery, particularly private patients. Roberts and colleagues (1995), based on the Australian study on patients' pain-related difficulties almost 10 years ago, recommended that in the immediate postoperative period health professionals or social workers provide routine home visits: this has not eventuated. Our finding that women reported difficulties managing at home, reinforce the continued need for day surgery patients to access services that provide domiciliary and community-based care.

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A COMPARATIVE STUDY OF PATIENT PERCEIVED QUALITY OF LIFE PRE AND POST CORONARY ARTERY BYPASS GRAFT SURGERY

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Key words: Short form health survey, SF-36, quality of life, physical health, mental health

ABSTRACT

Objective:

Traditionally, evaluation of outcome post cardiac surgery has focused on objective measures of cardiovascular status. The emphasis has shifted to examining an individual's quality of life (QoL). However a gap in Australian prospective research assessing QoL from a pre-operative period to the early stage of six weeks post-operatively exists. The aim of this study was to investigate recovery from coronary artery bypass graft surgery (CABGS) on the basis of patient perceived QoL and in particular, physical and mental health.

Design and setting:

Prospective longitudinal quasi-experimental study in a tertiary hospital in Melbourne, Australia.

Subjects:

Fifty four patients undergoing their first or second CABGS completed pre- and post-operative questionnaires.

Main outcome measures:

The Short Form 36 (SF-36) questionnaire was used to measure physical and mental QoL pre-and post CABGS and gives eight domain scores as well as a physical (PCS) and mental component summary score (MCS).

Results:

SF-36 scores following CABGS were significantly improved in three of the eight domains: physical functioning ($p<0.001$); general health perception ($p<0.001$); energy/vitality ($p<0.005$); and PCS ($p<0.001$). No statistical difference was found in patients' MCS pre- and post-operatively. Of importance, patients reported higher levels of pain at six weeks post-operatively compared to their pre-operative levels but scores were not significantly different.

Conclusions:

The SF-36 demonstrates improvements in physical QoL six weeks after CABGS compared to pre-operative results but no difference in mental QoL suggesting psychological adaptation. An increase in the pain score at six weeks suggests inadequate pain management in these patients.

INTRODUCTION

Coronary artery disease (CAD) is a significant cause of morbidity and mortality in Australia and around the world (Heart Foundation 2004). According to the Heart Foundation (2004), the health burden of cardiovascular disease exceeds that of any other disease and is the largest cause of death in Australia. The main symptoms associated with CAD are shortness of breath (dyspnoea) and chest pain (angina), which usually impacts negatively on an individual's physical functioning and activities of daily living (ADLs) and thus their QoL. Alleviation of these symptoms is the main reason individuals seek medical treatment.

Symptom severity has historically been categorised as the functional status of an individual with cardiac disease. The most recognised grading systems include; the Canadian Cardiovascular Society (CCS) classification of angina pectoris (Campeau 1976) and the New York Heart Association (NYHA) classification of heart failure (Criteria Committee of the New York Heart Association 1964). Although these classifications give clinicians an indication of the severity of an individual's symptoms, they do not inform us of their impact on the individual's QoL in terms of ADLs. There is no known cure for CAD. However re-vascularisation therapies are commonly utilised and include percutaneous coronary interventions (PCI) such as angioplasty and coronary stenting, and surgical re-vascularisation such as CABGS. Approximately 16,000 CABGS operations are performed annually in Australia (Heart Foundation 2004).

Research on CABGS has provided important data on outcomes, indicating that surgical intervention is effective in relieving the symptoms of CAD. Traditionally, evaluation of outcome post cardiac surgery has focused on medical outcomes such as complication, morbidity and mortality rates (Myles et al 2001). Although these measures are important in assessing the success of an operation, exclusively they cannot be regarded as an adequate estimate of outcome.

The Center for Disease Control and Prevention (2000) suggests that due to medical advances having led to improved treatment of disease and a delay in mortality, measuring health outcomes with interventions needs to not only focus on how many lives have been saved, but also on how an individual's life has been improved in terms of quality. A fitting explanation of QoL is the QoL theory which states that individual's subjective evaluation of the degree to which their needs, goals and wishes in valued areas of life, such as health, have been fulfilled, will equate to their life satisfaction (Frisch 2000).

In a study by Lindsay et al (2000) the researchers demonstrated that an individual's expectation of treatment is likely to have an influence on health outcomes with a majority of participants relating CABGS with an improved QoL. Gortner (1994) went on to find that the unexpected occurrence of continued symptoms post-operatively was shown to have a negative effect on an individual's perceptions of QoL following CABGS. Further research by Mallick et al (2005) has confirmed that those with depression and depressive symptoms report a negative or poorer QoL post CABGS even though their symptoms have been alleviated (Mallick et al 2005).

Considering the physical, social and emotional consequences of CAD which impact on QoL, measures have become increasingly recognised as complementary determinants of broader health status and have therefore gained importance in multidisciplinary clinical research (Donald 2003). A popular measure of subjective QoL for use in individuals with cardiovascular disease is the SF-36 questionnaire, which has been reported as valid and reliable in evaluating the impact of symptoms following CABGS (Ware 2003). Research investigating QoL in CABGS patients using the SF-36 has shown that for the majority of patients who undergo CABGS, most patients benefit from the procedure with an evident gain in QoL (Myles et al 2001; Skaggs and Yates 1999; Hunt et al 2000; Lindsay et al 2000). Of relevance to this study, Ross and Ostrow (2001) found that physical functioning and energy/vitality were significantly improved at six weeks post CABGS when compared to pre-operative levels.

METHODOLOGY

This prospective study was performed following review and approval by the Alfred Hospital Ethics Committee and the La Trobe University Human Ethics Committee. Data was collected face-to-face pre-operatively, intra-operatively and in the post-operative periods. All data was collected using the hospital cardiothoracic database. At the completion of data collection and analyses, data was kept in a locked filing cabinet for the follow-up study. Patient confidentiality was maintained throughout the study.

Questionnaire

The Australian version of the SF-36 was used (Australian Bureau of Statistics 1995). It is a self-administered 36 item questionnaire which measures eight domains of health. The scores for each domain range from 0 (the worst) to 100 (the best) possible health status. The scores can then be aggregated into two standardised summary scores measuring physical and mental health. (Jenkinson et al 1999). The mean score is 50 with 10 as the standard deviation. The SF-36's reliability and validity have been extensively reported. Ware (2003) found that the SF-36 was highly reliable; has high internal consistency; and high test-retest reliability. Similar results were also found in the Australian national survey (Australian Bureau of Statistics 1995).

Sample

A convenience sample of individuals undergoing CABGS or re-do CABGS was recruited over a 42 week period at a tertiary hospital in Melbourne, Australia. Potential participants were approached in the pre-admission clinic and consented for the study. The exclusion criteria included: those under the age of 18 years; those having concurrent surgery (valve replacement for example); those who were ventilated and intubated prior to operation; and those who had any communication disorder that could not be overcome with an interpreter. The data collection occurred between January and October 2004 and was completed pre-operatively in the pre-admission clinic and then six weeks post-operatively in the out-patients clinic.

Data analysis

Data analysis was performed using SPSS version 11.5®. Descriptive statistics were used for pre, peri and post-operative data. Paired t-tests were used to compare pre-operative and post-operative SF-36 scores.

FINDINGS

Eighty seven participants were recruited however information was obtained from only 81 participants pre-operatively. A percentage of the 81 patients did not

undergo CABGS or had concurrent surgical procedures such as valve replacement. These patients were then excluded from the study which reduced the sample size to 54. Patient demographic data from this sample is summarised in table 1.

Table 1:

Pre-operative characteristics of the sample

Variables	Frequency (n=62)	Percentage of sample (%)
Age	66.4 years (SD10.23)	
Gender		
Male	54	87.1
Female	8	12.9
Risk Factors		
Hypercholesterolaemia	56	90.0
Hypertension	58	93.5
Diabetes		
Type One	21	34.0
Type Two	3	4.8
Smoking Status		
Current smoker	15	24.2
Ex smoker	26	42.0
Cardiac history		
Acute myocardial infarction	26	42.0
Previous CABGS	4	6.5
Previous PTCA	12	20.0
Previous Stents	11	18.0

A majority (28.3%) of participants were found to have a Class III rating for the CCS, which means they had a marked limitation of ordinary physical activity and experienced angina with mild exertion; whereas a majority (35%) of participants had a Class II rating for the NYHA, which means they had slight limitation of physical activity. They were comfortable at rest, but ordinary activity resulted in fatigue or dyspnoea. Two patients (2.3%) died post-operatively in hospital due to cardiac causes. Both were undergoing re-operation.

The results from the SF-36 questionnaire for each of the eight domains are presented in table 2. Three measures were statistically significantly ($p < 0.001$) from pre-operative to six weeks post-operative. These domains were physical functioning, energy/vitality, and general health perception. Scores in the remaining domains had improved from the pre-operative scores but were not statistically significant. The exception was in the domain of pain as this score decreased post-operatively, although it was not significant ($p = 0.170$).

Table 2:

Mean pre and post-operative SF-36 scores for the eight domains (n=54).

SF-36 Domain	Pre-operative mean score (SD)	Post-operative mean score (SD)	Level of significance
Physical functioning	48.5 (25.8)	62.5 (21.7)	<0.001
Role limitation (due to physical problems)	47.1 (7.3)	54.6 (23.2)	0.600
Role limitation (due to emotional problems)	50.0 (44.2)	54.7 (43.9)	0.613
Social functioning	66.0 (28.1)	70.4 (28.6)	0.394
Mental health	82.9 (21.1)	83.7 (20.3)	0.798
Energy/vitality	53.3 (27.6)	64.3 (21.3)	0.004
Bodily pain	60.9 (25.9)	54.1 (25.0)	0.170
General health perception	58.0 (18.8)	69.5 (17.0)	<0.001

The component summary scores post-operatively for physical health showed significant improvement from the pre-operative score ($p < 0.001$). The MCS score post-operatively was not statistically significant from the pre-operative level ($p = 0.902$) (see table 3).

Table 3:

Mean PCS and MCS scores pre-operatively and six weeks post-operatively (n=54)

Component Summary Score	Pre-operative Mean Score (SD)	Post-operative Mean Score (SD)	T test	Level of significance
PCS	26.1 (8.0)	33.5 (10.2)	-4.6	<0.001
MCS	53.4 (12.7)	53.7 (10.1)	-0.124	0.902

LIMITATIONS

Several limitations should be considered when interpreting the findings of this study. The attrition rate was a problem due to the cardiothoracic unit significantly decreasing the number of surgical cases being undertaken at the time of this study and patients undergoing concomitant surgery for valvular disease. This impacted on the number of participants available for follow up in the allotted time. The stress experienced by participants during the pre-operative assessment when the initial data was collected is another potential limitation. One further problem with this non-randomised study is whether the observed differences in QoL scores from pre to post surgery may be due to other major life events rather than effects of re-vascularisation alone.

DISCUSSION

In this study, the male to female ratio was consistent with the demographic characteristics of cardiovascular disease predominantly affecting men, with CABGS being done three times more frequently in males than in females (Australian Institute of Health and Welfare 2003). The mean age of 66.4 years is considered young for those undergoing CABGS as procedure rates peak in Australia at ages 70-74 (Australian Institute of Health and Welfare 2003). This is a strong predictor for improvements of QoL, as Hunt et al (2000) found younger patients report greater improvements in QoL since they are more likely to return to a more active life post-operatively. A majority of participants reported having a Class III CCS rating and a Class II NYHA rating pre-operatively, suggesting they had a significantly decreased functional ability. Finally, the mortality rates are also representative of those undergoing CABGS. The findings from the demographic data demonstrate that the sample from this study is representative of the Australian population with heart disease (Australian Bureau of Statistics 1995).

When the pre-operative SF-36 scores from this sample are compared to Australian population data for those without heart disease and for those with heart disease, it reveals that for all domains except general health perception, mental health and the MCS scores are all well below the norms, suggesting that the QoL for this sample is below an optimal level (Australian Bureau of Statistics 1995). The fact that the domains of mental health and MCS scores are comparative to population norms suggests that the participants in this sample have psychologically adjusted to their illness. This is in line with previous studies (Singer et al 1999; Pit et al 1996).

In contrast, and not unexpected for individuals with symptomatic CAD awaiting CABGS, the identification of particularly poor health status pre-operatively through the PCS score may be an important factor in the overall assessment of operative risk. As Rumsfeld et al (1999) found inferences can be made as to how an individual's QoL will be affected post-operatively, as individuals with lower levels of health as determined by the SF-36 prior to CABGS are less likely to gain improvement in health following CABGS with up to 20% of patients not showing an improvement in QoL. The pre-operative PCS was also found to be predictor of mortality six months post CABGS.

When the post-operative SF-36 scores from this sample are compared to Australian population data for those with no heart disease, scores for all domains except energy/vitality, mental health and the MCS continued to be lower than the norms, suggesting that QoL at six weeks post CABGS continues to be sub-optimal.

When the mean SF-36 scores at pre-operative to post-operative periods in this sample are compared, significant improvements in three of the SF-36 domain scores: physical functioning; general health perception; and energy/vitality; as well as in the PCS are seen. This

suggests that an individual's physical health improves when measured six weeks post CABGS. It would be expected that SF-36 scores would continue to improve with further recovery. Findings from this study are consistent with other results (Myles et al 2001; Ross and Ostrow 2001). These studies demonstrated that at six weeks post CABGS, individuals still have a sub-optimal QoL. For example at one month post-operatively there is minimal improvements in QoL due to the challenge of managing post-operative symptoms, dealing with health problems that arise after discharge, adapting to lifestyle changes, and getting back to normal routines and role functions (Skaggs and Yates 1999).

For bodily pain, post-operative scores were lower than those recorded at pre-operative assessment in accordance with other studies (Ross and Ostrow 2001). An increase in the pain score at six weeks post-operatively is most likely an implication of surgery in that the healing and associated pain experienced in the sternotomy wound is still present.

The nursing implications of this study are that the measurement of QoL is particularly important in that outcome assessment incorporates an assessment between surgical risks and potential benefits. Health professionals tend to underestimate many problems that individual's experience in relation to disabilities, disease and QoL. Nurses play an integral role in the optimisation of individual health outcomes. As each individual's self-perceived QoL is unique, through preparation and education prior to surgery the nurse can gain an increased knowledge of what the individual deems important allowing realistic goals, individualised care and education to be developed (Donald 2003). As a result this could accelerate the recovery process especially in the early post-operative period, as Lindsay et al (2000) found for a majority of individuals, the experience of the operation was a greater challenge than they had expected, the pain was more severe, they were weaker for longer and the recovery process was variable but long. Early preparation and education would also facilitate lifestyle changes and help individuals cope with the consequences of CABGS and furthermore improve their QoL.

An important finding from this study even though not statistically significant suggests that individuals are not discharged from hospital with the appropriate analgesia which means that their recovery is prolonged and QoL is impacted on. The implications are that post-operative pain could be better managed in this cohort. As Reimer-Kent (2003) suggests, inadequate pain management is a common problem post-operatively and it is an area of nursing practice that could be improved. As a consequence of these findings the Practice Review Committee made up of nurses from the cardiothoracic unit are in the process of developing pain management guidelines which will be used for all individuals undergoing a sternotomy, with the aim to introduce a consistent approach which is patient centered and can be undertaken in the community by the patient after discharge.

CONCLUSION

The goal of health care interventions today is to manage, alleviate or eradicate physical illness and ultimately improve a patient's QoL. Review of the literature revealed a gap in Australian research which this study attempted to fill: assessing QoL from a pre-operative period to the early stage of six weeks post-operatively. At six weeks post-operatively most patients are yet to experience significant improvements in their QoL. This study aimed to increase the body of knowledge regarding QoL outcomes for patients undergoing CABGS. Optimal care of patients requires consultation about perceived results of surgery and a change in practice to meet patient needs. In future, nurses can create a change in practice that makes a difference in QoL for patients undergoing CABGS if they improve the way in which patients are counseled so that they are supported before, during and after surgery.

RECOMMENDATION

A multidisciplinary approach is required to optimise patients' QoL post CABGS and to ensure they have adequate analgesia in the six week post-operatively. CAD is a chronic disease and the role of subjective QoL questionnaires needs to be investigated as a possible tool in monitoring patients' QoL, especially pre-and post CABGS.

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PATIENT ADVOCACY AND ADVANCE CARE PLANNING IN THE ACUTE HOSPITAL SETTING

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In memory of a voiceless patient whose silent suffering caused me to grieve deeply that we as a culture could not step back from our striving to see how we had violated trust by not allowing him to pass away with even a shred of human dignity left.

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Key words: patient advocacy, ethics, advance care planning, hospitals, advance directives, nurses.

ABSTRACT

Objective:

The aim of this study was to explain the role of patient advocacy in the Advance Care Planning (ACP-ing) process. Nurses rate prolonging the dying process with inappropriate measures as their most disturbing ethical issue and protecting patients' rights to be of great concern (Johnston et al 2002). Paradoxically ethical codes assume nurses have the autonomy to uphold patients' health-care choices. Advance Directives (AD) designed to improve end-of-life care are poorly taken up and acute hospitals are generally not geared for the few they receive. The Respecting Patient Choices Program (RPCP) improves AD utilisation through providing a supportive framework for ACP-ing and primarily equipping nurses as RPC consultants. Assisting patients with this process requires attributes consistent with patient advocacy arising out of nursing's most basic tenet, the care of others.

Design:

Likert Scales survey administered pre and six months post-intervention to pilot and control groups, with coinciding focus groups.

Setting:

Selected wards in an acute care public hospital in South Australia.

Subjects:

Nurses on the palliative care, respiratory, renal and colo-rectal pilot wards and the haem-oncology,

coronary care, cardiology and neurology/geriatric control wards.

Intervention:

The RPCP during the 2004-2005 South Australian pilot of the (RPCP).

Main outcomes:

The organisational endorsement of ACP-ing gave nurses the autonomy to be patient advocates with respect to end-of-life care, reconciling clinical practice to their code of ethics and easing distress about prolonging the dying process inappropriately.

Results:

Statistically significant survey results in the post-intervention group showed nurses experienced: encouragement to ensure patients could make informed choices about their end-of-life treatment (84%); the ability to uphold these wishes in practice (73%); and job satisfaction from delivering appropriate end-of-life care (67%); compared to approximately half (42-55%) of respondents in the pre-intervention and control groups. Focus group participants shared that it used to be hard to advocate for patients, but now they could act legitimately and felt ethically comfortable about ensuing end-of-life-care.

Conclusion:

Findings suggested patient advocacy, fostered by the supportive RPC environment, effectuates the ACP-ing process. It is recommended that the RPCP should be recognised and developed as integral to promoting quality end-of-life assurance and associated job satisfaction.

INTRODUCTION

The aim of this study was to explain the role of patient advocacy in the ACP-ing process. An advance care plan (ACP) is documentation that makes a person's wishes known about possible future medical treatment in the event of losing capacity to communicate (OPA 1999). Assisting patients with the ACP-ing process involves ensuring they understand life prolonging treatment options; their legislative rights to ADs; and, in consultation with their loved ones and health care providers, to document and communicate their end-of-life care treatment preferences (Austin Health 2004). Facilitating this process requires a willingness to establish a therapeutic relationship with the vulnerable patient; enable the patient to be involved in decision-making; and serve as a mediator between the patient and other parties. These attributes, according to Baldwin's (2003) concept analysis, represent the presence of patient advocacy.

The investigator for this research, a registered nurse at a major teaching hospital's Division of Critical Care speciality pool, helped implement the RPCP at the hospital and job-shared the RPC Project Officer position. The program was launched in October 2004 as part of the National Palliative Care Program's RPCP pilot extension to a lead hospital in each State and Territory of Australia following Austin Health's successful trial in Melbourne, Victoria, Australia. This research project contributed toward a current masters undertaking in Health Science (Health Promotion) through Deakin University Melbourne.

BACKGROUND

In the acute care hospital setting, should the patient lose competence in the absence of AD or medical instructions to the contrary, life sustaining measures including cardiopulmonary resuscitation (CPR) are routinely implemented. For nurses who do not have authority to make decisions on these matters, the position can be particularly distressing if the patient is terminally ill, very frail and elderly or has expressed the wish to avoid such measures (Johnson 2004; Taylor and Cameron 2002). Furthermore, provision for people to exercise self-determination at end-of-life through the use of AD is poorly taken-up with only a 12.5 % prevalence in the South Australian (SA) community in 2004, translating to 1% of hospital case-notes containing advance directives in that same year (DHS 1999; Harrison Health Research 2004; Foote 2004).

In addition, health professionals are often unfamiliar with ADs and hospitals are generally not geared for the few they receive (Austin 2004). These issues are reflected in Johnson et al's (2002) Final Report to the Nurses Board of Victoria, *Registered nurses' experiences of ethical issues in nursing practice*, which lists 'prolonging the dying process with inappropriate measures' as the registered nurse's 'most disturbing ethical/human rights issue' (p.31) and 'protecting patients' rights and human dignity (p.7) to be of great concern.

Issues contributing to these matters include the perceived complexity of completing AD documents, directives being unavailable when needed, and incomplete or ambiguous directives (Brown et al 2005; Austin 2004). Health professionals may resist end-of-life discussions for fear of upsetting the patient, although studies show such discussions improve patients' perception of care (Steinberg et al 1996; Austin 2004). Nurses are more likely to initiate conversations if they feel they have the necessary skills and if they have previously cared for a patient with an AD (Lipson et al 2004).

Johnson (2002; 2004) suggests that because nurses have the opportunity to be in communication with their patients, they be empowered as patient advocates and Pincombe et al (2004) after observing patients dying in South Australian public hospitals recommended developing patient advocacy to ensure care better reflected patient and family needs. However patient advocacy can be risky; nurses have stood to lose their jobs following advocacy efforts due to a lack of a support structure for the process (Baldwin 2003; ABC 2005). In addition, simply giving permission for nurses to talk with patients does not endow the advocacy skills needed to facilitate ACP-ing (Briggs 2004).

A collaborative hospital and community program that does equip nurses to assist patients with ACP-ing called RPC was successfully piloted in Australia by Austin Health, Melbourne, Victoria, Australia in 2002-2003. Originally developed at the Gunderson Lutheran Medical Centre, Wisconsin, (United States of America) the program (which does not support euthanasia or suicide) focuses on the quality of the ACP-ing process; ensures copies of the patient's document are placed in an easily accessed green-sleeve at the front of current case notes; and requires all staff involved in the care of patients to be educated about the implications of AD in everyday practice (Hammes and Rooney 1998; Austin Health 2004). Heland (2003), the original RPC Project Officer at Austin Health noted 'the nurse was empowered' by the program and 'given the opportunity to really care again' (p.1).

Care of others is nursing's most basic tenet, in which patient advocacy is ethically grounded. It pertains to fostering and protecting in order to promote well-being whether in a return to health or facilitating a peaceful death. Counselling to ensure patients can make educated decisions about their health care needs and protecting and supporting their rights describes the act of patient advocacy (Baldwin 2003; Taylor et al 1993). The *Code of Ethics for Nurses in Australia* (ANC 2002) pledges to 'accept the rights of individuals to make informed choices in relation to their health care' (p.3) and 'uphold these rights in practice' (p.1). However the code is at odds with the discipline as revealed by the report to the Nurses Board of Victoria: such codes assume nurses have the autonomy to empower patients (Baldwin 2003).

It follows that effective patient advocacy not only depends on the attributes and skills of the advocate, but also on the perceived receptiveness of the organisational environment, which may prompt or repress the act, as

well as the actual responsiveness of the environment, which may determine its outcome.

It was hypothesised that patient advocacy, fostered by the framework and tools the RPCP program provides, effectuates the ACP-ing process, promoting quality end-of-life assurance and associated job satisfaction; where the intervention variable, the RPCP, provides a framework of educative, patient information, safety and quality systems and policy support for ACP-ing, along with equipping mainly nurses, through a comprehensive two day training course, with skills and resources to facilitate the process.

The outcome variables are described as:

1. 'Fostered patient advocacy', which denotes an environment that is encouraging of the act of patient advocacy with respect to informed choice about end-of-life care;
2. 'Quality end-of-life assurance', meaning the empowering process of ACP-ing eventuating in patient valued treatment in end-of-life care and a 'good death' (a 'good death' according to anthropological and historical archives includes awareness, adjustment, preparation, disengagement and time to say goodbye (Kellehear 1999); and
3. 'Associated job satisfaction', which represents being able to deliver dignifying end-of-life care perceived to be both appropriate and congruent with the patient's wishes.

METHOD

A prospective non-randomised control trial was conducted using convenience sampling in the partially manipulated natural setting of hospital wards. The triangulation of quasi-experimental and semi-structured focus group methods enabled quantitative outcomes to be supplemented with qualitative information to enrich the research and enhance validity (Burns and Grove 1993; Sim and Wright 2002). Approval to conduct research was given by both the hospital and University Human Research Ethics Committees. The first phase RPC implementation wards served as the pilot group and second phase wards as the control group. The sample population of nursing staff from all levels was considered representative of the target population, nurses in other large metropolitan public hospitals, due to commonality under professional standards and industrial and employing State practice codes (Sim and Wright 2002).

A 5-point Likert scales questionnaire was developed through trialling and then administered to nurses in the pilot and control groups prior to the launch of the program and again at six months post-intervention. Ballot boxes were placed in hospital ward staff rooms for the anonymous return of questionnaires. The average sample size for each group was 139 with a questionnaire return rate of 76.5 (55%). There were 67% of the same control and 72% of the same pilot group staff present during both surveys, however questionnaires were not linked and so there will be some overlap. Of the post-test pilot group respondents, 43% had not undertaken RPC consultants training (30% unknown). Therefore the study measured the

general effect of the RPCP intervention on the hospital ward nurse's perception, not just the effect on those who underwent RPC Consultancy training (table 1).

Analysis was performed separately for pilot and control groups on each question to compare pre-test with post-test responses using a Chi squared test of independence. The 'strongly agree' and 'agree' responses were combined as were the 'strongly disagree' and 'disagree' responses, to form a 3 by 2 contingency table with the neutral responses. If a cell had an expected count less than 5, to overcome potential bias, a Fisher Exact test was performed. Stacked bar charts were created to visualise the degree and direction of changes. On the questions (dependent variables) that demonstrated statistically significant changes using the Chi squared test, a multiple regression analyse was also performed to compare pre-test post-test pilot and control group data. The analysis looked at group, time, and group time interaction (predictor variables).

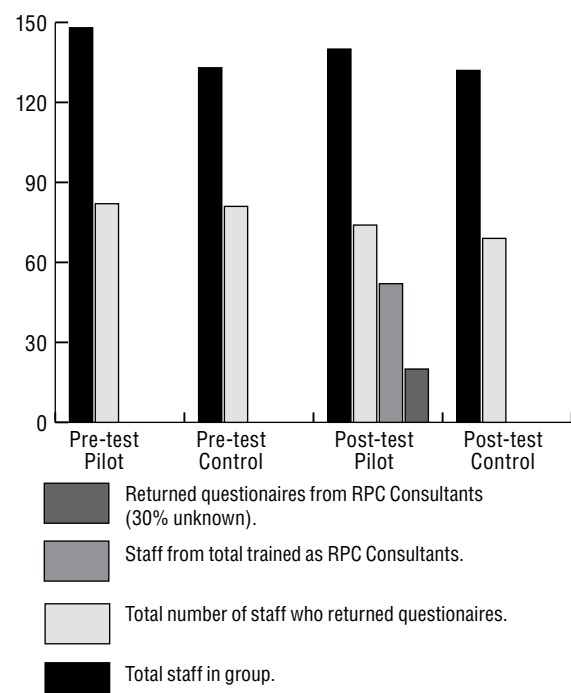
Table 1:

Sample group staff numbers and survey returns at pre-test baseline October 2004 and post test six months April/May 2005.

Pilot Group

- Renal: 28 beds, average 42 staff (RPC trained 18), returns pre-test 43%, post-test 43%
- Palliative Care: 12 beds, average 18 staff (RPC trained 9), returns pre-test 74%, post-test 82%
- Colo-Rectal: 36 beds, average 51.5 staff (RPC trained 16), returns pre-test 73%, post-test 48%
- Respiratory: 20 beds, average 30.5 staff (RPC trained 9), returns pre-test 35%, post-test 58%

Total: 96 beds, average 142 staff (RPC trained 52), returns pre-test 61%, post-test 52%



Control Group

- Haem-Oncology: 16 beds, average 28.5 staff, returns pre-test 61%, post-test 50%
- Coronary Care: 10 beds, average 29 staff, returns pre-test 96%, post-test 56%
- Cardiology: 26 beds, average 34 staff, returns pre-test 57%, post-test 58%.
- Neurology/Geriatrics: 32 beds, average 41 staff, returns pre-test 42%, post-test 46%

Total: 84 beds, average 132.5 staff, returns pre-test 55%, post-test 53%

Note: *Pre-test conduction: 17-27.10.2004 shorter time period due to the launch of RPCP on 27/10/04 and Deakin Human Research Ethics approval 18.10.2004 and TQEH HREC approval on the 30.08.200. Post-test conduction: 14.04.2005-06.05.2005.

Two focus groups with voluntary participants from both pilot and control groups were conducted prior to the RPCP implementation and one with pilot group staff only at six months. Discussions were audio-taped and the transcribed data was manually cut and pasted into themes with descriptive codes. The categories were then linked to identify relationships (axial coding) and provide insight into survey responses and the participant's views about the research topic (Sim and Wright 2002; Burns and Grove 1993).

QUANTITATIVE FINDINGS

In both pre and post-test pilot and control groups most nurses (77-87%) agreed that prolonging the dying process with inappropriate measures is nursing's most disturbing ethical issue; although they separated this issue from their clinical practice by disagreeing (62-70%) that they felt personal ethical conflict. Nurses also indicated (98-100%) that respect for patient self-determination at end-of-life was important and that delivering quality end-of-life care should give job satisfaction (94-96%). There was uncertainty (34-58%) about the validity of end-of-life care information in a crisis, although the post-test pilot group had the most confidence of all the groups. Likewise, trust in such information's availability in a crisis was poor in all groups (15-24%).

Up to half of the nurses (30-49%) agreed they felt powerless to advocate for their patients with respect to the appropriateness of their end-of-life care, although the pilot group nurses' agreement with the statement reduced to 19% post-intervention. Both post-test groups showed a statistically significant shift toward believing there was an end-of-life care policy in place. Awareness throughout the hospital of the RPC pilot would have contributed to this and a draft policy (Box 1) had been left on the haem-oncology control ward when an RPC proposed extension talk was given. Removing this wards post-test data reversed the result for the control.

Box 1: Core policy issued for the first time in July 2005 stated: 'TQEH is committed to respect patient's rights to self determination in their end of life care and medical treatment (Advance Care Plan) pursuant to the *Consent to Medical Treatment and Palliative Care Act 1995* and *Guardianship and Administration Act 1993* by educating staff and maintaining hospital systems that will ensure the plans are honoured.'

Outcome variable 1: fostered patient advocacy

A statistically significant change in the post-test pilot group was identified using the Chi squared test on Q.11, which did not occur in the control (pilot < 0.001, * p < 0.05; control 0.145). In effect, 84% of post-test pilot nurses agreed they felt encouraged in their work environment to ensure patients understood and could make informed choices about future treatment compared to an average of 49% in baseline and post-test control groups (range 42-55%) (table 2). The multiple regression also showed a statistically significant interaction effect for dependent variable Q.11, (p = 0.042).

Table 2:

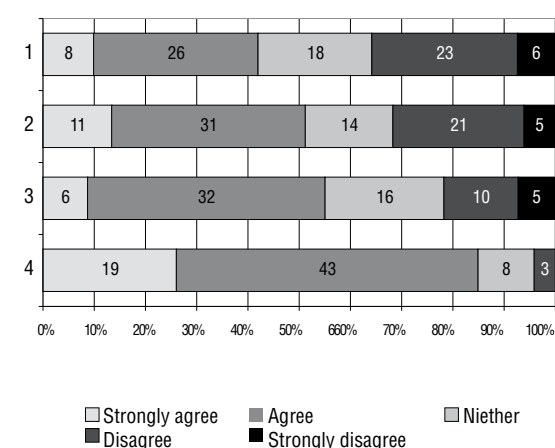
Q11: In my work environment I am encouraged to ensure patients understand and can make informed choices about their end of life treatment.

1. Pre-test Control Oct 2004 n=81

2. Pre-test Pilot Oct 2004 n=82

3. Post-test Control April 2005 n=69

4. Post-test Pilot April 2005 n=74



Outcome variable 2: Quality end-of-life assurance

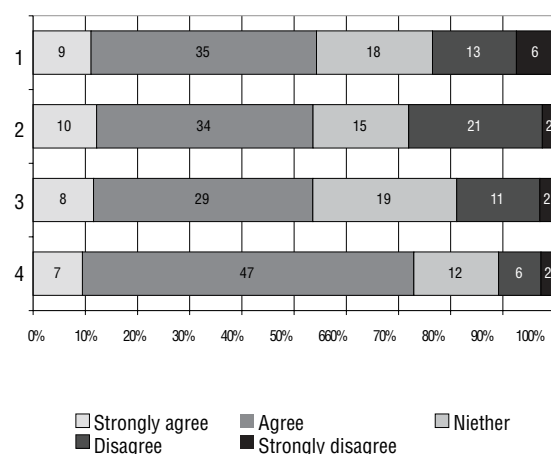
Another statistically significant change was found in the post-test pilot group using the Chi squared test on Q.7, which did not occur in the control (pilot 0.016*, * p < 0.05; control 0.670). In effect, 73% of the post-test pilot nurses agreed they were able to uphold the end-of-life care wishes of their patients compared to 54% in the base line

and post-test control groups (table 3). The combination of this outcome with outcome variables 1 and 3 represents 'Quality end-of-life assurance'. The multiple regression analysis showed similar results to the Chi squared test but was not as statistically significant.

Table 3:

Q7: In practice I am able to uphold the end of life wishes of patients.

1. Pre-test Control Oct 2004 n=81
2. Pre-test Pilot Oct 2004 n=82
3. Post-test Control April 2005 n=69
4. Post-test Pilot April 2005 n=74



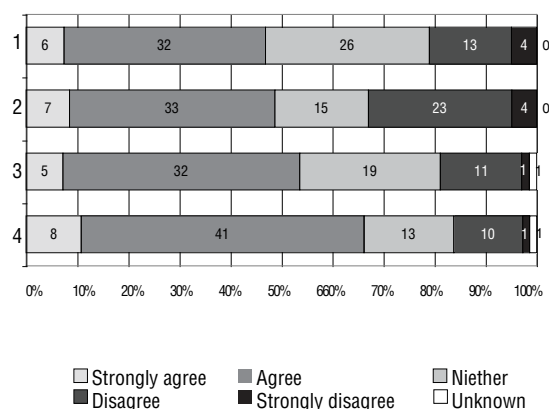
Outcome variable 3: Associated job satisfaction

A further statistically significant change was found in the post-test pilot group using the Chi squared test on Q.10, which did not occur in the control (pilot 0.026*, * p <0.05; control 0.658). In effect, 67% of post-test pilot nurses agreed they experienced job satisfaction because in practice they could deliver appropriate end-of-life care compared to 47-53% in the baseline and post-test control groups (table 4). The combination of this outcome with outcome variable 2 represents 'Associated job satisfaction'. The multiple regression analysis showed similar results to the Chi squared test but was not as statistically significant.

Table 4:

Q10: I experience job satisfaction because in practice I can deliver

1. Pre-test Control Oct 2004 n=81
2. Pre-test Pilot Oct 2004 n=82
3. Post-test Control April 2005 n=69
4. Post-test Pilot April 2005 n=74



QUALITATIVE FINDINGS

Pre-intervention focus group

The pre-intervention focus group sessions were evenly attended by a total of 18 nurses from six of the eight wards involved in the trial, comprising enrolled nurses and registered nurses with the majority being registered nurses.

Although palliative care nurses expressed satisfaction with the end-of-life care their patients received, overwhelmingly concern was about patients suffering because treatment aimed at restoring health was continued when death was imminent. For instance one nurse shared: 'a bad situation with an old person. I saw him take his last breath. It was my responsibility to call the code, but I was just tempted to walk away because he did it so peacefully. But there was no NFR (not for resuscitation) order ... your responsibility is to call somebody. It was really hard to be the one to have him brought back and he died anyway' (20.10.04).

Another participant said there was a: 'man lying in bed trying to express that he wanted to die, everything we'd try to do for him, he'd fight. Eventually he stopped breathing and we had to resuscitate him... I don't know what happened to him after that. But it was just horrible and I didn't think we should have to do that'.

Concerns were also expressed that families can be domineering and doctors offer them decision-making power about resuscitation issues: 'the families can't, or won't see that it's coming to an end, and each night you go in there and hope they (the patient) make it through to the next day. The doctors say 'do you want them to be resuscitated?'; and the relatives say 'yes we want everything done'. They think resuscitation is what you see on ER (medical television show), or at least that it means that the patient will end up how they were, which already is a sick person with a failing heart and kidneys ... relatives feel guilty if they decide for them and if the patient suddenly arrests you have to do CPR (cardio-pulmonary resuscitation) and it doesn't seem right' (21.10.04).

A senior nurse continued: 'We attend code blue calls and just the number of calls that you get for people who

are in their 80s and 90s and who are frail and skinny, they are breaking ribs when they are doing CPR. I'm sure if you asked the person previously that they probably wouldn't want to have this done to them. It could have been a better experience for them and the family'.

Nurses shared that terminology makes understanding difficult for older people and those with little English. They spoke of how patients are willing to talk about dying and that it should be brought up, but it's hard when curing is the goal.

If you talk to some patients they don't want treatment, they don't want to live, they wait until the doctor has actually left and then they say to you 'I don't want this'. It's that age group, where whatever the doctor says they'll just go along with it. We are in the middle, and often we can explain to the family what washes over and communicate (back) to the doctors (20.10.04). There was acknowledgment 'that it's very difficult for the doctors to be saying 'there's nothing more we can offer you' (21.10.04).

The nurses disclosed that with no formal pathway for patient advocacy they received an uncertain hearing. One stated that: *'Advocating for patients toward the end can be difficult because our doctors can be so hell bent on treating'. A senior nurse disagreed saying: 'I certainly think we can advocate, our doctors are quite good'. Others would not elaborate on why they did not find advocacy easy although one nurse disclosed: 'It's taken me years to get to that point where I feel like I can say anything' (21.10.04).*

Post-intervention focus group

The six month post-intervention focus group was attended by three enrolled nurses, from three of the four pilot wards, all of whom had been trained as RPC consultants. Attendance was low, due to competing training sessions, and time restraints prohibited the conduct of another focus group. Adequate information was gathered from the trained RPC consultants but the session did not capture the perspectives of other nurses on the pilot ward and so their questionnaire comments are mentioned.

The post-implementation pilot focus group participants admitted that in the past initiating end-of-life care discussions risked disapproval or questioning: *'It was like, that's not your role. It was really hard sometimes, to advocate for you patients'.*

They discussed the difference the RPCP made: *'I think it changes the whole culture about what we are doing. It's been something that we do discuss with our patients, but we've never had a formal process for it. Most are very appreciative of it and certainly for people with chronic conditions it's something they've already thought about. They have said 'I'm really terrified of going to a nursing home' and 'What if I can't walk? I don't want to keep going'. Just explaining the different terminologies is giving them clearer goals they can think about then talk about with their families. You feel like you are giving people a chance to make an informed decision. I know*

that even if I don't agree with it, it's what they want ... knowing what someone actually wants makes me feel safe in providing care to that person' (20.04.05).

A nurse who had not done the RPC consultant training commented on the questionnaire: *'Since having the RPCP a lot more care and respect is given to end stage patients'. Another however wrote: 'I have experienced the doctors overriding the patient's choices, to stabilise the patient, which prolonged the dying process' perhaps illustrating the position of not being empowered through the RPC training.*

The RPC consultants shared that having a formal process to advocate through meant doing the job corresponding to deep felt ethical conviction. It was described as nursing as it should be. *'Before we had respecting patient choices there were times when you wondered whether you were doing the right thing for your patient. Now you're often finding out whether a patient wants to be resuscitated or whatever as far as their treatment goes. This is back to the philosophy, the foundation of why people want to do nursing, because you want to be a patient advocate. You want to provide comfort, encouragement and education and support your patients through their own process, not your own; now we can act on the patient's behalf and ensure the care provided is what they want and it can be respected, because it is in black and white, it's written down' (20.04.05).*

Limitations

The non-equivalent control group is a limitation as the sample for explanatory research is required to be typical characteristically of the target population so as outcome generalisations can be applied to it. Representativeness was claimed because nursing skills mix and nurse patient ratios are based on Australian Nursing Federation and the Victorian Government Department of Health agreements, while clinical practice standards are determined by bodies such as the Nursing Board of South Australia. The generalisation about background issues is affirmed by the Australian Council on Healthcare Standards action of issuing a draft in October 2005 on a new standard: *'Systems for managing consumer/patients at the end of life are caring and appropriate' (ACHS 2006 EQuIP 4 program standard 1.17).*

Expectancy effect because of the investigator's involvement in the RPCP is minimised through the use of anonymous surveys. Professional advice and assistance from the hospital epidemiologist, biometrician and experienced qualitative researcher served to reduce bias and systematic error in the data gathering. Instrument reliability was demonstrated by the consistent pattern shown from ward to ward on questionnaire responses. The study does not gauge practical effect, nor does it measure outcome sustainability, however corresponding ACP-ing activity is reflected in the hospital RPCP audit data at six months intervention (Box 2.).

CONCLUSION

The research hypothesis was supported suggesting patient advocacy fostered by the framework and tools the RPCP provides, plays an integral role in effectuating the ACP-ing process with the ensuing outcomes of end-of-life quality assurance and associated job satisfaction. The organisational endorsement of ACP-ing gave nurses the autonomy to be patient advocates reconciling clinical practice with their code of ethics and easing distress about prolonging the dying process inappropriately.

It is recommended that the RPC ACP-ing model be embraced by acute hospitals in the promotion of quality end-of-life care. The RPCP trains and equips nurses to assist patients with the ACP-ing process. It is recommended that patient advocacy attributes, which arise out of care for others, be recognised and developed as integral to this process.

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NURSES' ATTITUDES TOWARD ELDERLY PEOPLE AND KNOWLEDGE OF GERONTIC CARE IN A MULT-PURPOSE HEALTH SERVICE (MPHS)

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Key words: multi-purpose health service (MPHS), attitude, elderly, gerontic, care

ABSTRACT

Objective:

The purpose of this study was to explore the attitudes of nurses working in a multi-purpose health service (MPHS) toward elderly people and their understanding of gerontic care. As there are no previous studies in this area of nursing it is anticipated that this study will provide the basis for further exploration.

Design:

A descriptive, non-experimental quantitative research design using a self-report questionnaire was used for this study.

Setting:

This study was conducted at a rural MPHS in Northern Queensland, Australia.

Subjects:

A sample group of thirty-one staff members from a single MPHS were the participants of this study.

Main Outcome Measure:

Multiple outcome measures were used. Nurses' attitudes were assessed using Kogan's Old People's Scale (KOPS). Nurses' knowledge was measured using Palmore's Facts of Ageing Quiz (PFAQ) and a second instrument, the Nurses' Knowledge of Elderly Patients Quiz (NKEPQ), which was developed by the authors of this study.

Results:

The key findings indicated that even though nurses in this MPHS have strongly positive attitudes toward

elderly people, they have knowledge deficits in key clinical areas of both gerontic nursing and socio-economic understanding of the ageing population in Australia.

Conclusions:

This study is the first of its kind to investigate attitudes and knowledge of nurses working in an MPHS towards the elderly residents in their care. Due to the small sample size, these findings are not generalisable; nevertheless, these results assist with the identification of knowledge gaps and highlight areas for improved education which is essential in the delivery of high-quality, effective care.

INTRODUCTION

To meet the needs of an increasing population over the age of 65, many small, rural, acute care hospitals have converted to a multi-purpose health service (MPHS) system of funding that includes the provision for residential aged care beds. This change in need requires acute care nurses to expand their roles of practice to include gerontic nursing. This may leave nurses feeling coerced into working in an area that is considered either undesirable (Happell and Brooker 2001; Giardina-Roche and Black 1990), or outside their current educational and practical knowledge (Timms and Ford 1995).

Currently there is no research that investigates either the attitudes of nurses working in an MPHS toward elderly people, or potential knowledge gaps that these nurses may have in gerontic care and management. An indication of the attitudes and knowledge that nurses working in an MPHS may experience toward the elderly can be extrapolated from studies of acute care nurses who work in similar

settings. Such studies are relevant because nurses working in an MPHS remain essentially, acute care nurses.

The literature suggests that nurses in acute care hospitals have overall, slightly positive attitudes toward elderly people. Hope (1994) compared the attitudes of nurses working in acute care in general medical units to nurses working in acute care in aged care units using Kogan's Old People Scale (KOPS) (Kogan 1961). These findings indicated that nurses in both units had positive attitudes toward elderly people. A similar result was found in a study of orthopaedic nurses from four different hospitals (Tierney et al 1998). Further studies confirmed this trend and found that nurses' age, years of nursing experience, and qualification level had no bearing on their attitudes toward older people (Myers et al 2001; Wilkes et al 1998; Helmuth 1995).

Hope's study suggested that a lower knowledge level of gerontic care may indicate a more negative attitude toward older people (Hope 1994). However using Palmore's Facts of Ageing Quiz (PFAQ) (Palmore 1977) as an outcome measure, this association was not statistically significant.

Lack of knowledge of the ageing process may not affect attitudes toward older people however poor knowledge of gerontic care may result in nurses being unable to modify care accordingly, potentially placing elderly patients at risk. Investigations of the knowledge base of acute care nurses in terms of gerontic understanding have been undertaken. Wilkes et al (1998) indicated significant gaps in understanding were present in the areas of age-related sensory loss, age-related lung function changes, and age-related learning abilities. In the study by Tierney and colleagues, the error rates for questions on age-related changes to sensory loss and age-related changes to learning abilities were equivalent to or higher than those of the Wilkes study (Tierney et al 1998). Knowledge deficits did not correlate with age, years of experience, qualification level or attitude toward older people in either study.

Researchers who have used PFAQ to measure nurses' knowledge levels have criticised it for its lack of nursing focus and its generalist approach (Tierney et al 1998; Lusk et al 1995; Hope 1994). In an attempt to address such criticisms in research design, this study incorporates not only the KOPS and PFAQ to assess nurses' attitudes and knowledge, but also a third instrument, the Nurses' Knowledge of Elderly Patients Quiz (NKEPQ), developed by the authors of this study. This tool aims to further assess knowledge by adding a specific gerontic nursing focus to the outcome measures.

Overall, the literature suggests that acute care nurses have slightly positive attitudes toward older people but have significant knowledge deficits in ageing and the ageing process.

AIM

This study investigated whether these trends are apparent in a MPHS setting. The MPHS investigated in this study is generally representative of other MPHS services in terms of staff numbers, skill mix, and nursing education levels. All staff are required to work in the residential care area on a rotating roster basis. Because the MPHS model that has been adopted by many small rural hospitals incorporates residential aged care, it is important that the educational needs of nursing staff are identified and addressed to ensure best practice in the delivery of care to older residents.

METHOD

A descriptive, non- experimental quantitative design using a self-report questionnaire was used for this study.

Sample

All nursing staff of the MPHS were invited to participate in the study. The inclusion criteria were current nursing registration either as a registered nurse or an enrolled nurse. A 100% response rate was achieved resulting in a sample of thirty-one (n=31).

Data Collection

Data were collected using a self-report questionnaire. Researchers were onsite to supervise the completion of the questionnaire at convenient times for the participants over a four week period.

Measurements

The data collection instrument was a four-part questionnaire:

Section 1 – Demographic information including age, gender, years of experience and postgraduate qualifications.

Section 2 – Kogan's Old Person's Scale (KOPS) (Kogan 1961).

Section 3 – Palmore's Facts of Aging Quiz (PFAQ). The modified version of this quiz (Palmore 1988; Courtenay and Wiedman 1985), which includes a 'don't know' option for each statement, was used in this study.

Section 4 – The Nurses Knowledge of Elderly Patients Quiz (NKEPQ) consists of twenty factual statements requiring a 'yes', 'no' or 'don't know' response (table 1.). This instrument was developed by one of the authors to compliment the PFAQ by adding a gerontic nursing focus.

Reliability and Validity of Measurements

Both the KOPS and PFAQ are fully validated instruments (Kogan 1961; Palmore 1977). Statements for the NKEPQ were developed following an extensive literature review and input from a geriatrician. A panel of expert gerontic nurses was invited to review and assess the instrument for face validity.

Data Analysis

The KOPS was scored as outlined in the original methodology (Kogan 1961). The minimum possible sum is 34 and the maximum sum is 238. The neutral value is 136. Both the PFAQ and NKEPQ were coded identically: +1 for a correct answer, -1 for an incorrect answer and 0 for a response of 'don't know'. The PFAQ had a range of -25 to +25 and the NKEPQ had a range of -20 to +20. Both had a midpoint of 0 that was equal to 50% of responses answered correctly. Using a sample t-test, demographic profiles of each participant were cross-correlated with scores for each instrument to identify relationships.

Table 1:

Statements of the Nurses' Knowledge of Elderly Patients Quiz (NKEPQ)

Statements
1. In patients over 65 years old the half life of many medications is shorter than in younger patients.
2. Anti-psychotic medication is nearly always effective in the management of most 'behavioural problems' associated with dementia.
3. The adverse reactions to timolol (Timotol) eye drops include depression, schizophrenic symptoms and postural hypotension.
4. Sedatives usually have a longer half-life in patients over 65 years old.
5. Digoxin may cause delirium in elderly patients.
6. Anaesthetics are known to cause Alzheimer's disease in elderly patients.
7. Alzheimer's disease causes symptoms of dementia.
8. Repeating instructions three or four times is a slow but very effective technique to improve compliance in patients with a severe dementia.
9. The Mini Mental State Exam is the most widely used tool for diagnosing Alzheimer's disease.
10. Depression in an elderly patient may have similar features to Alzheimer's disease.
11. Psychomotor hypo-activity is a common symptom of delirium.
12. Delirium is the new term for dementia in elderly people.
13. Dehydration and constipation may cause a delirium.
14. Elderly people may have a delirium superimposed on a dementia and or a depression.
15. An elderly patient who has an episode of delirium has an increased risk of dying within the following two years.
16. The recording of blood pressure lying, standing and 2 minutes after standing is an out dated assessment procedure in elderly patients who fall.
17. The most common hearing impairment in elderly patients results in them not being able to hear when there is background noise.
18. Macular degeneration may contribute to falls in elderly patients.
19. Patients with glaucoma may have 'tunnel vision'.
20. A full range arm movement is one of the few functions rarely affected by the ageing process.

FINDINGS

Demographic characteristics of the sample

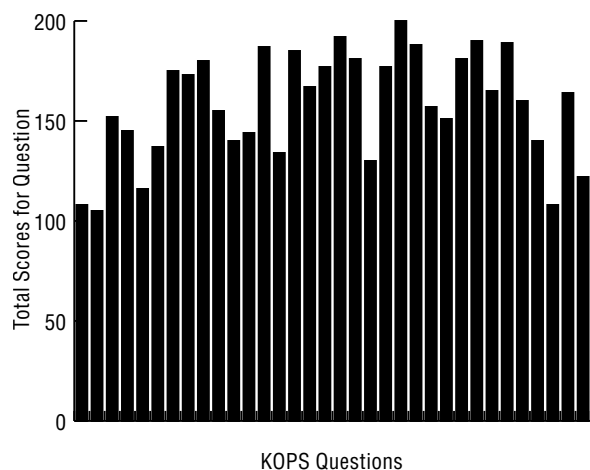
Of the 31 participants who responded only one was male. Seventy-one percent (n=22) were registered nurses (RN); 26% (n=8) were enrolled nurses (EN); and one participant completed the questionnaire who was later found to be neither an RN or EN. As the data was de-identified it was not possible to extract this response. The ages of participants were as follows: 3.2% (n=1) was below the age of 29 years; 22.6% (n=7) were 30-39 years of age; 32% (n=10) were 40-49 years of age; 29% (n=9) were between 50-59 years; with the remaining 12.9% (n=4) above 60 years of age. All participants had completed their nursing education at either the hospital certificate level, degree level or both. One person had a Masters degree; 19.3% (n=6) had either a postgraduate certificate or diploma; but only 10% (n=3) of the postgraduate qualifications were in gerontic nursing. Fifty-one percent (n=16) of the participants had never worked in either a nursing home or hostel for older people.

Analysis of MPHS nurses' attitudes to older people

The KOPS analysis revealed there was a significantly positive attitude toward older people ($t(30)=10.86$, $p<0.001$) yielding a 95% confidence interval of 30.35 - 44.42. The mean value of the sample was 173.4 (SD = 19.18). The minimum score of the sample was 136; the maximum score was 227 and the range was 91. Graph 1 outlines the mean values of the sample for each question on the KOPS.

Graph 1:

Attitude scores for each question on Kogan's Old People's Scale (KOPS)



Attitude scores for each question of Kogan's Old People's Scale (KOPS). This graph displays the mean scores of the sample for each individual statement within the KOPS attitude test. The neutral value indicated by the black horizontal line.

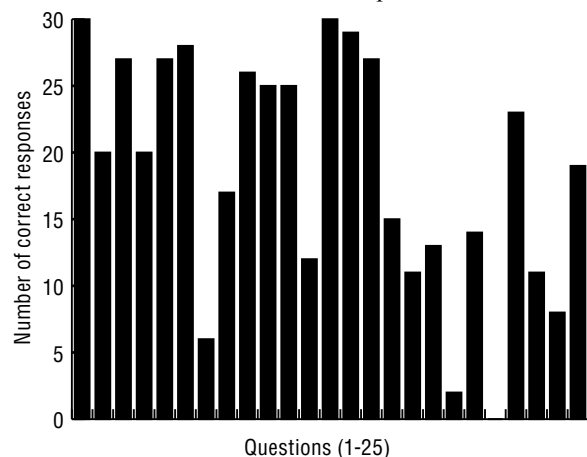
Analysis of MPHS nurses' knowledge of gerontic care

Analysis of the PFAQ responses of the sample showed a mean score of 9.35 (SD = 4.25) which correlates to an average of 68.7% of correct responses. Despite the positive

mean of the sample, areas of concern were identified (graph 2). Graph 2 indicates that the majority of the participants answered just over 50% of the questions correctly. No individual answered Question 21 correctly. Questions 7, 19 and 24 were answered very poorly and questions 12, 16, 17, 18, 20, and 23 were answered incorrectly or as a 'don't know' by more than half of the participants.

Graph 2:

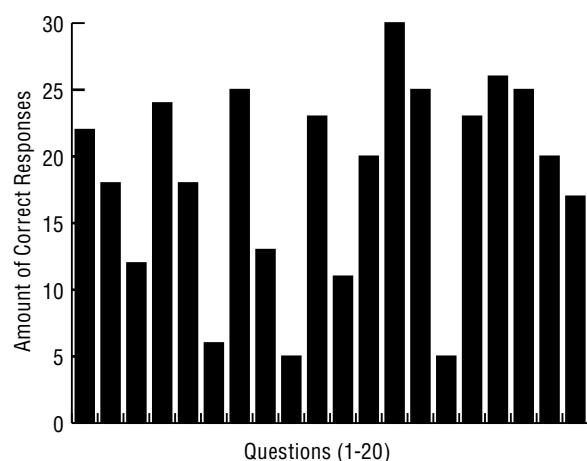
Responses of the sample to Palmore's Facts of Aging Quiz (PFAQ). This graph shows the number of correct responses within the sample to each question on the PFAQ. The maximum number of correct responses is 31.



The NKEPQ (graph 3) yielded a mean score of 9.10 (SD = 3.25) which translates to 68.2% correct responses. The lowest score was 55% (n=2) and the highest, 85% (n=14).

Graph 3:

Scores for the Nurse's Knowledge of Elderly Patients Quiz (NKEPQ).



Graph 3: Responses of the sample to the Nurse's Knowledge of Elderly Patients Quiz (NKEPQ). This graph shows the number of correct responses within the sample to each question on the NKEPQ. The maximum number of correct responses is 31.

The gaps in knowledge identified by the PFAQ were also seen using this instrument. Three questions were

answered very poorly: questions 6 (n=6), 9 (n=5), and 15 (n=5). In addition, questions 3, 8, and 11 were answered correctly by less than half of the participants. Based on the responses to the PFAQ, nurses in the sample presented with fundamental knowledge deficits about the ageing process. In particular areas related to changes in sensory input, lung capacity, and learning ability had the lowest knowledge base. The NKEPQ confirmed these deficits and also highlighted a lack of knowledge base about the normal processes of ageing, as well as common diseases faced by older people, altered symptom presentation in older people, and adverse drug reactions associated with older patients.

CORRELATES

RNs scored a significantly more positive attitude toward the elderly than ENs according to the KOPS ($t(30)=1.845$, $p<0.1$). The difference between the two means was 14.1 which was equivalent to a response that was almost one standard deviation more positive than ENs. There was also a significant correlation between the attitudes of the participants and PFAQ scores ($r=0.596$; $p<0.001$) showing that the more positive the attitude the higher the score on PFAQ.

Limitations

The potential limitations of this study are three-fold: (i) systematic error in data collection related to the issue of social desirability: responding with the socially acceptable answer even though it is not a true reflection of the respondents' views (Brink and Woods 1999); (ii) the small sample size of this initial investigation which means that the findings are not generalisable; (iii) the NKEPQ has yet to be fully validated; and (iv) the tools used for this study have not been specifically designed for nurses from the MPHS setting.

DISCUSSION

This study was conducted to generate initial knowledge of the attitudes of nurses working in MPHS toward elderly people and their knowledge of gerontic care. With the movement toward the MPHS model in many rural settings, consideration should be given to the knowledge of staff members who are asked to expand their scope of practice into new areas, in this instance, residential aged care.

No research currently exists to determine the attitudes of nurses working in MPHS toward the older residents in their care. In contrast to studies of nurses working in acute-care in similar settings that found only mildly positive attitudes (Tierney et al 1998; Hope 1994), the attitude score in this study was strongly positive. The fact that RN's showed a much more positive attitude to older people than ENs may suggest education as a predictor of attitude. In addition, a positive attitude toward the elderly correlated with a higher score on the PFAQ indicating the importance of attitude in learning and knowledge.

In assessing the knowledge of the sample, this study shows a much lower mean score for the PFAQ compared to scores achieved in a similar study (Wilkes et al 1998). With the exception of questions 19 and 21, the Wilkes' study confirms more than a 25% error rate for the same questions, therefore identifying similar knowledge gaps. The number of incorrect answers to what should be regarded as fundamental nursing knowledge about age related sensory changes, age related changes to lung capacity, and age related changes to learning, is of major concern. The proportion of correct answers should be much higher amongst nurses who work in any health organisation that regularly provides services to patients over the age of 65.

The NKEPQ was designed to further assess nurses' knowledge by investigating a specific gerontic focus. There were only five questions in this quiz for which the error rate was less than twenty percent. This supports the PFAQ results indicating that nurses in this MPHS require education and training in gerontic nursing including the aetiology of diseases, assessment processes and tools, common adverse drug reactions in older people, and the implications of dementia syndromes in relation to nursing care.

This study has identified a lack of fundamental nursing knowledge in relation to the normal physiological changes of ageing. Failure to modify care delivery to compensate for normal age related changes might place older patients at risk. Abilities in hearing, reading or understanding complex treatment regimes may be overestimated. The risk of falls could increase and even the therapeutic effect of medication, particularly those administered via nebulisers, may be reduced. With the changes to nursing education in professional development programs seeing the incorporation of nursing knowledge across the life span (Adam et al 2001) and nursing competencies (ANMC 2006), such deficits should be a feature of the past.

Hope (1994) suggests that nurses working in acute care have not been privy to the same level of knowledge as nurses who have specialised in gerontics. Nevertheless, care of older patients with health deficits is no longer the sole domain of specialist aged care nurses. This study identified significant knowledge gaps that indicate an urgent need for the development of education and training in the contemporary knowledge, practices, and skills of gerontic nursing. In addition, there was a significant knowledge gap relating to socio-economic factors of older people in Australia.

CONCLUSION

This study is the first of its kind to investigate the attitudes and knowledge of nurses working in a MPHS. The key findings show that even though nurses have positive attitudes toward elderly people, they have significant knowledge deficits in essential clinical practice issues, the socio-economics of ageing, and specialist care of older patients. This study assists with the identification of these knowledge gaps and highlights areas for improving education. Whilst the findings are not generalisable to other MPHSs, or residential aged care facilities, this study contributes to nursing knowledge

and informs the management of MPHSs. Quality, tailored education and training will benefit the organisation, improve job satisfaction and may contribute to the retention of skilled staff (Van Haaren and Williams 2000). Improved care outcomes for the clients will be an obvious, significant benefit.

RECOMMENDATIONS:

Three general recommendations arise from this study:

1. Further research should be conducted using a qualitative design with in-depth interviews of selected participants from the same MPHS to seek further clarification and views about nursing permanent stay elderly patients;
2. Consistent and frequent education programs need to be implemented addressing knowledge gaps in contemporary gerontic nursing as well as the socio economic factors relating to ageing in Australia; and
3. Future research should be directed into the development of a questionnaire that will address specific, in depth issues relating to gerontic nursing knowledge and practice.

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THE IMPACT OF HOSPITAL STRUCTURE AND RESTRUCTURING ON THE NURSING WORKFORCE

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Key words: hospital structure, restructuring, nursing, management

ABSTRACT

Objective:

Health systems throughout much of the world have been subject to 'reform' in recent years as countries have attempted to contain the rapidly rising costs of health care. Changes to hospital structures (restructuring) have been an important part of these reforms. A significant impact of current approaches to restructuring is the loss of, or changes to, nursing management roles and functions.

Setting:

Australian hospitals

Primary argument:

Little evaluation has been undertaken to determine the impact of hospital structure and organisational restructuring on the nursing workforce.

Conclusions:

There is some indication that nurses have experienced a loss of key management positions, which may impact on their capacity to ensure that adequate and safe care is provided at the ward level.

INTRODUCTION

The demand for efficiency in health care has resulted in significant and, too frequently, continuous changes to hospital structures. Mergers, downsizing and re-engineering, all of which may include changes in work assignments, modifications to clinical staffing and skill mix, and reductions in management positions, are commonplace. Often these strategies have been driven by factors external to the

health service itself such as decreased funding or the introduction of a new or expanded service. In the Australian context we can also add political imperatives such as: a strengthening of the federal government's influence in health; the need to better integrate and coordinate health services; increased expectations of consumers for accountability; and media coverage of adverse hospital outcomes such as occurred recently at Bundaberg Hospital (Queensland) or the Macarthur Health Service (New South Wales).

The impact of restructuring on staff is not necessarily accounted for in the process of change, which is unfortunate, as the pressures of cost containment usually lead to an emphasis on work redesign to deliver care in more efficient and cost effective ways. However as hospitals undergo restructuring there is little evidence that efficiency or outcomes actually improve (Fulop et al 2002; Braithwaite et al 2005). Despite this, restructuring can have significant implications for patients and the nursing workforce.

For patients, decreased bed numbers and 'bed block' have resulted in shorter stays in hospital, increased rates of day only admissions and longer waiting times. Patients are likely to be sicker on admission and as a consequence, require more care. It is now well established that patient outcomes are linked to appropriate nurse-patient ratios and the proportion of registered nurses (Aiken et al 2002). Hospitals in which the organisation of nursing promotes high levels of nurse autonomy, nurses' control over their work environment, and good relationships between nurses and doctors, have better patient outcomes (Sochalski and Aiken 1999). These factors are also associated with greater trust in management and a greater commitment from nurses to their work place (Laschinger et al 2000).

However nurses as the largest component of the workforce and thus the largest operating expenditure, are often faced with restructuring which involves reducing their labour costs through changes to skill mix and work practices and a reduction in management positions. Hospitals are now less likely to have enough registered nurses, adequate support services, supervisors who are supportive of nursing, an influential chief nurse executive, and other organisational characteristics associated with good patient outcomes (Upenieks 2003). It is timely therefore to consider in more detail the impact of restructuring, an almost constant occurrence in today's health care system, on nurses who ultimately provide the majority of patient care.

BACKGROUND

Obviously the complexity of providing health services presents different challenges in structuring for the best results (effectiveness) and the greatest return on investment (unit cost) than in many other service industries. Health care administrators have been pressured to undertake almost constant organisational restructuring due to a range of dynamic external factors including: increasingly scarce resources; rapidly developing and costly technology; shifting consumer expectations; a changing workforce; new regulations and competition; and demands for greater efficiency (McConnell 1998; Keating 2000). In addition, as with other public sector organisations, governments' adoption of a market-based model has reinforced the need for more efficient ways of organising (Self 1993).

A range of contemporary managerial ideas including: total quality management; the use of teams; process re-engineering, patient focused care; decentralisation of services; and high performance work organisations; have impacted on the organisational design of hospitals and health services (Landsbergis et al 1999). While these generic business oriented approaches are persuasive, the extent to which they are effective in health is unknown.

Hospitals, which constitute a significant proportion of health services expenditure, have sought to increase efficiency, decrease duplication, and re-shape the way that care is delivered through whole systems restructuring (Urden and Walston 2001). Generally however there is widespread dissatisfaction with this market-based approach from nurses, with its strong emphasis on organisational management and efficiency, rather than on nursing practices that have been shown to lead to better patient outcomes (Urden and Walston 2001). Organisational change should result in a more patient-centred system emphasising goal alignment amongst all clinicians (not just nurses) and managers, and devolved decision making that supports improvement in satisfaction, quality, cost, innovation and growth (Miller et al 2001).

Indeed there are some who argue that the new, leaner, restructured health system has replaced earlier

models which were traditionally characterised by high job satisfaction; adequate staffing; clinical career ladders which fostered retention; a degree of autonomy, responsibility and control at a practice level; lower staff turnover; and superior patient and nurse safety outcomes (Aiken et al 2001).

A common market-based model for restructuring to increase efficiency has been downsizing. This process usually involves an overall reduction in staff numbers, centralisation of administrative functions to reduce overheads and duplication, and removal of middle layers of management (Roan et al 2002). The current target is white-collar professionals rather than blue-collar workers, making nursing staff especially vulnerable (Di Frances 2002). As Aiken et al (1996) report, a result of downsizing of hospitals in the USA was that the number of nurses declined while the number of non-clinical administrators increased. Hospitals continue to flatten their structures with fewer nurse management positions and wider spans of control in an ongoing effort to cut costs (Laschinger et al 2001).

Restructuring in Australia

Australia is not immune to the trend to restructure. For several years now there has been a shift toward an organisational structure that involves managing a network of inpatient, outpatient, community and support services at the hospital level. This grouping of 'related specialties' is commonly referred to as clinical divisions or directorates. More recently the trend in New South Wales has been to streams of care. Clinical streaming builds on the model of networking of services and focuses on the provision of services across the care continuum and across a number of settings and institutions with a senior clinician (usually medical) responsible for service delivery.

Streamed services usually encompass everything from health promotion, early intervention, community health and outpatient services, through to acute and intensive care. Clinical streams are meant to facilitate the participation by all clinicians as well as consumers in the planning, development and improvement of services and to assess the best way to use available resources (human, financial and infrastructure) to meet client needs (NSW Health 2004). Despite these intentions, the changes have not always united clinicians as specialist interests sometimes become even more strongly focused, leading to competition for resources and restricting integration (Braithwaite and Westbrook 2005). Nevertheless, it is being replicated in other Australian states (Sainsbury 1999; Western Australia Government 2001).

Another consequence of a clinical streaming structure is a lessening of focus on managing at the institutional level. As the management of these streams transcends institutional boundaries, the nursing unit manager of a surgical ward for example, may find her/his direct supervisor is off campus in a location that may be hundreds of kilometres away. As a consequence, their

role acquires more devolved administrative tasks because senior nurses and managers are no longer on site, are less familiar with the organisation and what is happening; and realistically, are unable to provide direct leadership. The result for nurses is that the first-line nurse manager, the position responsible for providing clinical leadership, has less time and capacity to do so. In addition, there are concerns about proposals to 'downgrade' nurse manager positions in this structure (NSW Health 2005). Not only does this send the wrong message about the importance of these roles in patient safety and the effective management of the largest component of the clinical service but also, the loss of nursing leaders or a nursing voice results in a demoralised nursing workforce and increased turnover (Fagin 2004).

Until recently there has been limited evaluation in this country of the effectiveness of divisional structures and clinical streaming and certainly none in-depth. In particular, no analysis has been undertaken of the cost of supporting an additional organisational layer, nor even more importantly, whether this structure has had a positive impact on patient outcomes, organisational efficiency or enhanced service delivery. Braithwaite et al (Braithwaite et al 2005; Braithwaite and Westbrook 2005) maintain that the anticipated improved efficiency of services structured as clinical directorates was not realised in practice. Although clinical directorates were designed to promote team approaches and to improve patient care delivery, clinicians and managers have different perspectives. Their research found that change in hospitals requires deep-seated adjustments to the enduring sub-cultures of doctors, nurses and allied health professionals, so that each group can work better together. A new structure will not automatically achieve this.

Many years ago the NSW Nurses Association undertook a limited evaluation of clinical divisions at Johns Hopkins Hospital in the USA (NSW Nurses' Association 1991). Although dated, this report outlines some of the issues associated with this model and provides a number of ideas that are still relevant today when contemplating the introduction of this or any other structure. First, to enhance collaboration clinical divisions need management structures that ensure doctors and nurses are 'equals'. Second, the allocation of human and financial resources needs to remain flexible across structures with a nurse executive overseeing the appropriateness of the allocation for the entire organisation. Third, senior nurses require appropriate infrastructure support (administratively) and delegated authority for strategic and operational management of the nursing services. Fourth, the Director of Nursing must continue to represent nursing at a corporate level, speaking for nursing in administrative, financial and professional activities. Finally, senior nurses within any structure must maintain a line relationship with the Director of Nursing (NSW Nurses' Association 1991). At the end of the day, structures should facilitate, not impede, the provision of patient care.

The impact of restructuring on nurses

Despite the size of their workforce, nurses have had relatively limited input into the way restructuring has occurred, but conversely, have been most affected over the years. Yet each time structure is changed, the consequences and costs to nursing and patient services are often unacknowledged. While restructuring often focuses on increased efficiency, factors affecting the quality of care and the work life of nurses are often neglected. Downsizing potentially deskills the workforce, reduces collective corporate knowledge and the number of available mentors, and disturbs established organisational-client relationships. As Di Frances (2002) indicates, the whole process of downsizing can create distrust and low morale, especially when junior staff perceive that the reward for long and dedicated service is retrenchment. Such effects are exacerbated if the downsizing is top-down and takes place without employee consultation and participation in the process (Roan et al 2002).

In Canada, drastic financial cuts in public funding to the health care system led to widespread closures of beds, wards and even hospitals. Greenglass and Burke (2001) found the most significant predictor of stress in nurses working in downsized hospitals was workload. Decreased job satisfaction and professional effectiveness were also related to increased workload. In addition, restructuring was found to have negative consequences on more junior nurses, affecting recruitment and retention (Burke and Greenglass 2000).

Another consequence of hospital restructuring often is that lesser-trained or untrained staff replace registered nurses, resulting in additional stress on those remaining in the workforce (Burke 2005). With fewer qualified staff available to care for patients, higher patient acuity and shorter length of stay significantly increase nursing workloads, which has been shown to result in more adverse patient outcomes (Duffield and O'Brien-Pallas 2002), and high levels of absenteeism among nurses, with rates two to three times greater after a major as opposed to minor downsizing (Kivimäki et al 2000). The negative effects of restructuring on patient care and nurses' working conditions now are widely accepted (Baumann et al 2001; Burke 2003; Laschinger et al 2001).

A significant impact of current approaches to restructuring is the loss of, or changes to, the nurse executive role. Frequently these positions take on responsibility for a larger and more diverse range of staff and services, resulting in some cases with less direct representation of nurses and their issues at both institutional and policy levels (Institute of Medicine 2004). Unfortunately, this lack of involvement of nurse executives in organisational decision making has left nurses with limited power to influence change or create positive nursing work environments, both of which are critical in ensuring patient safety (Patrick and Laschinger 2006).

However it is the reduction in the number of first-line and middle management positions that may prove to have the greatest impact on the nursing workforce in the long-term. As middle management roles have disappeared, nursing unit managers (NUMs) now spend more time on administrative work and as a consequence, they are unavailable to supervise, mentor and support their staff (Duffield and Franks 2001). This has resulted in junior nurses and new graduates being relatively isolated, leading to dissatisfaction and frustration (Duffield et al 2001). With changes to skill mix, nurses are increasingly supervising less qualified or inexperienced staff, a task that they report as very time-consuming (McKenna 1995; McIntosh et al 2000). In addition, the number of first-line nurse managers has decreased as the trend for them to manage multiple units and more staff continues, resulting in less direct management support and clinical leadership for nursing staff (Sovie and Jawad 2001). Moreover, these redefined roles may come with little additional support.

In summary, restructuring has tended to result in fewer middle management positions and greater demands on unit-based nurses for the management of the clinical work force. At the same time, nurse executive positions have lost responsibility, but not accountability, for the strategic direction of nursing services and/or have acquired administrative authority for functions in addition to nursing. The net result, in the view of leading nurse executives, has been a diminished influence of nursing in institutional priorities and operational decisions and weakened ties between clinical staff and administrators (Institute of Medicine 2004). Restructuring may lead to unintended voluntary resignations because of high dissatisfaction with the process. The surviving nursing staff may experience low morale and motivation prompted by reactions such as insecurity, distrust and anger, which can result in poorer patient outcomes (Duffield and O'Brien-Pallas 2002). At a time of global and worsening nurse shortages, anything that exacerbates the loss of nurses from the system must be redressed.

Is there an appropriate structure for hospitals?

Many health services have endeavoured to strategically renew their organisations through large scale restructuring of work processes and organisational structures in response to the pressures outlined earlier. Yet there is uncertainty about whether there is a best way, or even a particular way, to structure a health service. Frequently administrators and managers have relied on industrial and business models with an emphasis on decreasing costs and improving productivity rather than improvements in outcomes and quality of care.

The almost constant restructuring of health services suggests that while it is fairly easy to determine a broad strategy, such as downsizing or re-engineering, it is clearly more difficult to define the exact organisational structure necessary to support the overall strategy. There

is no consensus or widely accepted empirical evidence to indicate which form of structure suits which health care system or professional group, or whether indeed, there is a more universal and strategic approach to restructuring that can be applied to health care services generally (Rondeau et al 2002). Downsizing or re-engineering may simply be the first step with little detail provided on the allocation of authority, responsibility and accountability within the structure. Clearly, this clarification is important as part of the process.

While the ideal restructuring model remains elusive, there are clearly a number of important factors to include in order to minimise the impact on the nursing workforce. As Aiken et al (2002) show, hospitals with strongly supportive nursing work environments have significantly lower mortality rates than others. This suggests a strong correlation between organisational structure, and nurse empowerment and control which are significant for organisational effectiveness (Laschinger et al 2001).

Sainsbury (1999) confirms that some of the critical factors to consider include: organisational size because it impacts on the range of services provided; the skills and expertise of existing staff; personalities and loyalties of staff in the current structure; interpersonal relationships; reasonable workload; and the capacity for bureaucratic rationality. It is also important to ensure that professional links are maintained to prevent the individual loss of professional identity that can occur through restructuring (Wynn 1997). Furthermore, research suggests that nurses have improved job satisfaction when staffing levels remain high enough for reasonable time to be spent with their patients (Landsbergis et al 1999); job control is not limited, otherwise high physiological stress can result (Edwards and Harrison 1999); and upper management and medical staff are strong enough to implement changes.

There is some evidence that hospitals are returning to previous structures where divisions have disappeared, there are no sub-structures and the nurse executive is responsible for all nursing activity. In the UK the role of 'modern matron' was 'reconstituted' in 2001 under the Government's NHS Plan to provide strong clinical leadership at the ward level. This position has the authority and organisational support to resolve clinical issues and ensure that the standards of care are met if not exceeded (United Kingdom Department of Health 2001). Evaluation has indicated that these new matrons have a positive impact on improving standards of nursing care, the environment, skill mix and staff retention, encouraging staff development and reducing the number of formal complaints from patients (Scott et al 2005); and the potential to make a positive contribution to patient safety (Keeley et al 2005).

CONCLUSION

This paper has questioned the reliance on industrial and business oriented approaches to restructuring in health care and the effects these models have on nursing. It is evident that more research needs to take place before any claims about the cost and benefit of one restructuring approach being significantly better than another can be evaluated at face value. Evaluation of structural reform will always be problematic in hospitals due to the inability to judge outcomes in a timely fashion but one measure of success is the impact on people working within the system. The health care environment is highly dependent on its clinicians' knowledge and expertise. Downsizing and re-engineering, while sometimes inevitable, needs to be carefully considered in terms of their potentially negative impact on nursing and patient outcomes.

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THE IMPORTANCE OF LANGUAGE FOR NURSING: DOES IT CONVEY COMMONALITY OF MEANING AND IS IT IMPORTANT TO DO SO

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ABSTRACT

Objective:

Language is the medium by which communication is both conveyed and received. To understand and communicate meaning it is necessary to examine the theoretical basis of word conceptualisation. The determinants of understanding language however are somewhat elusive and idiosyncratic by nature. This paper will examine briefly the development of language and how language is used in the health care setting, while recognising that nursing is an internationally recognised profession.

Setting:

In nursing, language is used to facilitate quality care and inform and educate recipients of that care. In today's somewhat litigious society, it is essential that what is transmitted is commonly interpreted by nurses and patients alike. Questions are posed relating to an elitist language for nurses and its placement for communicating with other health care professionals.

Primary argument:

Through exploring language with a small group of nurses, this paper alludes to consumer expectations; how nurses use a common language; and where and

when they move toward a more elitist communication. The paper examines consumer expectations of health care communication and how it facilitates consumer choice and the quality care agenda.

Conclusion:

Communication for the nursing profession poses a challenge as there are differing requirements for specific situations. Nurses acknowledge that language facilitates commonality of understanding and hence meaning. An elitist language when communicating with other health professionals does exist within specialist units, though where commonality of language ends and an elite language begins is difficult to determine. Language does elicit power and authority when educating and communicating with patients while proving difficult in the context of international global nursing requirements.

INTRODUCTION

Language provides our human lifestyle with a rich tapestry of ways to communicate meaning and understanding within our present day society. Max Muller (Lederer 1991) the philologist states that '... language is the Rubicon [boundary or limitation] that divides man from beast'. Heidegger (1971, pp.191-192) expands this discourse further by stating '...that we

are prisoners of our language, [and that] ... language speaks ... speech is regarded as an activity of man. The philosopher Ludwig Wittgenstein (Stumpf and Firser 2003; Lederer 1991) in his early works proffers '*... the limits of my language... are the limits of my mind. All I know is what I have words for*'. Yet words by themselves do not communicate meaning. Language as a communication tool dates back to Egyptian hieroglyphics and Greek mythology for it is through their legacy of language that their unique lifestyle and culture is expressed to the peoples of the world today (Johnson and Webber 2001). It is the knowledge conveyed by language that has the potential in the nursing profession for directing, teaching, coordinating and planning care for patients (Tomey and Alligood 1998).

This paper will examine the ways in which language develops as communication and conveys meaning and understanding within a framework of practical application, commonality of understanding, and professional nursing accountability.

A brief historical overview of the development of contemporary English language

Language is something unique to a country, environment and culture into which we are born, choose to live, work, or become part of; it forms the social structure and identity of a nation. The beginnings of the English language came through the Roman conquests in the first century BC when Julius Caesar invaded Britain; and later by the influences of Roman Catholicism and missionaries who were learned scholars in 'Latin' (Lederer 1991). The practice of adopting conquering invaders' language is not confined to any one nation; internationally this has occurred throughout the centuries.

The dramatic changes that occurred to the English language in 1066 when the Norman invaders conquered England and slew King Harold produced both a cultural and linguistic change. The language spoken from the nobility to the farm peasants under the kingship of King Harold was old English which was a Saxon language. With the demise of King Harold and the beginning reign of King William (a Norman) the court language changed to French and with it came a separation of status and language between the nobility and the peasant. This separation is clearly enunciated by Lederer (1991) in the terms the peasants used (old English), like '*... sheep, ox, swine, calf, deer and chicken*', while the terms used by the court were '*... mutton, beef, pork, bacon, veal, venison and pullet*' (Lederer 1991) and this linguistic division is still evident today in the commonality of the English language.

The Norman French population through geographical location (isolation from the motherland France) and local environment, adopted some of the Saxon language, which by virtue of the European Renaissance of the fourteenth to the seventeenth century, re-educated 'men and women' to the classical ambience of science, medicine, art, literature and geography. According to

Lederer (1991), this distinctive three-tiered vocabulary of Anglo-Saxon, French and classical synonyms offered three choices within the English language all conveying similar meanings.

The emancipating power of language is not a universal idiom, as environment and culture influence the usage of words and their meaning to formulate understanding. In the North of England (Yorkshire) for example the term 'garret' is used to portray an attic while the word 'ginnel' is a laneway or passageway between two high walls (Anon 1984). However few, if anyone, outside the North of England would know these terms or their meanings.

Other countries have similar exemplars from which to draw comparisons. Therefore in enunciating words consideration of the idiosyncrasies of culture, geographical location and the local environment must be considered. Yet despite these idiosyncrasies, English is the first or official language of forty-five countries covering one-fifth of the earth's land surface. Additionally, argues Lederer (1991) countries such as India, Pakistan, Malaysia, Switzerland, Holland, Denmark and Sweden are able to converse in English. How the English language has become so important to the present global communication system is perhaps not as important as the meanings and understandings promulgated by the words themselves which allows insight into ethnicity and its cultural practices in a multi-cultural global society.

Illuminating language for understanding and communication in health care

Nurses today are enveloped in metamorphosing their professional identity as clinicians, researchers and educators through enunciating their unique position within the health care system. Nurses employed in the clinical areas of hospitals embrace a variety of mediums in the quest for improving communication systems for team members. Larger metropolitan hospitals are purported to use electronic data collection at the patient's 'bed side' through 'palm top' technology recording specific individual patient information. Other organisations in a less sophisticated environment adopt recording devices that combine with computerised or written progress notation informing and updating the nursing team. This embodiment within a ward, unit, or hospital provides nurses with a known communication language. Communication is defined by the Macquarie dictionary as: '*... the imparting or interchange of thoughts, opinions, or information by speech, writing or signs*' (Delbridge and Bernard 1993 p.185).

Communication is an essential component of professional nursing having relevance to currency of care for each individual patient. Language and hence communication becomes problematic when transferring/referring patients to another hospital, unit, or aged care facility, as the language contained in the documentation must be a language which is commonly understood by all nurses. Communication therefore is not only required to

be succinct, relevant, and current, but must be a language which conveys meaning and understanding to all nurses irrespective of where they are working; this is evidenced by nursing being accepted as a global occupation.

As previously mentioned verbal communication has the potential to be fraught with cultural and linguistic dilemmas relating to enunciation and environmental settings. Any idiosyncrasy with words has the potential to detract from the original meaning and understanding received by nurses. Words therefore are integral to illuminating meaning and understanding by conveying the message. The Macquarie Concise Dictionary defines words as: '*... a sound or a combination of sounds, or its written or printed representation used in any language as the sign of a concept, [or] ... an element which can stand alone as an utterance*' (Delbridge and Bernard 1993 p.1172).

Words alone can be meaningless; it is through the characterisation of words that meaning and understanding is conveyed. Technology has advanced the speed of communication through altered telecommunication mediums however language (of whatever sort) remains the catalyst for conveying and receiving information. Language imparts knowledge for professional nurses to share thus guiding practice through a commonality of understanding and meaning.

Are nurses using a common language?

Best practice guidelines (Melnik and Fineout-Overholt 2005), journal articles, conferences and seminars exude the rhetoric of professional language associated with the delivery of nursing care. This rhetoric assumes that those consuming the knowledge, understand the language being used. O'Connor (2005) furnishes evidence (through using discourse analysis) that a language belonging to a particular group which identifies and defines membership, promotes power and authority through communication and as such excludes others from certain forms of knowledge. Tonkiss (cited in Seal 1999 p.246) states, '*... knowledge construction is not simply concerned with raw facts or scientific truths, but involve[s] the skilful use of language and artful strategies of argument*'.

This brief journey into discourse highlights factors associating language with knowledge as being exclusive. This exclusivity provides for the emergence of experts within certain nursing areas which, if universally correct, could equate to elitist groups within a nursing structure. Therefore to address the aspect of elitism within a language culture certain questions require answering.

The questions posed are: how do we know that the language used is common with meaning and subsequent understanding for all nurses? Does the environment in which the nurse is employed illuminate his/her understanding through patient contact or peer colleagues or indeed by transfer or discharge documentation? Consider the nurse returning to the workforce following a career interruption; how does the current language differ

from the language learned prior to that interruption? How does the language used by specialist nurses engaged in specialist units differ from nurses' common language? Is specific nursing language of specialist units a type of professional elitism?

Is the power of words contained in research studies portraying methodological techniques a unique language? Though it transfers ideas, represents groups, and informs nurses of 'best practice' (through this very medium called language), could this be termed as Gerrish and Lacey (2006) suggest, another elitist stance?

Recognising that nurses are individuals with varying levels of education, experience and expertise, poses the question of difference between use of elitist language or everyday speech thus impacting on the understanding and meaning conveyed.

One of the factors impinging on the understanding of terminology is the environment in which the nurse is employed. Nurses employed in an intensive care unit (ICU) or coronary care unit (CCU) use language synonymous to those areas and while these two specialist units are similar, each language may have varying degrees of difference. For nurses engaged in the general areas of a hospital, the language used when conversing with nurses from specialist units will be tangential at times.

Meaning and understanding however share some commonalities as we are all nurses and interpret each other's language from within that framework. Consider the researcher, journal editor, or book author; how does the language in these diverse writings convey meaning and understanding? To answer some of these posited questions, an investigation or dialectic into how nurses acquire professional language would be useful.

Language conveying meaning and understanding for professional accountability

Language is integral to professional accountability for nurses. It is through communication that meaning and understanding for professional practice is determined. The Australian Nursing and Midwifery Council provides guidelines for professional conduct (2007) and ethical practice (2007) however it is through the acquisition and demonstration of knowledge and hence competence, that nurses have been recognised and registered as a profession in their own right. Professionalism is realised through research, journals articles, books and further education. It is these resources that progress the nursing profession illuminating understanding for clinical practice, educating those within it toward professional accountability.

Language for accountability however requires understanding and meaning, whether this is at a basic level, an intermediate level or an exclusive (elite) level. Language contained within the nursing profession at the basic level could be subsumed into the common language (if there is a commonality of language) of nurses. Language at an intermediate level may be enshrined in clinical pathways (Kinsman 2004), to improve

communication between clinicians, while an exclusive level of language (as mentioned previously) extrapolates into a specialist exclusive language known only to those working within a specialist unit. The importance of language cannot be underestimated as it is through communication (and hence meaning and understanding) that care services are delivered to the general population.

How do we learn professional language?

Individuals who enter nursing have acquired an educational standard acceptable to the entry requirements for an undergraduate nursing degree. Language used through lectures conducted by professional nurse educators within universities aims to enhance learning of content and language itself. Reinforcement of the meaning and understanding of the concepts (teaching/learning) is through practical application under individual or group supervision within a controlled environment (university practice laboratories), assisted by video learning. Novice nurses learn and reflect in and on nursing practice and hence terminology (language) through clinical placement within the health system. The nurse is enveloped in the realisation of a socially constructed culture and beliefs in a profession from inception through to graduation (Stein-Parbury 2005).

Nurses are educated in understanding codes of ethical practice and codes of professional conduct that guide professional nurses (Australian Nursing and Midwifery Council 2007). Nurses returning to the profession after a career interruption or nurses from other countries wishing to practice in Australia may be at variance with the current language producing limitations to content understanding and meaning. Anecdotal evidence suggests that the longer a nurse is removed from the workforce the more difficult the communication is and while the Australian Nursing and Midwifery Council (ANMC) provides programs with special requirements for nurses educated in other countries, the commonality of nursing language may still be inadequate.

Learning language through discourse from a specialist unit

The ambience of learning for nurses is through language. Language provides communication and through communication meaning and understanding is conveyed. The content of communication is agreed as being through the spoken or written word; visual or telecommunication systems; interaction with peer colleagues and patients; and/or through documentation from various sources.

Recently the author gave a presentation to a group of nurses relating to terms that were used interchangeably within their area of expertise and asked questions including what the terminology meant to them as specialist nurses. Their enthusiasm spilled over to a discussion following the presentation on the issues of nurses having a common language.

The questions posed earlier in this paper were considered by these specialists. The inter-change that occurred illuminated the meaning and understandings of whether nurses had a common language and whether language had exclusivity. These nurses proffered that the profession has a basic commonality of language which provides a general understanding and meaning for the delivery of basic nursing care. This concept was clarified by nurses who returned to the profession after having a career interruption who stated that the language had changed therefore their currency of the common nursing language was inadequate at re-entry. These inadequacies were associated with the length of the career interruption: the longer the interruption the greater the non currency. The group of nurses agreed that understanding and meaning differed for each individual, but how to determine this variable was beyond their comprehension.

Environment contributes to the exclusivity of language within a specialist area; however it also provides for peer and collegial support in assisting nurses with understanding the language. The nurses above considered their language and hence knowledge was exclusive and thus provided expertise in their speciality of nursing; this could be extrapolated to a form of elitism. In their responses they suggested that their speciality was no different to other specialist areas of nursing in finding that a commonality of language was at a basic level providing understanding and meaning. However for interaction at a higher level which was inclusive of discharge and transfer documentation the commonality was transformed to an exclusive language understood only by those in that specialist area.

The acceptance of a common language for nurses while being enunciated was not demonstrated. There was an assumption that language and hence meaning and understanding were individual rhetoric. The commonality of language was accepted by the group, however the boundaries on a continuum of where commonality finished and specialist language commenced was not defined.

Expectations from consumers

The general population has the expectation, confidence and assurance that nurses working as registered professional nurses have obtained the minimum standard for registration (Australian Nursing and Midwifery Council 2007). Registration ensures that issues relating to moral rights theory of ethical concepts are upheld (Johnstone 2004). Professional codes of conduct guide the profession on the expectations held of a registered nurse and their accountability for clinical practice. Realising these ethical and professional considerations means that nurses understand the various nuances of care. Informed consent is integral to the delivery of quality nursing care, therefore nurses are expected to communicate in a language that is understood by patients, have the knowledge to answer patient questions and concerns, as well as articulate with other health professionals' on the individual wishes relating to patient care.

Having a common language reinforces expectations that those caring for the patient know what they are doing. An intermediate language (clinical pathway) manages and guides the continuum of care for patients, providing a positive health outcome orientated toward early safe discharge. If complications arise within the current hospitalisation requiring transfer to a specialist unit then the communication will be of a language (elite) that will identify and rectify those health problems that are of a specialist nature.

CONCLUSION

The determinants of nursing language have been enunciated within a European context while acknowledging that nursing is an international profession. Communication through language forms an integral part of conveying meaning and understanding for nurses. The relationship between nurses' language belonging to a particular group does promote power and authority while providing expertise in the specialist areas. Discourse with a group of nurses addressed and identified issues associated with an elitism language while affirming that nursing does have a common language. The demarcation of where common nursing language finishes and exclusive language begins is illusive and thus difficult to determine. While this paper has acknowledged the relevance for nurses of having a common language and using clinical pathways to guide and improve clinical practice through communication; meaning and understanding is still unique to the individual. The question of language used by specialist nurses within specialist units (elite language) has not been identified as essential or necessary for today's professional nurse. This issue remains unresolved.

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THE IMPACT OF SURGICAL WARD NURSES PRACTISING RESPIRATORY ASSESSMENT ON POSITIVE PATIENT OUTCOMES

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Key words: respiratory assessment, critical thinking, competent nursing practice, adverse events.

ABSTRACT

Objective:

A literature review to examine the incorporation of respiratory assessment into everyday surgical nursing practice; possible barriers to this; and the relationship to patient outcomes.

Primary argument:

Escalating demands on intensive care beds have led to highly dependent patients being cared for in general surgical ward areas. This change in patient demographics has meant the knowledge and skills required of registered nurses in these areas has expanded exponentially. The literature supported the notion that postoperative monitoring of vital signs should include the fundamental assessment of respiratory rate; depth and rhythm; work of breathing; use of accessory muscles and symmetrical chest movement; as well as auscultation of lung fields using a stethoscope. Early intervention in response to changes in a patient's respiratory health status impacts positively on patient health outcomes. Substantial support exists for the contention that technologically adept nurses who also possess competent respiratory assessment skills make a difference to respiratory care.

Conclusions:

Sub-clinical respiratory problems have been demonstrated to contribute to adverse events. There is a paucity of research knowledge as to whether respiratory education programs and associated inservice make a difference to nursing clinical practice. Similarly, the

implications for associated respiratory educational needs are not well documented, nor has a research base been sufficiently developed to guide nursing practice. Further research has the potential to influence the future role and function of the registered nurse by determining the importance of respiratory education programs on post-operative patient outcomes.

INTRODUCTION

Respiratory assessment is an important component of health assessment and is a valuable tool in patient management. However many nurses still regard these skills within the domain of the medical officer and not a 'legitimate nursing activity' (Wilson and Lillibridge 1995 p.117). Chest auscultation has not become part of the ritual of nurses' daily work as compared to the 'vital signs' of temperature, pulse, respirations and blood pressure. Yet it is becoming increasingly important as the scope of nursing roles and the very nature of clinical practice changes; the introduction of more technology does not reduce the need for nurses to use assessment skills, but rather increases it.

Stethoscopes are still not being used by nurses as effectively as they could be. Listening to lung sounds and accurately assessing the pattern and work of breathing are often absent from surgical nurses' routine practice; whereas oximetry, spirometry, blood pressure taking, pain and sedation scores are included. Increasing patient acuity levels in acute care facilities, particularly in general surgical wards, has emphasised the need for nurses working in these areas to diversify and expand the traditional definition of their role.

Enhancement of decision-making skills in the early recognition of potential problems can facilitate competent resolution of the challenging clinical scenarios that acute care nurses face (Rushforth et al 1998 pp.965–970). These include early intervention for pulmonary oedema, pneumonia and pulmonary embolus as well as exacerbation of asthma or chronic obstructive airways disease (COAD).

LITERATURE REVIEW

A systematic examination of current nursing literature identified significant gaps regarding the impact of education programs on nurses using respiratory assessment in acute patient care. A search of the *Cumulative Index to Nursing and Allied Health Literature (CINAHL)*, *Pub Med* and *Medline* databases was performed and the table of contents from selected journals reviewed. Critical appraisal of the recovered articles was undertaken to reveal the quality and outcomes of the papers. In the articles reviewed, many authors agreed that competent respiratory assessment was a foundation requirement of nursing practice, whereby appropriately educated nurses have the ability to perform regular systematic examinations facilitating awareness of changes in patient condition (Longson and Copley 1989 pp.315-317; Goodfellow 1997 pp.6-8; Kessenich 2000 pp.170). There is good evidence to support the notion that sub-clinical respiratory problems contribute to adverse events (Considine 2005 p.624). There is also substantial support for the contention that technologically adept nurses who also possess competent respiratory assessment skills make a difference to respiratory care. The inclusion of respiratory assessment as a means of data gathering facilitates early intervention in response to changes in a patient's health status, with enhanced health outcomes (Cutler 2002 pp.286).

However despite papers advocating the efficacy of regular respiratory assessment, nurses are demonstrating an unwillingness to incorporate respiratory assessment into their clinical practice resulting in delays in essential treatment (Considine and Botti 2004 p.26). Therefore researching whether focused respiratory education of nurses will facilitate practice change, remains important. The impact of educational programs and their relevance as change agents to empower nurses' attitudes, skills and application to respiratory practice continues to be a challenge for nursing educators. The application of respiratory assessment to clinical practice was seen to be an issue by Lont in 1992 and remains a problem today.

Cutler asserted that many seriously ill patients, who are cared for in the general wards in the United Kingdom, would be in critical care areas in North America (2002 pp.162-166). She also contended that patient care on general hospital wards is often not 'well managed'. Both statements are relevant to Australian hospitals. Acutely ill and highly dependent patients are routinely being cared for in general wards in Australia.

Nurses working in these areas often lack skills relating to respiratory assessment, reflecting the need for more

research and education in this area (Considine 2005 p.632). There are enormous clinical challenges facing nursing practice in ward areas, given that stethoscope use in clinical assessment was viewed as a post-registration specialist skill specifically for critical care nurses (Woodrow 2002 p.675). Nursing roles are continually evolving and developing and the impact of shorter hospital stays, rising patient acuity, an ageing population, a higher incidence of patient obesity and new technologies is reflected in the extra demands made on the surgical ward nurse. However the basic nursing skill of respiratory assessment continues to underpin best practice in postoperative care. Detection of the deterioration of an acutely ill ward patient is considered to be within the realms of 'basic nursing assessment' (Ahern and Philpot 2002 p.54).

There is no mention of the possible inclusion of listening to breath sounds and accompanying respiratory assessment in Zeitz and McCutcheon's 2002 study of postoperative vital signs in the general surgical setting (p.831). This is despite measurement or observation of oxygen saturation, colour, airway and gag reflex. A systematic review relating to vital signs conducted by the Joanna Briggs Institute for Evidence Based Nursing and Midwifery, also concluded that the focus of the majority of studies was on measurement and technique rather than duration or frequency issues (Joanna Briggs Institute 1999 p.41).

Early detection of changes in a patient's condition and subsequent preventive actions by critical care and emergency nurses has been shown to facilitate accurate and timely referral and continuity of care (Rushforth et al 1998 p.966). Increasingly, there are challenges for nurses working in the acute surgical wards to extend their knowledge base to also include respiratory assessment to enhance similar early interventions. From the trauma patient with multiple fractured ribs and broken limbs in the orthopaedic area to the elective surgery patient with asthma or COAD, the value of the inclusion of comprehensive respiratory assessment skills in a ward nurses' repertoire is becoming increasingly evident. When these skills include the accurate assessment of respiratory rate, work of breathing and auscultation together with the measurement of oximetry and spirometry trends and use and compliance with inhaled medications, the improvement of health outcomes is significant. Reliance on technology rather than using it as an adjunct to clinical care has led to the typical response when reporting patient respiratory deterioration to colleagues, 'what does the oximetry show?'

The development of nurses' skills and knowledge in relation to respiratory assessment needs to be proactively included in nursing practice to ensure that patient care is delivered in a safe and timely fashion and technology augments nurses' clinical decisions (Trossman 2003 p.75; Coombs and Morse 2002 pp.200-210). However clinical emphasis has often been placed on the use of equipment such as chest x-ray, oximetry, spirometry, magnetic resonance imaging and computerised tomography scanning. Established respiratory assessment practices such as confirming the existence of normal breath sounds by auscultation and measuring respiratory patterns and

rate are often overlooked, missing vital early signs and symptoms. Critical evaluation by consumers of the quality of health care and increasing litigation has reinforced the need for health care organisations to comply with national standards of accreditation and for the nursing profession to maintain high standards of patient care (Leeder 1998 p.3).

Safety and quality agenda

Rapid technological changes coupled with a rise in consumer expectation and hospital stay related litigation has put increasing pressure on all health care professionals, including the nursing profession, to provide best practice standards of care. This focus on quality has become core business for health with consumers demanding 'near perfect results' (Barracough 2004 p.90). However up to 80 per cent of critically ill patients in the United Kingdom were said to receive 'suboptimal care' in acute care wards leading to potentially avoidable deterioration (McQuillan et al 1998 p.1853). Similarly, the Quality in Australian Health Care Study Consortium in 1998, found that 16.6 per cent of admissions to Australian hospitals culminated in adverse events resulting in disability or a longer hospital stay. Of these, 51 per cent were considered preventable (Wilson and Runciman et al 1995 p.458). Given that the approximate cost of a hospital bed per day in Australia is between \$700 and \$800, this represents considerable extra pressure on the nation's health care budget not to mention the disadvantage to patients (Queensland Health 2006 p.50). Root causes of sentinel events reported by the Joint Commission on Accreditation Healthcare Organisation in 2001, included the need for education, communication and improvement in the patient assessment process (JCAHO 2001 p.9).

An educated nursing workforce has been shown to contribute positively to patient outcomes. A recent study of surgical patients in the United States has found that each 10 per cent increase in the proportion of RNs holding a bachelor degree was associated with 5 per cent lower mortality rates (Aitken et al 2003 p.1617). Continuing educational development of nurses in relation to clinical competencies was strongly recommended in the *National Review of Nursing Education* (2002 p.24) and is a major component of clinical governance frameworks. The major tenet of clinical governance includes health professionals' access to educational programs (Harvey 2000 pp.2-4).

The Australian Council for Safety and Quality in Health Care in its third report to the Australian Health Ministers' Conference in 2002, focused on high priority areas such as infections. A national approach was coordinated to improve clinical practice. The relationship between nursing expertise and reduction in the incidence of adverse events, including infection rates, has been clearly demonstrated by a number of studies. As nursing competence and proficiency within a ward or unit increases, the incidence of adverse events, declines (Deutschendorf 2003 pp.52-53 and Houser 2003 p.46). These papers are endorsed by similar findings relating to post operative complications. In a group of surgical patients admitted to 232 acute care North American hospitals, the positive effects of a 10 per

cent increase of RN staffing were associated with a 9.5 per cent decrease in pneumonia (Cho et al 2003 p.71). Cho et al's 2003 study noted the strong links between adverse events and increases in both morbidity and mortality especially in relation to pneumonia, which was associated with a 1.74-fold increase in the patient's length of stay and a 3.39-fold increase in the death rate (2003 p.76). The authors contend that postoperative pulmonary infections could be avoided by surgical patients with the provision of 'attentive lung care' by knowledgeable, skilled RNs.

Incidence of respiratory complications

Postoperative pulmonary complications such as pulmonary emboli are more common in the aged and obese, while patients presenting with co-morbidities of chronic obstructive airways disease, asthma and cardiac disease are considered a high risk group for postoperative respiratory problems (Kremer 1998 pp.467-468). Specific concerns regarding overweight patients include appropriate respiratory assessment, provision of adequate oxygenation relating to decreased lung compliance and difficulties in mobilisation in the immediate postoperative period (Keller 1999 pp.109-112).

Older patients, who constitute about twenty per cent of patients undergoing surgery, present different clinical issues to younger patients. There is a higher likelihood of patients over seventy developing atelectasis or lung infection, complicated by the presence of chronic lung disease, diabetes and/or pre-existing risk factors such as high abdominal or thoracic incisions, smoking, obesity and prolonged periods of anaesthesia (Bailes 2000 pp.186-205). The classic symptoms of infection and pulmonary oedema are often absent, vague or non-specific meaning special nursing vigilance is required.

Nurses and Respiratory Assessment

Respiratory assessment skills have been part of undergraduate education in North America and Canada since the early 1970s (Reese et al 1979 pp.662-665), with Australia following in the late 1980s (James and Reaby 1988 pp.51-52). A survey of twenty-five Australian tertiary institutions offering undergraduate nursing programs conducted by James and Reaby in 1987, found that respiratory assessment was included in the curriculum of only four establishments. Of these institutions, 76 per cent included general assessment skills such as taking vital signs, assessing wounds and fluid balance status in their programs, affirming the need to teach more advanced assessment skills.

Respiratory assessment programs have continued to develop over the past decade with most universities now including assessment skills in their core curriculum (Wilson and Lillibridge 1995 p.117). As nursing practice has diversified and expanded, the ability to undertake comprehensive health assessment, including respiratory assessment, has become an integral part of the nurse's role in intensive care units, coronary care units and Departments of Emergency Medicine. The advent of the nurse practitioner role in Australia, New Zealand and the

United Kingdom in the late 1990s has also encouraged expansion of the nurses' role in relation to respiratory assessment. Competent respiratory assessment is now considered by many to be a foundation requirement of nursing practice (Longson and Copley 1989 pp.315-317; Goodfellow 1997 p.8; Kessenich 2000 p.170). However there are barriers for respiratory assessment being incorporated into everyday nursing practice.

Barriers to respiratory assessment.

In terms of barriers to changing nursing practice in relation to respiratory assessment, a number of studies have found that nurses lack confidence in their ability to competently perform physical assessment and have divergent perceptions of what physical assessment meant in its application to clinical practice (Rushforth et al 1998 p.970; Lillibridge and Wilson 1999 pp.29-37). Rushforth et al discuss the lack of support to incorporating physical assessment skills into practice and the many inappropriate non-nursing tasks still carried out by nurses (1998 p.968). Nursing colleague's attitudes to respiratory assessment have been cited as an additional obstacle. Common barriers to the planned introduction of research findings into clinical practice were identified by a study conducted by Funk et al (1991 pp.90-95), including resistance to change and perceptions that nurses have insufficient time or authority to implement new practices. Lack of support from both colleagues and nursing administration was also established. Creation of a professional practice climate where the nurse was 'enabled to practice' was recommended to facilitate change in both the organisation and the nurse (Champagne, Tornquist and Funk 1996 p.221).

The requirement to assess changing health status suggests that stethoscope use by nurses should be regarded as an essential nursing tool to listen to respiratory, heart and abdominal sounds. O'Neill suggests that normal, decreased, or absent as well as abnormal sounds can all be detected following appropriate education, (2003 p.392). However evidence of nurses' use of comprehensive respiratory assessment, including stethoscope use as a routine part of practice, is variable. Lont (1992 p. 93) contended that the combination of 'complex medical technology, increased surgical interventions' and decreased length of hospital stay requires that all levels of RNs are able to 'accurately judge a patient's changing health status', including stethoscope use, and make an appropriate decision regarding intervention.

DISCUSSION

The inclusion of respiratory assessment as an additional means of gathering information following surgery facilitates early intervention in the event of changes in a patient's health status. This can be especially valuable in the initiation of timely clinical referral following comparative analysis of clinical data. Nurses face increasing challenges to provide high quality services at reasonable costs within appropriate time frames. The inclusion of comprehensive

respiratory assessment in routine surgical nursing practice has a number of potential benefits. As nurses are with the patient twenty four hours a day, they are in the best position to incorporate a mix of technological and assessment skills together with use and compliance of associated inhaled medications into everyday practice. Early identification of respiratory problems and subsequent referral has the potential to reduce clinical complications, such as atelectasis, pneumonia, pulmonary emboli, pneumothoraces and exacerbation of COAD or asthma. Further, professional nursing practice standards require competent nursing assessment that results in earlier initiation of specific nursing actions and referrals to appropriate health professionals (Yamauchi 2001 pp.213-214).

Nurses play a pivotal role in the prevention of adverse events relating to respiratory dysfunction, a well-recognised predecessor of cardiac arrest and medical emergencies resulting in increased mortality (Considine 2005 p.624). Specific clinical indicators include changes in respiratory rate and the onset of tachypnoea, dyspnoea and hypoxaemia (Considine 2005 p.624). High risk patients exhibiting clinical instability related primarily to respiratory problems can progress to adverse events such as cardiac arrest and death unless aggressive management measures are instigated early to correct physiological abnormalities (Buist et al 2002 p.387). Varying periods of clinical instability, where potentially reversible changes in predominantly respiratory vital signs are evident precede approximately 80 per cent of cardiorespiratory arrests (Buist et al 1999 p.25). When respiratory assessment is practiced by clinically competent nurses, learning and experience is combined in their everyday practices and is instrumental in achieving early medical input, subsequent intervention and optimal patient outcomes (Oliver and Butler 2004 pp.21-26).

CONCLUSION

Respiratory assessment was considered to be a momentous new nursing challenge by Reaby in 1990 and Lont in 1992. However this particular clinical skill remains a challenge to surgical nurses in 2007. The literature suggests that barriers to implementing this nursing practice change include a lack of confidence among nurses, limited education and lack of emphasis regarding respiratory assessment at both undergraduate and postgraduate levels. Other obstacles include nurses' attitudes with regard to using a stethoscope and incorporating respiratory assessment in their everyday clinical practice. Importantly, the literature fails to address the issue of implementing and sustaining practice change. While it may be concluded that respiratory assessment contributes to improved patient outcomes and consequent reduction of overall health care costs by reduced lengths of patient stay, the best way to achieve such practice change remains inconclusive. At a time of increasing budget restrictions, increasing complexity of care and never-ending new technologies it is essential for the nursing profession to have a good understanding of how efficient and effective that care provision is.

RECOMMENDATIONS

Post operative monitoring of vital signs should include the fundamental assessment of lung fields using a stethoscope, oximetry and spirometry where indicated. Research in this area should be expedited to determine whether respiratory education programs and practical supervisory assessment in the clinical area generate a proactive solution to the early detection of respiratory problems post-operatively. The research should explore the current body of nursing knowledge regarding nurse use of respiratory assessment, to both inform undergraduate and staff development education programs and identify categorically whether focused respiratory education of nurses facilitates practice change and makes a difference to patient outcomes.

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