ACTUAL DECISION MAKING:
FACTORS THAT DETERMINE PRACTICES IN
CLINICAL SETTINGS

Dayle Hunt Joseph, Jeannette Matrone and Elaine Osborne

Decision making is an integral part of nursing practice. In this era of expanded practice, nurses are expected to participate actively in decision making with regard to the care of clients. Decision-making skills are an inherent part of nursing curriculums throughout the United States. Students are now expected to demonstrate these skills on state board examinations.

Findings of several researchers have given credence to the notion that nurses do use some form of decision analysis when choosing particular options for patient care (Baumann & Bourbonnais, 1982; Benner, 1984; Corcoran, 1986; Grier, 1976; Thompson & Sutton, 1985). Little information is given, however, about the types of decisions nurses do make and the activities surrounding those decisions. In conversations with nurses, they frequently discuss, in a cavalier fashion, the kinds of decisions they make throughout the course of a day. In this particular study, an attempt was made to investigate those every day decisions empirically, so that a better understanding of the scope of decision making in nursing practice can be realized.

Kim (1983) developed a typology for nursing care decisions in which three types of decisions - program, operational control and agenda were identified. In Kim’s model, these types of decisions are "assumed to directly affect the client and...decision responsibilities rest primarily on the professional nurse, independent of medical control" (Kim, 1983, p. 276). Although the researchers in this study examined carefully Kim’s typology, we were hesitant to consider only those decisions within the purview of nursing. As will be demonstrated throughout the findings, nurses are making decisions commonly thought of as being in the province of medicine. The findings reported in this paper substantiate the typology described in Kim’s work, and implicate variables that influence decision making.

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Background

Nurses working in hospitals are often criticized for their lack of decision-making skills. Many, even those within the profession, seem to believe that the hospital nurse functions less autonomously than his or her counterpart who practises in the community. There are many questions that arise about the responsibilities of nurses who work in hospitals. Policy may have some influence upon practice, but the researchers suspected that is not a strong predictor of decision making.

In a preliminary study, the researchers conducted in-depth, taped interviews with registered nurses working in staff positions in a major metropolitan hospital. In an attempt to review the data objectively, the researchers independently listened to the tapes and identified themes that consistently appeared throughout the interviews.

Nurses continually reported that they did make decisions about the clients’ plan of care. They believed that it was their responsibility to appropriately intervene and felt that many physicians, not all, supported their actions. In other words, it is not unusual for a nurse to order a blood test, cancel an x-ray or change the client’s activity level. When asked to discuss hospital policy, the majority of nurses seemed convinced that policy did not meet the needs of current practice. They felt that they were responsible for the client’s well-being and that if they failed to intervene, the client would suffer needlessly. When discussing actual decisions that were made, some nurses asked that the tape recorder be turned off; they knew that their practices were not always covered by hospital policy (Joseph, Matrone & Osborne, 1984).

This interview process documented the notion that nurses do, in fact, make decisions. Repeatedly, nurses made statements such as:

"If I know the patient takes Tylenol at home, I give the patient 2 tablets and notify the doctor when he visits the unit."
"If I am not happy with the intern’s response, I notify his superior and suggest that which I feel should be done."
"Nurses are patient advocates, of course we make decisions."

There were two other important observations made from this preliminary investigation. The staff nurses were very clear that they did not mind assuming decision-making responsibility for most clients. However, many stated that if the client’s physician was not supportive of this practice, and if they had had previous negative interactions with a particular physician, they would not act autonomously. They refused to make necessary decisions for these doctors’ clients because they feared repercussions. Although nurses make decisions, these decisions are, often, contingent upon their ideas of col-
laboration with the physician. The following comment is typical: "If it is Dr. X’s patient, I do what is needed, and then tell him what I’ve done. If it’s Dr. Z.’s, I get all the orders first because I know he won’t approve."

Some of the nurses interviewed believed that the physician should make all the decisions. They felt less comfortable assuming this type of a role. Many of those nurses who worked in critical care units felt that nurses who worked on the regular units were resistant to any kind of decision making. One nurse, in particular, recounted the following.

"I’ve literally had a nurse restrain my hands, telling me not to give the IV drug I was about to bolus because there was no order. The patient desperately needed it. In intensive care, we give such medications all the time; if we didn’t the patients would die!"

It seemed to the investigators that decision-making practices differed between those nurse working on the general medical surgical units and those working in critical care units.

This qualitative data, collected over the course of a year, was the impetus behind the development of two instruments: Perceptions of Collaborative Relationships (PCR) and Actual Decision Making (ADM). The questions were designed from information collected during the interviews. Face validity was obtained by preliminary testing of both instruments. The questionnaires were first administered to four experts - master’s prepared nurses who were prepared as clinical nurse specialists. After this initial review, the instruments were further refined. All confounding items which were identified by these judges were removed from the questionnaires. The instruments were then pilot tested. The results will be shared in this paper.

Statement of the Problem

The purpose of this study was to determine the effects of perceptions of collaborative relationships, attitudes toward decision making and clinical practice setting upon actual decision-making practices. There were two null hypotheses in this study. They were:

Perceptions of collaborative relationships, attitudes toward decision making and type of unit do not significantly influence the actual decision-making practices of nurses.

There is no difference in the decision-making practices of nurses working in critical care and general medical-surgical units.

Speedling, Ahmadi and Weissman (1981) report that nurses believe that physicians do not really understand the role of nursing and that they are less
apt to seek the opinion of the nurse. "Physician-nurse relationships have been characterized in general by an enduring pattern of physician dominance and nurse deference, with increasing conflict between the two groups" (Prescott & Bowen, 1985, p. 127).

Prescott and Bowen (1985) used both questionnaires and interviews to examine collaborative relationships between nurses and physicians. Two hundred sixty-four nurses and 180 physicians were interviewed. Approximately 70% of both groups agreed that the relationship between nurses and physicians was positive. When describing negative relationships, nurses tended to discuss a lack of respect, while physicians discussed demeanor with the physician as well as the clinical competency of the nurse. The questionnaires were obtained from a much broader population - 1044 staff nurses and 536 physicians. The composite variable that appeared to be of importance was based upon responses to four items that dealt with clinical competence and respect.

Reichman (1984) posits that the perceptions of the patient, the nurse and the physician in regard to the role of the nurse in the hospital are quite diverse. He believes that both patients and physicians view the role of nurse as physician-helper. Nurses are beginning to view themselves as a separate profession and believe that part of their role is to participate in collaborative decision making. Reichman does not discuss any methodology, which unfortunately limits the usefulness of these perceptions.

Joseph (1985) found that nurses do believe that they should be making decisions. A sample of 85 female staff nurses responded to the Joseph Decision Making Tool (JDFT) which is designed to measure attitudes about decision making. Approximately 60% of the staff nurses answering the questionnaire indicated that nurses should make decisions. These findings supported earlier ones obtained during the pilot testing of the JDFT (Joseph, 1982).

Jenkins (1985) developed an instrument to measure perceptions of clinical decision making. The Clinical Decision Making in Nursing Scale (CDMNS) was tested on 111 undergraduate baccalaureate students from the sophomore, junior and senior levels. Students in this study did not perceive themselves to be capable decision makers. These findings are consistent with those of other researchers (Kaperson, 1985; Mahoney, 1980; McIntyre, McDonald, Baily & Claus, 1972). Although Jenkins' findings are of importance, it must be remembered that a student, rather than an actual nurse population was used. Also, this study looked primarily at perceptions that do not always realistically reflect that which is done.

Grier (1976) investigated the relationship between intuitive decisions and those made by employing quantitative techniques. Forty-seven registered
nurses were asked to quantify 185 decisions. Significant agreement was found between Expected Value and the ranking of actions. The actions chosen were consistent with the nurses' value of outcome. Grier clearly documented that nurses do make decisions.

Corcoran (1986) investigated decision-making practices of novice and expert nurses. Like Benner (1984), Corcoran found that expert nurses do utilize different thought processes when making decisions. Although Corcoran's work deals primarily with information processing, it is noteworthy to mention that both novice and expert nurses engage in decision making with regard to the plan of care for hospice patients.

Kim's (1983) work on a typology for nursing care decisions identified three types of decisions - program, operational control and agenda. Kim (1983) defines program decisions as those that relate to goals for client care. These kinds of decisions, generally, involve use of the nursing care plan and strategies for teaching. Operational control decisions are those that address nursing actions, are situationally controlled and often require immediate attention. These kinds of decisions are routinely made when nurses make decisions about withholding medications, changing dressings and ambulating clients. Agenda decisions are those that are applied to priority and time sequencing. Such decisions involve planning of daily routines of care.

Joseph et al. (1984) conducted in-depth, taped interviews of 16 medical-surgical nurses currently practising in a major metropolitan primary nursing setting. Nurses were first asked to discuss whether they make decisions and then to identify the types of decisions they made. Answers to this latter question usually fell into the classification of operational control decisions or those that deal primarily with nursing action. Nurses frequently discussed the need to alter or to withhold specific treatments or medications. They also recognized that many of these decisions seemed to cross the traditional boundary of medicine, but felt strongly that it was their responsibility to make these decisions. Some program decisions were identified as well. They discussed such issues as teaching and discharge planning.

Method

This preliminary study was used as the basis for developing an instrument to measure actual decision-making practices of registered nurses. The semi-structured interviews were tape-recorded. The tapes were reviewed independently by the three researchers and content was analyzed for recurring themes. Decisions were examined carefully and classified according to Kim’s typology. There was an interrater reliability of approximately 95% for the types of decisions that were identified.
Instruments

A Likert-type instrument titled "Actual Decision Making" (ADM) was developed. This instrument consists of 27 items which specifically relate to nursing actions. Subjects are asked to choose an answer using a 5-point scale. Scores range from 27 to 135 with a mean score of 73. Subjects who score higher than 73 are considered to be decision makers. The instrument was reviewed for face and content validity by a panel of four expert judges who were master’s prepared nurse clinicians. The instrument was then pilot tested using 91 subjects, all of whom were registered nurses practising in staff positions on either a critical care or a general medical-surgical unit. An alpha coefficient of 0.88 was obtained for the preliminary testing of this instrument. Modest reliabilities of 0.50 and 0.60 are considered acceptable in the preliminary stage of any instrument construction (Nunnally, 1978); as such, the reliability coefficient of 0.88 associated with this study’s instrument is quite respectable.

To insure the content validity of the instrument further, a research assistant spent six weeks observing nurses at work in the clinical settings. The findings from this participant observation study confirmed that nurses do make decisions and that they accurately self-report about those decisions (Joseph, Matrone & Osborne, 1986). This study supported our pilot testing of the ADM, in that the findings were similar to those found initially when interviewing subjects.

The perceptions of Collaborative Relationships instrument or measure (PCR) was developed in a fashion similar to that of the ADM. A modest preliminary reliability of 0.63 was obtained. This is a 10-item questionnaire that utilizes a Likert-type format. Scores range from ten to 100 with the mean score of 37 (80). Subjects who scored over 37 are considered to perceive their relationships with physicians as being collaborative.

The JDMT, which has known reliabilities of Cronbach’s alpha 0.79 (Joseph, 1982) and 0.72 (Joseph, 1985), was used to measure attitudes towards decision making. Joseph (1985) used this instrument to measure the relationship between sex-role stereotype, years of experience and education upon attitudes towards decision making. This instrument consists of 20 short scenarios that reflect specific situations that call for nursing decisions and actions. Scores range from 20 to 100 with a mean score of 51. Subjects scoring below 51 believe that they should be making decisions. The directions for completing this instrument are explicit. Subjects are told that they are to pretend that no hospital policy exists and that they are to respond according to their beliefs about decision making. This tool is designed to measure beliefs and attitudes rather than decision-making practices of registered nurses. The JDMT has known reliability and validity. Factor analyses of the
JDMDT has demonstrated that certain types of decisions involve more risk than others (Joseph, 1985).

Sample

The target population for this pilot study was a moderate size metropolitan hospital located in the northeast area. Questionnaires were distributed on both critical care and general medical surgical units. Nurses working in administrative positions were not included in the sample; it has been demonstrated that these nurses tend to take on the value system of the dominant culture and respond differently than staff nurses. Questionnaires were administered to staff nurses who worked on all three shifts (days, evenings and nights).

Prior to data collection, subjects were invited to participate in the study. They were informed that this participation was voluntary and that all information obtained from the study would remain anonymous. A heterogeneous sample of 91 nurses was obtained. These nurses, ranging in age from 22 to 60 years, had different levels of education and nursing experience. Subjects were given approximately one hour to complete the three questionnaires. In most instances, the completed questionnaires were left in a sealed packet and retrieved by a graduate student. There were 140 packets containing the following: Demographic Data Sheet, JDMDT, PCR, ADM and a completed consent form. The response rate was 65% (N = 91) which is a respectable rate for this type of investigation.

Results

This study investigated variables that influenced actual decision-making practices. It was therefore appropriate to consider the cumulative effect of these variables upon decision making. Multiple regression allows for prediction of the criterion variable (in this case actual decision making) from knowledge about predictor variables. A correlation matrix was generated to demonstrate relationships between the criterion and predictor variables. When analyzing these relationships, determinations can be made about the predictive ability and the relative importance of each variable (Fox, 1982).

A Pearson $r$ was computed as an additional method of examining which of the variables related to the JDMDT (Table 1). There is a highly significant relationship between attitudes toward decision making and actual decision-making practices.

A stepwise multiple regression procedure was utilized as a method of determining which of the variables more potently influenced actual decision making (see Table 2). It is clear from this table that the JDMDT, or attitudes
toward decision making, was the best predictor of actual decision making. Perceptions of collaboration and type of nursing unit contribute minimally to the overall variance (33%) which is explained by this regression analysis. This result is a significant finding because approximately one third of the variance can be explained by attitudes.

Table 1

**Pearson Correlation Coefficients Describing the Effects of the type of Unit, Attitudes Toward Decision Making (JDMT), Actual Decision-making Practices (ADM) and Perceptions of Collaborative Relationships (PCR)**

<table>
<thead>
<tr>
<th></th>
<th>Unit</th>
<th>JDMT</th>
<th>ADM</th>
<th>PCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JDMT</td>
<td>-.148</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADM</td>
<td>.141</td>
<td>-.564*</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>PCR</td>
<td>.114</td>
<td>-.057</td>
<td>.150</td>
<td>1.000</td>
</tr>
</tbody>
</table>

n=91
*p<0.01

Table 2

**Stepwise Regression Analysis of the Variables that Predict Actual Decision Making**

<table>
<thead>
<tr>
<th>Variables</th>
<th>$R^2$</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR</td>
<td>.022</td>
<td>.112</td>
</tr>
<tr>
<td>JDMT</td>
<td>.318</td>
<td>-.550</td>
</tr>
<tr>
<td>Unit</td>
<td>.019</td>
<td>.04671</td>
</tr>
<tr>
<td>Total</td>
<td>.333</td>
<td></td>
</tr>
</tbody>
</table>

n=91, df=87
*p=0.0000
The Beta weight for the JDMT further supports this variable's prediction of actual decision making, as it is large. Beta weights enable the researcher to estimate the contribution of each of the variables in the equation and to determine the relationship between the predictor and the criterion variables (Waltz & Bausell, 1981). The scoring of the JDMT influenced the Beta weights. The JDMT is scored in the opposite direction of the ADM. Thus, there is an inverse relationship indicating that subjects with low scores on the JDMT had higher scores on the ADM. Subjects who believed they should make decisions were likely to make decisions.

A Mann Whitney U-test was used to determine the differences in decision making between nurses working in critical care and those working in general medical-surgical units. The Mann Whitney U-test was chosen because it is a "relatively powerful alternative to the usual t-test for equality of means" (Hays, 1973, p. 778). This is a non-parametric statistic that tests the difference in the ranks of scores of two independent groups (Polit & Hungler, 1987). In this study, no differences were found between the two groups of nurses.

**Discussion**

The findings of this study reject the first null hypothesis: *Perceptions of collaborative relationships, attitudes towards decision making and type of unit do not significantly influence the actual decision-making practices of nurses.* The results of this study support the fact that attitudes about decision making are reflective in the decision-making practices of nurses. The combined effects of the three variables in question explain 33% of the variance. This is a significant finding which lends credence to the notion that attitudes are important.

The second null hypothesis: *There is no difference in the decision-making practices of nurses working in critical care and general medical-surgical units* was accepted. The findings supported this hypothesis. Although in an initial study (Joseph, Matrone, & Osborne, 1984) nurses from critical care units seemed to report more decision making, no significant differences were determined between the two groups. However, the two groups of nurses were not evenly distributed in the sample. The general medical-surgical group represented 64% of the sample ($N_1 = 67$), while the critical care group represented 36% of the sample ($N_2 = 24$).

In a follow-up study (Joseph, Matrone & Osborne, 1986) it was determined that decision making occurs routinely as part of nursing practice. Both groups of nurses were found to engage in decision-making practices. These findings are encouraging as it is clear that decision making is practised throughout the hospital setting.
This study also adds to an expanding body of knowledge about instrument
development. The JDMT was retested for reliability (Cronbach’s alpha 0.72)
and far within the modest range (.50 to .60) established by Nunnally (1978)
for early stages of instrument construction. Having an alpha reliability of
0.88, the ADM has a robust internal consistency. This finding is further sub-
stantiated in a subsequent study (Joseph et al., 1986). A factor analysis will
be reported in a subsequent publication. The PCR did not have as stable a
reliability (Cronbach’s alpha 0.63). This instrument consisted of only ten
questions that may have negatively influenced the reliability findings. All
three of the questionnaires were easy to administer, requiring less than an
hour to complete.

Implications

This study addresses a very important issue in nursing practice - decision
making. It verifies the belief that nurses in practice do participate in
decision-making activities. The findings support Kim’s typology of decision
types. The ADM instrument specifically asks nurses to document the kinds
of decisions they do make. Items that relate to dispensing "over the counter"
medications and treatments, to ordering and canceling diagnostic tests and to
determining patient activity are addressed in this instrument. The majority of
collaborations can be classified as operational control decisions, as they relate to
practice decisions that often require immediate attention. It is evident from
this study that nurses do cross traditional boundaries in medicine when
making decisions. Practice and policy standards need to be established to
legally support nurses in these activities, as they are viewed as routine and
indicative of competent practice.

It is important to note that staff nurses were the target population in this
study. The researchers believe that these are the nurses who interact daily
with clients, and that their ability to engage in decision making is a critical
component of the client’s care. Staff nurses must have the support and
encouragement of administration when making decisions. There is always an
element of risk in decision making and nurses must be prepared to be
accountable. Administrators should establish reasonable policies that allow
for flexibility and encourage safe practice. Joseph (1985) found that 60% of
the nurses studied believed that it was within nursing’s realm to make deci-
sions. Nurse educators must prepare nurses for this very important function.

It is evident from this preliminary investigation that nurses in the practice
setting willingly make decisions. Most see decision making as an important
part of their practice as a professional nurse. The boundaries between nurs-
ing and medical decisions are not easily distinguishable. Nurses often find
themselves in situations that legally require a physician to make the decision.
The nurses felt, however, that waiting for the physician to respond, in many
cases, has the potential of causing harm or undue discomfort to the patient. Nurses are making knowledgeable decisions that are based on their education and their practical experience. A closer look at legal issues needs to be undertaken by administrators and rules need to be updated. This can be accomplished by collaborative efforts between nursing and medicine, as both groups take a realistic look at the practice setting of the 1980s. Although the findings pertaining to collaboration with physicians were not significant, nurses continually referred to collaboration as improving client care. Many of these same nurses easily identified several physicians with whom they felt a collegial rapport had been established.

**Limitations**

These findings cannot be generalized to the entire population of staff nurses working in hospitals. The agency chosen for this study has a well-established primary nursing model in place. Nurses working in this hospital are accountable to clients for 24 hours. It is not unusual to observe physicians looking for the primary nurses to discuss their (nurse and doctor's) client. This hospital has a Collaborative Practice Model partially implemented. A heightened awareness of collaboration may have influenced perceptions of collaboration.

Further replication of this work is needed. A larger, more diverse sample comparing nurses working in urban and suburban settings would be interesting. Another area that is in need of investigation is the study of decision-making practices of nurses as they ascend the hierarchy of professional growth - from staff nurse to supervisor.

Decision making is an important aspect of clinical practice. Both educators and administrators should be cognizant of the changes that are occurring at the bedside so that adequate supports can be provided to nurses who daily deliver care to clients. They must be good role models themselves, by creating an environment of trust and respect within which staff nurses can develop their decision-making abilities.
REFERENCES


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RÉSUMÉ

Situation réelle des pratiques décisionnelles: les éléments déterminant la pratique en milieu clinique.

Le but de cette étude pilote était de déterminer l’effet des perceptions des relations collaboratives, des attitudes envers la prise de décision et du milieu de pratique clinique sur les pratiques décisionnelles réelles du corps infirmier. Des données qualitatives recueillies à partir d’entrevues en profondeur ont été utilisées pour développer et éprouver à titre d’essai deux instruments: Les perceptions des relations collaboratives (PCR) et la prise de décision réelle (ADM). Le PCR contient dix questions et utilise l’échelle de type Likert à 5 points pour mesurer les croyances sur les relations collaboratives avec les médecins. Un niveau de fiabilité alpha de 0,63 a été obtenu. Le ADM contient 27 questions et demande aux infirmières de fournir un auto-rapport sur leur pratiques décisionnelles réelles selon une échelle de fréquence.

Après six semaines d’observation intense des participants, les chercheurs ont conclu que l’instrument reflète les pratiques décisionnelles des infirmières autorisées. On a trouvé l’instrument utile et facile à administrer. Un niveau alpha de 0,88 de Cronbach a été obtenu. L’instrument décisionnel de Joseph (JDMT) a été utilisé pour mesurer les attitudes envers la prise de décision (alpha de 0,79 de Cronbach; deuxième tour: 0,72). Un design exploratoire avec une population hétérogène de 91 infirmières permanentes employées soit dans des unités de soins intensifs soit dans des unités médicales-chirurgicales dans un milieu de soins primaires a été utilisé. Aucune différence importante ne s’est manifestée entre les infirmières des soins intensifs et celles des unités médicales-chirurgicales. Toutefois, une analyse régressive a identifié le fait que les trois variables en questions comptaient pour 33% de la variante dans la prise de décision réelle. Les attitudes envers la prise de décision se sont avérées un prédicteur hautement significatif dans la prise de décision réelle (p = .0000). Ces résultats ont des implications pour tous ceux intéressés à définir l’étendue du secteur infirmier, puisqu’ils donnent un aperçu précieux du type de décision prise par les infirmières.