BARRIERS TO CLINICAL DECISION-MAKING IN NURSES IN AUSTRALIA

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ABSTRACT

Research aims

The aim of this study was to examine whether nurses in Australia participated in clinical decision-making to the extent they desired. Some factors that could be inhibiting or promoting participation in clinical decision-making, namely educational level, occupational orientation (role values), level of appointment and area of practice (medical/surgical) were also examined.

Method

A quantitative, correlational study examined the relationship between nurses' occupational orientation, educational level, area of specialty and decision-making. T-tests were used to identify significant differences between the decision-making nurses say they have and that which they say they want.

Major findings

Nurses holding a professional role value participated more in clinical decision making than those holding a paramedical role value. Nurses practising in surgical areas participated less in decision-making than those in medical areas. While a higher educational level was not associated with greater participation in clinical decision-making, it was linked to wanting more participation in this process.

Conclusion

Important issues arising from the study need to be addressed. Nurses who are better educated are not making decisions to the extent to which they aspire. Surgical nurses participated less in decision-making than medical nurses and holding professional values can lead to greater decision-making participation.

INTRODUCTION

In recent years globally there has been an increasing emphasis in the health industry on customer-focused care and improved patient outcomes. Health care is now a consumer product subject to the same forces of consumerism as other industries - better patient outcomes at less cost (Bradshaw 1995). This emphasis on consumerism and the provision of cost-effective care has led to an examination of skill mix (Spilsbury and Meyer 2001) in some settings and even the suggestion that the use of the registered nurse (RN) is too costly (Bradshaw 1995). Researchers such as Huber and Oerman (2000) Stetler et al (2000) and Spilsbury and Meyer (2001) have suggested that evidence to date is not sufficient to show the critical role that professional nursing plays in achieving quality outcomes, particularly the invisible aspects of nursing care such as clinical judgment and decision-making (Huber et al 2000). In contrast, Kriariksh and Anthony (2001) state there is an established association between quality of patient outcomes and nurses' decision-making and that a way to enhance the quality of patient outcomes is to increase nurses' participation in decision-making regarding nursing interventions.

Clinical decision-making is the process that nurses use to gather and evaluate information to make a judgment that results in the provision of professional patient care (White et al 1992). Research into clinical decision-making has been examined by studying cognitive processes, as well as how decisions are made, and the factors that affect clinical decision-making such as stress, education and experience. It is generally assumed that nurses in clinical practice have the skills, ability and freedom to make decisions regarding nursing interventions and that university level preparation aims to provide nurses with the skills necessary to make sound clinical decisions (du Toit 1995). However, it appears that despite higher educational levels, there are still barriers in clinical

practice that prevent nurses participating in decision-making to the extent they want. If, as reported, effective nurse decision-making improves patient outcomes, it is necessary to begin to understand the barriers that prevent nurses participating fully in this critical aspect of their practice.

LITERATURE REVIEW

The processes that nurses use in clinical decision-making have been investigated using different methods. To date researchers have examined the cognitive processes involved in decision-making using think aloud protocols (TAP) (Grobe et al 1991; Aitken 2000; Aitken and Mardegan 2000), decision analysis (Panniers and Walker 1994) and content analysis (Tschikota 1993). Nurses are believed to use a hypothetico-deductive cognitive model in decision-making, where nurses gather information, make a hypothesis and then gather cues to eliminate or support the hypothesis (Westfall et al 1981; Thompson 1999; Taylor 2000). Decision-making has also been studied using participant observation and interviewing. Intuitive processes have been described by Benner and Tanner (1987) as a process of decision-making used by nurses. Intuition is believed to be a knowing without rationale and is believed to develop through experience (Benner and Tanner 1987; Dreyfus 1992; Benner et al 1999; Buckingham and Adams 2000).

Nurses' values and beliefs about whether they should make decisions influence their decision-making behaviour (Augoustinos and Walker 1995). Values contain both an affective and cognitive dimension and serve as criteria for decision-making (Berggren et al 2002). A role is a person's pattern of behaviour that results from the constructs that a person holds (Feist 1994) to a specific position in society (Augoustinos and Walker 1995). In nursing, the values and beliefs held by nurses towards their work and occupation constitute their occupational ideology. These beliefs and values are shaped by societal and institutional norms and internalised by nurses (Lauri and Salantera 1995). The work values held by individual nurses will have been shaped by socialisation processes within and external to nursing (du Toit 1995; Yung 1996) and internalised to form nurses' values to work. An example of socialised role development is seen where nurses take a passive role when working with medical staff leading to a lack of independent judgements by nurses (Oughtibridge 1998).

Rhodes (1985) outlined three role values that nurses hold and related these to participation in decision-making. Those who hold 'paramedical' role values and see themselves as physicians' helpers act subserviently and often do not make independent decisions regarding everyday nursing care (Rhodes 1985). Those who hold 'bureaucratic' values believe that the hospital organisation should make decisions for them and also do not often make independent decisions (Rhodes 1985). On the other hand, those nurses who hold 'professional' values and a belief in autonomous decision-making are willing to participate in clinical decision-making (Rhodes 1985).

Nurses worldwide are reporting that they want to be able to participate in decision-making more than they currently do. In Israel, Misener et al (1996) found nurses wanted more decision-making authority, responsibility and control and that there was a discrepancy between the decision-making in which nurses actually participated and those in which they wanted to participate. This finding was attributed to the authoritarian management style common in Israel. Wulff (1991) also found differences in the amount of decision-making in which nurses participated in the United States of America (USA) and what they wanted to participate in, stating that they want to be able to participate more.

The participation in decision-making in this study was mainly correlated to personal characteristics. However, Wulff (1991) also found that some job attributes, such as nurse leadership style, affected participation in decision-making. A study which examined the type of decisions nurses can make and what kind they want to make, found that nurses frequently did not independently or consistently make patient care decisions in those areas identified as belonging to the nursing domain such as rest, nutrition, elimination and mobility (Prescott et al 1987). These authors concluded that nurses' characteristics such as education, experience, and interpersonal styles affect clinical decision-making. The magnet hospital research, also in the USA, has demonstrated links between nurse decision authority and greater retention and job satisfaction, with nurses choosing to work in areas with greater decision authority (Scott et al 1999; Curley 2002; Ritter-Teitel 2002). In Australia, O'Connell and Warlow (2001) state that nurses often feel they are in situations where they are unable to change aspects of patient care and that nurses lack autonomy within hospital systems. However, these researchers did not examine whether nurses want more decision authority.

Nurses are being educated at the tertiary level to use skills such as problem solving, critical thinking and reflection to develop good clinical decision-making abilities. However, despite nurses being equipped with the necessary skills to make decisions regarding patient care, they still feel their participation in clinical decision-making is being constrained (Misener et al 1996). In Australia, du Toit (1995) found that student nurses at a university were being socialised into professional roles with independent decision-making being an important aspect of that role, which led to a high willingness to make clinical decisions. Several authors echo this sentiment that students are socialised into roles at university and also learn roles in the workplace (Yung 1996; Beecroft 1999; Wade 1999; Cullen 2000). One important aspect of the professional role of nurses is the belief in autonomous nursing practice that can be expressed as greater participation in clinical decision-making. University educated nurses also appear to be socialised to value autonomy and in turn, expect a high

level of involvement in clinical decision-making (du Toit 1995).

The amount of autonomy that nurses have varies from hospital to hospital and unit to unit, as does the extent to which nurses can make decisions (Prescott et al 1987). Clinical autonomy is a role characteristic that is socially constituted and so a nurse's position in a ward may act to constrain their clinical autonomy and decision-making (Cash 2001). Much variability exists in both the decisions nurses can make and the extent to which nurses want to make decisions, and there may be barriers to nurses' clinical decision-making as a result of the type of hospital or ward in which they work. Nurses working in areas such as community health, critical care and mental health are more independent decision-makers (Bucknall and Thomas 1996). In England differences in participation in decision-making were found between nurses on medical and surgical wards, with medical wards having less need for frequent medical intervention and greater need for skilled nursing care, leading to greater self-confidence and autonomy in practice for medical nurses (Adams et al 1997). The differences in nursing autonomy between medical and surgical wards were due to the nurses on the medical wards needing to implement skilled nursing interventions more frequently (Adams et al 1997). Surgical nurses had less uncertainty to tolerate and had fewer chances to develop self-confidence and autonomy in their practice (Adams et al 1997). There has been little research in Australia concerning similarities or differences in medical/surgical wards.

A nurse's level of appointment has also been shown to affect participation in clinical decision-making. Bucknall and Thomas (1996) examined both the frequency with which nurses reported they made decisions and the relationship between level of appointment and decisions made. They concluded that nurses practising at a higher level made more decisions than those practising at a lower level, which supports the work of Schutzenhofer et al (1996). Lower levels of appointment may act as a barrier to participation in clinical decision-making. This might be quite appropriate in some cases.

METHOD

In this study decision-making was defined as those decisions made by nurses in their usual clinical practice and incorporated aspects such as activities of daily living, wound dressings, medication administration, emotional support and referrals to other services. The frequency with which nurses make such decisions was assessed and correlated to a number of factors. The study used a correlational design to examine the relationships between selected factors and decision-making by nurses in Australia.

Instruments

Two questionnaires, one that identified role values (occupational orientation) and one that assessed decision-making were used after Rhodes (1985) granted permission. A pilot study was conducted to determine the suitability of the questionnaires for Australian conditions following which the wording of the questionnaires were modified slightly. The occupational orientation (role values) questionnaire consisted of 26 items making up three sub-scales that tested:

i) professional role values: for example 'Nursing duties should be defined by the nursing profession' eight items;

ii) paramedical role values: for example 'Nursing duties should be defined by the medical profession' nine items; and,

iii) bureaucratic role values: for example ' The area management should decide what work nurses should do.' nine items (Rhodes 1985).

Each item of the scale had a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1).

The decision-making questionnaire consisted of two subscales, one for perceived decision-making and one for normative decision-making. This inventory consists of 23 items for the perceived subscale and 23 items for the normative subscale. Each item on the decision inventory has a five point Likert scale with scores ranging from five (strongly agree) to one (strongly disagree). The 23 items on the subscales are related to decisions nurses make in aspects of daily patient care and cover areas such as nurse initiated medications, bathing, feeding, mobility and pressure area care. An example for each subscale is provided:

Perceived: 'I decide when to discontinue charting.'

Normative: 'I should be able to decide when to discontinue charting.' (Rhodes 1985)

Reliability and validity

The reliability of the questionnaires was evaluated using Cronbach's alpha. Item to scale correlations were obtained from the pilot study. The occupational ideology scale had Cronbach's alphas greater than or equal to 0.7. On the bureaucratic scale the Cronbach's alpha was 0.602. Removal of one item increased this to 0.695, so this item was discarded. For the second questionnaire on decision-making, the Cronbach's alpha for the perceived decision-making scale was 0.74 and the Cronbach's alpha for the normative decision-making scale was 0.745. Both scales were used in the study without alteration. Face validity was achieved by changing the wording slightly in three items on the occupational scale to reflect Australian conditions.

Sample

The sample consisted of all RNs working in medical or surgical areas in three hospitals in one area health service. Participants were recruited by posting out questionnaires to all RNs on each ward selected for the study. Mailing

out the questionnaires was staggered and non-consecutive so as to reduce interaction between participants. No follow-up was attempted. The sample size was 174 RNs.

Ninety-four completed questionnaires were returned giving a response rate of 58%. The mean age of the sample was 33.5 years; 7% of the sample was male and 93% was female; the average length of experience in nursing was 11 years; 47% worked in medical areas and 46% in surgical areas; 82% were RNs, 5% were appointed at Clinical Nurse Specialist (CNS) level, 4% at Clinical Nurse Consultant (CNC) and 5% at Nurse Unit Manager (NUM) level. Education levels held were Hospital Certificate (15%), Graduate Certificate (13%), Diploma of Nursing (47%), Bachelor of Nursing (2%) and Master of Nursing (1%).

Analysis

Data were analysed using descriptive statistics, correlations and t-tests. Pearson's correlations were used for relationships where both variables were normally distributed and where interval level data were obtained. This included the relationship between occupational orientation and decision-making. Spearman's correlations were used for non-parametric and ordinal level data. This included the relationship between level of appointment and decision-making. For analysis of the relationship between area of practice and decision-making, the two areas were treated as dummy variables in Spearman's correlation, with medical areas designated 0 and surgical 1. Two-tailed tests of significance were used which were set at $p<0.01$.

A t-test was used to determine if the scores for perceived decision-making (decision-making that nurses report they have) and normative decision-making (decision-making that nurses report they want) were significantly different at a $p<0.01$.

Ethical issues

Anonymity was protected, as participants were not required to identify themselves. Consent was implied if participants returned completed forms as indicated on the covering letter. Participants were informed as to what was required by the cover sheet and the researcher was available to answer questions. Responses to the questionnaires are kept in a locked cabinet, data are in an aggregated form to protect participants' privacy, and the computerised data file is password protected.

Results

The role values (occupational orientation) of nurses were ascertained using the occupational orientation scale. The total possible score for both the professional and paramedical scales was 45 and 40 for the bureaucratic scale. The highest mean score for the role values was for professional values followed by bureaucratic values and paramedical values (see table 1).

Perceived and normative decision-making were ascertained using the decision-making inventory. The total score for each was 115. The mean score for the perceived scale was 78.7 (see table 2), well above the midpoint of 57 indicating that nurses perceive they make decisions reasonably frequently on the items. The mean score on the normative scale was 87.6 (table 2), again well above the midpoint, and also higher than the perceived decision scale. The t-test showed a significant difference between the scores on the perceived decision-making inventory and the normative decision-making inventory. The scores for the normative decision-making scale are significantly different from and higher than those of the perceived decision-making scale. The findings indicate that nurses believe they should be able to participate more in decision-making than they currently do.

Table 1: Means and standard deviations for role values

Scale	Mean	SD
Professional value	37.5	+3.7
Paramedical value	14.7	+4.4
Bureaucratic value	24.5	+3.9

Correlations between decision-making (perceived and normative) and the factors examined showed that some factors were restricting participation in decision-making while others were increasing participation (see table 3).

Table 2: Means, standard deviations and t-tests for decision-making inventory

Perceived decision-making	Mean 78.7 SD +13
Normative decision-making	Mean 87.6 SD +11.4
t-test paired: t = -5.978, df = 93, sign. (two tailed) = 0.000	

There was a significant positive relationship between professional values and perceived decisions $r=0.332$, $p<0.01$ (see table 3), and professional values and normative decisions $r=0.358$, $p<0.01$. Professional values led to an increased participation in decision-making and a desire to participate further. There was a significant positive relationship between education and normative decision-making ($r=0.561$, $p<0.01$). Those with higher levels of education wanted to participate more in decision-making. There was also a significant positive relationship between level of appointment and perceived decisions ($r=0.338$, $p<0.01$). Those holding higher levels of appointment participated more in decision-making.

There was a significant negative relationship between paramedical values and perceived decisions ($r=-0.250$, $p<0.01$) (see table 3). Holding paramedical values was related to decreased participation in decision-making. There was also a significant negative relationship between area of clinical practice and perceived decision-making, $r=0.309$, $p<0.01$, with those in surgical areas participating less than those in medical areas.

Table 3: Significant correlations between decision-making and occupational orientation, educational level, level of appointment and area of practice

	Perceived decisions	Normative decisions
Professional orientation	0.332* 0.000	0.358* 0.001
Paramedical orientation	-0.250* 0.007	-0.327* 0.001
Educational level	not significant	0.561• 0.000
Level of appointment	0.338 • 0.000	not significant
Area of practice	-0.309 • 0.001	not significant

Key: top number = correlation coefficient; bottom number = significance; * Pearson' correlation; • Spearman's correlation

Limitations

Some caution may be needed when applying these findings more widely because the study was undertaken with a sample from one area health service only. Secondly, the sample was a convenience rather than random sample, which increases the risk of bias, thus again limiting generalisability.

Discussion

This study identified a significant difference between the scores for perceived and normative decision-making. Nurses reported that they wanted more decision-making authority than they currently have. This finding supports the results of research by Misener et al (1996) and Wulff (1991) and adds weight to the assertion of O'Connell and Warlow (2002) that nurses report being unable to affect aspects of care. Nursing should be concerned that these nurses feel they cannot make decisions to the extent they want. More research needs to identify what other aspects of the clinical environment are preventing participation in decision-making. The discrepancy between the actual decision-making and desired level of decision-making warrants consideration by medical and nurse managers as ward structures may be too hierarchical to accommodate nurses' desires to make decisions concerning patient care.

The educational level was not correlated with perceived decision-making, but was strongly positively correlated with normative decision-making (decisions nurses want to make). This is an interesting finding as one of the aims of tertiary level preparation was to produce professional nurses with effective decision-making skills (Pardue 1987; Watson 1994). It would appear that the Australian education system is preparing nurses who believe decision-making is a part of their role, but they are unable to undertake this responsibility to the extent they believe they should.

The study also found that holding a professional occupational orientation increases decision-making participation, whereas holding a paramedical orientation restricted decision-making behaviours. Those nurses holding a professional occupational orientation do not believe that others should make all their decisions, and they are willing to take on the role of decision-maker in clinical practice in areas of concern to nursing. If nurses see themselves as professional, they will act accordingly and be more willing to make decisions. The finding that professional role values are related to greater participation in decision-making supports the work of Misener et al (1996) and is an important finding. In the Misener et al (1996) study participation in professional activities was related to feelings of personal control and greater participation in decision-making.

The finding that professional occupational orientation is related to decision-making is similar to overseas findings (Rhodes 1985; Misener et al 1996; Scott et al 1999; Curley 2002; Ritter-Teitel 2002). These results are particularly important, as they appear to be relatively constant across countries. If nurses hold values to their work that can be shaped by their socialisation into nursing, then a concerted approach is needed to socialise nurses into holding professional values with a belief in their ability to carry out independent decision-making regarding nursing interventions. Adamson et al (1995) state that nurses are aware of their subordinate position in health care and their subsequent lack of autonomy in decision-making. Furthermore they believe that many nurses no longer consider that their role is merely to follow orders. This idea needs to be strengthened to increase nurse participation in decision-making about fundamental aspects of nursing care in order to improve patient outcomes.

Nurses holding a higher level of appointment also participated more in decision-making and equally, the converse is true: A lower level of appointment was linked to lower levels of participation in decision-making, supporting the work of others (Schutzenhofer and Musser 1996; Bucknall and Thomas 1996). Schutzenhofer and Musser (1996) report findings that would suggest that there is a link between grade, autonomy and independent decision-making. Bucknall and Thomas (1996) believe that autonomy and independent decision-making are synonymous, and that practising at higher levels as well as holding a professional occupational orientation leads to nurses being more autonomous in decision-making. The findings in this study reinforce those of other researchers (Bucknall and Thomas 1996; Beecroft 1999; Ritter-Teitel 2002) and support the assumptions underlying advanced practice roles, that is, such roles lead to more professional autonomy and hence greater participation in clinical decision-making. However, this finding could also be indicative of the barriers to decision-making in hierarchical organisations, where the decision-making discretion is with more senior staff, not with nurses at the bedside. Those holding lower levels of appointment may feel constrained in decision-making by the authority of those in more senior positions and they may be less

willing to participate in decision-making. However, interestingly there was no correlation between level of appointment and normative decision-making (wanting to be able to make more decisions). Nurses practising at lower levels did not report wanting to be able to make more decisions. They appear to accept their status in the hierarchy and the amount of decision-making authority they have, which is in contrast to the better-educated nurses who want more decision-making authority.

There were differences in clinical decision-making by nurses according to the area of practice with those in medical wards participating more than those in surgical wards. This corresponds to the findings of Adams et al (1997) in England. This interesting finding needs more research to uncover why medical nurses participate more in clinical decision-making about nursing care than surgical nurses.

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