

Valuing Research in Clinical Practice: A Basis for Developing a Strategic Plan for Nursing Research

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Afin d'élaborer un plan stratégique pour la recherche en sciences infirmières dans un environnement clinique, on a effectué un sondage dont le but est d'examiner les comportements qu'ont les infirmières face à la recherche comme partie intégrante de leur travail. Les 348 infirmières qui ont répondu représentaient divers types d'infirmières : les infirmières soignantes, les infirmières chefs, les infirmières cliniciennes spécialisées, les infirmières monitrices, les infirmières en soins prolongés, les infirmières qui ont un rôle élargit et une stomathérapeute. On les a divisées en deux groupes : les infirmières soignantes et les infirmières cadres. Les répondantes ont précisé qu'elles attachaient une grande importance à la recherche et qu'elles pensaient que la division des sciences infirmières soutenait la recherche. Elles étaient en fait peu nombreuses à faire de la recherche ; elles ont fait état de leur manque de confiance dans leur capacité à participer à l'élaboration et à la mise en oeuvre de recherches. La plupart des infirmières soignantes n'utilisaient pas la recherche pour leur travail, contrairement à la majorité des infirmières cadres. Les facteurs expliquant autant l'utilisation de la recherche que font les infirmières, que leur participation dans l'élaboration et la mise en oeuvre de la recherche, étaient différents pour les deux groupes.

With a view to developing a strategic plan for nursing research in a clinical practice setting, a survey was conducted to examine nurses' attitudes towards research as a part of their work. The 348 nurse respondents represented various nursing roles: staff nurses, head nurses, clinical nurse specialists, nurse educators, hospice nurses, expanded-role nurses, and an enterostomal therapist. They were classified into two groups, staff nurses and leadership nurses. The subjects reported that they valued research highly and that they believed the nursing division was supportive of research activities. Few were actually involved in conducting research; the nurses reported a lack of confidence in their ability to participate in designing and conducting studies. Most staff nurses were not using research in their work, while the majority of leadership nurses were. Factors that explain both research use by nurses and their participation in designing and conducting research differed for the two groups.

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Introduction

There is a growing trend in Canadian health-care institutions towards including nurse researchers as part of the nursing division, with varying arrangements being made between nursing administrators and university faculties to support research activity in hospitals. The increasing opportunities for nurses to take up doctoral studies in Canada have contributed to the new expectation that research and scholarly work will be part of clinical nursing.

Background Literature

The literature indicates that in 1986 the majority (67%) of Canadian teaching hospitals were involved in some form of nursing research (Thurston, Tenove, Church, & Bach-Paterson, 1989). Since that time, nurse researchers and administrators have responded to the need for development of institutional research programs (Eagle, Fortnum, Price, & Scruton, 1990; Fitch, 1992; Logan & Davies, 1995; McKiel & Dawe, 1991). A recurring theme in these programs is the need for strong administrative support and acceptance by staff nurses of the relevance and usefulness of research.

In today's climate of health reform, modes of care delivery will be scrutinized and evaluated through outcomes-based research. Health-care agencies and health-related disciplines are already attempting to respond to new trends, through goals and mission, vision, and value statements that reflect a commitment to excellence in patient care through practice founded on education and research. Nursing has thus begun to incorporate research-based practice in the planning process for care delivery (Butler, 1995; Mowinski Jennings, 1995). But is nursing prepared to accept research-based clinical practice, from a global perspective as well as an individual one, as the research plan is interpreted by staff? This question is fundamental to the development of a sustainable research program. Assessment of nurses' views and awareness of research is a critical first step in program development.

Roles and responsibilities of nurses working in hospitals vary with regard to using research and helping to design and conduct studies. Graduate nurses have been identified as key players in articulating the role of nurse as researcher. Clinical nurse researchers (CNRs) prepared at the doctoral level both conduct their own research projects and help develop the research skills of staff nurses by involving them in clinical studies (Knafl, Bevis, & Kirchhoff, 1987). While no consistent approach

has been identified as ideal, conducting rather than using research appears to be the expected role for the CNR. The clinical nurse specialist (CNS) has also been identified as responsible for conducting research; however, constraints imposed by the multifaceted role of a CNS have been identified as barriers to their independently designing and conducting original research (Fraser Askin, Bennett & Shapiro, 1994; Hamric & Spross, 1983). The CNS is ideally situated to analyze the literature, implement change in practice based on research findings, and evaluate outcomes. This process of applying knowledge is referred to as research utilization (Goode et al., 1991).

Nurse administrators are faced with the challenge of providing leadership and support in developing an environment that encourages research-based practice (Spence-Laschinger, Foran, Jones, Perkin, & Bovan, 1993; Tranmer, Kisilevsky, & Muir, 1995). Both structural and human resources are needed to educate nursing staff to become active participants. Stetler (1989) points out that many nursing baccalaureate programs do not focus on use of research. The Canadian Nurses Association's (1990) five-year strategic plan for research recommends that a climate of inquiry be created to facilitate the carrying out and utilization of research in clinical settings. Clinical nurse educators (CNEs) are central to meeting this goal.

Transforming nursing into a profession grounded in research requires an individual commitment to seeing that research activities are central to care delivery and clinical practice (Tranmer et al., 1995). Staff nurses could champion research by becoming involved in clinically relevant studies that have meaningful outcomes for the delivery of care. Staff nurses who are professionally motivated and view research as integral to their work could promote and support nursing research (Sabey & Forker, 1995; Turner & Weiss, 1994).

Integrating the organizational goals of research into practice requires a long-term commitment on the part of all members of a nursing division (Logan & Davies, 1995; Stetler, 1989). They should have access to current literature that focuses on research particular to their clinical specialty and that serves to increase sharing and visibility of findings (Logan & Davies; Wells & Baggs, 1994). For nurses in advanced positions, the value that organizations place on research is reflected in the support they provide for nurses to become involved in studies and the opportunities they provide for nurses to consult with expert resources who will mentor and join research teams (Spence-Laschinger et al., 1993; Wells & Baggs).

Purpose

The purpose of this survey was to obtain baseline data on nurses' attitudes toward research in practice and, within the nursing division, the degree to which staff were either aware of or actively involved in research as part of their work. The specific study goals were (a) to identify nurses' attitudes towards research in practice, (b) to determine what factors were predictive of nurses' attitudes towards research, and (c) to examine the factors that contributed to nurses' use of and participation in research.

Method

A cross-sectional survey design was used. A convenience sample of nurses working in the nursing division at the Victoria General Hospital, a large tertiary-care hospital, was accrued.

Participants

Staff nurses, head nurses, clinical nurse specialists, nurse educators, hospice nurses, expanded-role nurses, and the enterostomal therapy nurse were invited to participate in the survey. Clinical nursing directors and nurses who participated in the research evaluation process for the nursing division were excluded. All head nurses on each of the 30 nursing care/perioperative units were asked to randomly distribute 20 surveys to individual staff nurses in the unit. Staff nurses were included in the study if they were registered nurses and had been actively employed by the nursing division throughout the previous year, beginning January 1, 1994. Employment included full-time, part-time, and casual assignments in the nursing unit. Six hundred surveys were distributed throughout the nursing division; 541 were distributed to staff nurses (as not all units had 20 registered nurses), 31 to head nurses, five to administrative supervisors, four to clinical nurse specialists, two to expanded-role nurses, 13 to nurse educators, three to hospice nurses, and one to the enterostomal therapist. Given the small numbers of specialty nurses, participants were categorized as staff nurses ($n = 541$) or leadership nurses ($n = 59$).

Instrument

The Research Survey, which measures a positive attitude towards research, was selected for the study (Wells & Baggs, 1994). This survey includes a 20-item self-administered attitude scale, which uses a five-

point Likert format with responses ranging from 1 (strongly disagree) to 5 (strongly agree). The scale has been analyzed into three factors: value of research as relevant and useful for patient care; confidence, or the range of skills needed to both use and conduct research; and support, which refers to an individual's perception of organizational factors that enhance research. Coefficient alpha for each factor is reported as value $\alpha = .74$, confidence $\alpha = .82$, and support $\alpha = .68$. Each factor yields a separate score. A total attitude score is not computed. Scores range from 1 to 5, with a higher score being indicative of greater value for research, more favourable attitude, and greater perceived system support (Wells & Baggs).

Four additional questions were included relating to nurses' awareness of research being conducted in their unit by either nurses, physicians, or other health-care professionals. The section was adapted for use in this study by further categorizing responses concerning the conducting of research to include nurses from their unit and nurses external to their unit and to the hospital, and nurses conducting thesis research for university degrees. The level of research involvement, whether past, present, or expectations for the future, was also measured, using a binary-response (yes-no) format. Respondents were asked about four levels of involvement: data collection, participating as research subject, use, and conducting the research.

Results

Characteristics of Participants

An overall response rate of 61% ($N = 366$) was obtained, with 64% ($n = 38$) responding from the leadership group and 61% ($n = 328$) from the staff-nurse group. Eighteen surveys were discarded because of errors or missing responses. A total of 348 surveys (58%) was used in the analysis.

Leadership group. Nurses working in leadership positions at the hospital included head nurses and all specialty or advanced-practice nurses listed above. Average age was 41 years. Most leadership nurses had been practising for 20 years, although they had been employed at the study hospital an average of 18 years. The majority (47%) of the leadership nurses were prepared at the baccalaureate level, 30% at the diploma level. Prior education in research and statistics ranged from 0 to 6. An average of one research and one statistics course had been completed, consistent with the baccalaureate curriculum. Continuing edu-

cation as measured by attendance at research-related conferences ranged from 0 to 4, with an average of one conference attended.

Staff nurses. The mean age of staff nurses was 35 years; most had been practising for 13 years, 10 at the study hospital. For 72%, the highest education was at the diploma level; this percentage was not unexpected, as overall in 1995 the nursing division baccalaureate staff was only 17%, with 4.7% currently enrolled in post-R.N. programs (personal communication, L. Wallace, Clinical Director, August, 1995). Research-related education (research and statistics courses) ranged from 0 to 5 courses. The majority of staff nurses had not taken courses in either research or statistics. They had attended an average of one research-related conference; attendance ranged from none to a total of six within the previous year.

Research Awareness

The nurses surveyed were aware of research currently being conducted in their nursing unit, mainly medical research (83%) and research by nurses from outside their unit (62%). Most were aware that nurses were conducting research but did not know whether the nurses were employed at the study hospital (58%), were from other hospitals (69.5%), or were doing research for theses. Regarding other health-related research activity, 64% did not respond to the question, while only 3% were aware of such research being conducted in their unit.

Of the leadership-group nurses, the majority were aware that medical research (76%) was being carried out, to a lesser extent nursing research (34%). Staff nurses concurred; however, on average staff nurses were more aware of nurses conducting research (49.7%), specifically those external to their unit (63%), than the leadership group (34% and 50%, respectively) (see Table 1).

Research Involvement

Participants were asked about their prior, present, and anticipated future involvement in research. Most of the nurses surveyed reported that they had previously used research findings in their work: leadership group 90%; staff nurses 53%. Many nurses indicated that they had been research data collectors (leadership 68%; staff 48%). In describing their experience with designing and conducting research, leadership nurses reported more participation (48%) than staff nurses (26%). Nurses' present use of research findings had declined when compared to prior use, consistent for both leadership (71%) and staff (30%) nurses.

Table 1

Nurses' Awareness of Who Was Conducting Research on Their Nursing Unit

		Leadership <i>n</i> = 38		Staff Nurses <i>n</i> = 310		Total Group <i>n</i> = 348	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Physician	NR	5	13.2	17	5.5	22	6.3
	NO	4	10.5	34	11.0	38	10.9
	YES	2	76.3	25	83.5	28	82.8
		9		9		8	
Nurses	NR	5	13.2	23	7.4	28	8.0
	NO	2	52.6	13	42.9	15	44.0
	YES	0	34.2	3	49.7	3	48.0
		1		15		16	
		3		4		7	
VGH nurses from outside my unit	NR	5	13.2	27	8.7	32	9.2
	NO	1	36.0	87	28.1	10	29.0
	YES	4	50.0	19	63.2	1	61.8
		1		6		21	
		9				5	
VGH nurses for student thesis	NR	9	23.7	53	17.1	62	17.8
	NO	2	52.6	18	58.1	20	57.5
	YES	0	23.7	0	24.8	0	24.7
		9		77		86	
Nurses from other hospitals	NR	7	18.4	62	20.0	69	19.8
	NO	2	73.7	21	68.7	24	69.3
	YES	8	7.9	3	11.3	1	10.9
		3		35		58	
Nurses from other hospitals for student thesis	NR	7	18.4	62	20.0	69	19.8
	NO	2	71.0	21	69.4	24	69.5
	YES	7	10.5	5	10.6	2	10.6
		4		33		37	
Other	NR	2	55.3	20	64.5	22	63.5
	NO	1	39.5	0	32.9	1	33.6
	YES	1	5.3	10	2.6	11	2.9
		5		2		9	
		2		8		10	
NR = No Response							

Table 2

Nurses' Reported Involvement in Research Activity, Previous to the Survey, Presently, and Considerations for the Future

		Leadership Group <i>n</i> = 38					
		Previous		Present		Future	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
As a data collector	NR	2	5.3	4	10.5	2	5.3
	NO	10	26.3	25	65.8	6	15.8
	YES	26	68.4	9	23.7	30	78.9
As a subject	NR	5	13.2	6	15.8	4	10.5
	NO	16	42.1	29	76.3	7	18.4
	YES	17	44.7	3	7.9	22	71.1
Use findings in practice	NR	1	2.6	0		0	
	NO	3	7.9	11	28.9	1	2.6
	YES	34	89.5	27	71.0	37	97.4
Participate in designing and conducting research	NR	3	7.9	5	13.2	1	2.6
	NO	17	44.7	23	60.5	3	7.9
	YES	18	47.4	10	26.3	34	89.5
		Staff Nurses <i>n</i> = 310					
		Previous		Present		Future	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
As a data collector	NR	7	2.3	19	6.1	22	7.1
	NO	155	50.0	219	70.6	87	28.1
	YES	148	47.7	72	23.2	201	64.8
As a subject	NR	16	5.2	26	8.4	28	9.0
	NO	204	65.8	265	85.5	144	46.5
	YES	90	29.0	19	6.1	138	44.5
Use findings in practice	NR	11	3.5	24	7.7	19	6.1
	NO	136	43.9	192	61.9	51	16.5
	YES	163	52.6	94	30.3	240	77.4
Participate in designing and conducting research	NR	13	4.2	21	6.7	25	8.1
	NO	217	70.0	259	83.5	113	36.5
	YES	80	25.8	30	9.7	172	55.5
NR = No Response							

Participation in designing and conducting research had also declined for both leadership (11%) and staff (10%) nurses. When considering the future, 97% of the nurses in the leadership group reported that they would use research findings, and 90% reported that they would participate in designing and conducting research. Staff nurses also reported that they would increase their use of research findings in future (77%). Staff nurses reported that they were more willing to consider participating in research than previously (55%), but were found to be less likely to participate than those in the leadership group (see Table 2).

Continuing Education in Research

Participants were asked to identify what they considered necessary for them to support research within the nursing division. The leadership group identified consultation on research design ($n = 35$; 92%) and statistics ($n = 33$; 87%) as the priorities, while staff nurses identified time during scheduled working hours ($n = 266$; 86%) and more information on research conducted in their particular specialty ($n = 243$; 78%) (see Table 3).

Table 3 <i>Research-Related Education Required by Nurses to Participate in Research within the Nursing Division</i>			
	Leadership	Staff Nurses	Total
More information on the research process	23	238	261
More information on on research conducted in my specialty area	25	243	268
Consultation on research design	35	194	229
Consultation on statistics	33	188	221
Money for supplies, data collectors, data entry	30	201	231
Time during my scheduled hours	29	266	295
Other	0	15	15

Nurses were asked to identify their research-related learning needs. The leadership group identified critical analysis ($n = 28$; 74%) and use ($n = 27$; 71%) of research. Staff nurses were most interested in education related to research use in clinical practice ($n = 186$; 60%) and the role of research assistant ($n = 120$; 55%).

Participants were asked to identify the journals they read on a regular basis (more than 50% of issues published yearly) and those to which they subscribed. While all nurses registered in the province are members of the Canadian Nurses Association and receive its official publication, *The Canadian Nurse*, only 100 (29%) nurses reported that they regularly read the journal. Few staff nurses subscribed to journals ($n = 38$; 12%). Those in the leadership group appeared to subscribe to journals of clinical relevance to their specialty.

The Research Survey

Reliability. Reliability of the research survey was determined for the total number of respondents ($N = 348$) using Cronbach's alpha. The scores for the three factors were consistent with previously reported values: Factor 1 α research value $\alpha = .78$; Factor 2 α confidence $\alpha = .83$; and Factor 3 – perceived support $\alpha = .67$. Correlation coefficient results revealed that the three factors were only weakly correlated ($r < .36$); however, research value was moderately related to perceived system support ($r = .49$).

Attitudes toward research in nursing. The value of research in clinical practice was highly rated by the nurses. The leadership group indicated a slightly higher research value than did staff nurses ($M: 4.36$ vs. 3.77). Nurses' ability to use or conduct research was moderately rated by both leadership and staff nurses ($M: 3.03$ vs. 3.04). Perceived support from the nursing division for research activities was moderately rated by the leadership and staff nurses ($M: 3.43$ vs. 3.03). To determine whether there were any significant differences among the nurses, a one-way analysis of variance (ANOVA) was performed. Because the role of nurse carries different expectations within the nursing division, they were categorized as staff, head, and specialty nurses (the specialty nurses included clinical nurse specialists, nurse educators, hospice nurses, and the enterostomal therapist). Results indicate a significant difference among the three groups for research value ($F_{2,336} = 15.97$, $p \leq .001$) and perceived system support ($F_{2,336} = 10.69$, $p \leq .001$) but no significant difference for confidence in conducting and using research. The groups were further analyzed using Tukey's Studentized Range Test. Group comparisons indicate, for both research value and per-

ceived system support, a significant difference between staff and head nurses and between staff and specialty nurses, but no significant difference between head and specialty nurses.

In examining the variables that may be predictive of nurses' attitudes towards research in clinical practice, a regression procedure was carried out for each of the three subscales. Results indicate that within the nursing leadership group a combination of their experience with using research finding, level of education, and experience as a data collector explained 19% of the variance in the value nurses placed on research. Research confidence was weakly explained ($\text{Adj } R^2 = .087$) by the combined effect of an awareness of nurses from their units conducting research and previous participation in designing and conducting research. Perceived system support was also weakly explained ($\text{Adj } R^2 = .16$), by presently using research findings, in experience using research findings, and awareness of nurses from their units conducting research.

Factors relating to staff nurses' attitudes towards research differed from those of the leadership group, and had weak explanatory power. Research value was explained ($\text{Adj } R^2 = .16$) by past use of research findings in clinical practice, age, level of education, and experience as a data collector. Confidence was explained by previous participation in design or conducting research, experience as a data collector, and years in nursing ($\text{Adj } R = .14$). Perceived system support was also explained by a combination of factors: nurses from *their* units conducting research, past use of research, and nurses from *other* units conducting research in their nursing unit ($\text{Adj } R^2 = .14$).

Use of research in clinical practice. To determine whether nurses either were currently using research or were involved in designing or conducting research, chi square (χ^2) and odds ratio (OR) statistics were analyzed. Further identification of variables associated with the use of research and participation was achieved using logistic regression analysis.

Nursing roles were found to be strong indicators for using research in clinical practice. Nurses in the leadership group were five times more likely than staff nurses to use research ($\text{OR} = 5.01$). It is interesting to note that despite this differential the nurse's role within the leadership group (head or specialty nurses) was the same (staff nurses and specialty nurses – $\text{OR} = 3.9$; staff nurses and head nurses – $\text{OR} = 3.9$). Education was a strong indicator for using research in clinical practice. Staff nurses with baccalaureates were found to be twice as likely as diploma nurses to use research. In the leadership group, only three had

graduate degrees; therefore, education was categorized as diploma or degree and was not found to be associated with using research in practice ($\chi^2 = .414, p = .52$). Additionally, employment status (full-time, part-time, or casual) was not found to be associated with using research in either sample group.

To identify the factors associated with using research, a logistic regression equation was constructed for the overall nursing division and for the two groups of nurses. First entered into the model were past and present involvement in research, as subjects or data collectors; previous use of research and participation in designing and/or conducting research; and awareness of research being conducted in their nursing units. Added were demographic variables: age, number of years as a registered nurse, years practising at the study hospital, level of education, statistics and research courses taken, and number of research-related conferences attended. A third step was the addition of nurses' value for research, confidence, and perceived system support.

Results indicated that the significant variables associated with staff nurses' use of research in clinical practice were past use of research findings ($\chi^2 = 44.97, OR = 20.0, p < .01$), present involvement in data collection ($\chi^2 = 14.90, OR = 4.04, p \leq .01$), and perceived support within the system for research activity ($\chi^2 = 4.88, OR = 2.0, p = .02$). Nurses who had a bachelor of nursing education were twice as likely to use research in their practice than diploma-prepared nurses ($OR = 1.75$). Leadership group analyses did not identify any variables associated with the use of research in practice.

Participation in designing or conducting research. Within the overall nursing division most nurses were not designing or conducting research ($n = 277$). The leadership group was shown to be four times more likely than staff nurses to participate in research ($OR = 4.6$). This result is not surprising, since some members of the leadership group were required to use research in their work and therefore may have had more opportunities to participate in research activities. The nurse's role was found to be a strong indicator of participation in research ($\chi^2 = 14.14, p < .001$); however, within the leadership group there was no difference proportionally among the specialty nurses and the head nurses.

Education was not found to be associated with research participation within the leadership group; however, when the categories were collapsed to reflect only R.N. and degree preparations, for the total sample education was revealed to be associated with research participation. Nurses with a degree were twice as likely as diploma-educated nurses to participate in research ($OR = 1.98$). Employment status (full-

time, part-time, or casual) was not associated with participation in research, for either group.

To determine the factors associated with nurses' participation in designing or conducting research, a logistic regression equation was constructed by groups of staff nurses and leadership nurses, with variables entered into the model as previously described. Staff nurses' present involvement in designing and conducting research was found to be associated with four variables: past participation in designing and conducting research ($\chi^2 = 19.75$, $OR = 9.62$ $p < .01$), number of research courses taken ($\chi^2 = 5.87$, $OR = 2.45$ $p = .01$), present involvement in data collection ($\chi^2 = 2.98$, $OR = 3.47$ $p = .02$), and number of statistics courses taken ($\chi^2 = 4.18$, $OR = 3.29$ $p = .04$). Within the leadership group, university preparation at the baccalaureate ($\chi^2 = 4.68$, $OR = 12.19$ $p = .031$) or masters level ($\chi^2 = 4.31$, $OR = 27.77$ $p = .03$) were the only variables associated with research participation.

Discussion

The majority of participants in this survey had no formal education in research or statistics. Those who did report having taken courses had done so in conjunction with baccalaureate requirements. Regardless of education, however, nurses valued research highly and were shown to believe there was strong support within the nursing division for research activity. Educational background was found to be a factor in nurses' lack of confidence in their ability to participate in research, which suggests that advanced education in the research process may be required. It is interesting to note that nurses who were required to use research in their work reported a similar lack of confidence in their research abilities. This finding underscores the need to examine role expectations and linkages between research obligations and conducting research in clinical practice.

A discrepancy was seen between nurses' lack of knowledge about the research literature and their reported participation in and use of research. This may be explained by their perceptions of what it means to be involved in research. For some it may have meant using research-based policies in their work; for others, helping investigators to access client populations in the nursing units. The fact that the subjects identified most components of the research process as educational ones suggests that their research role has been a supportive one. This raises the question of how nurses can become actively involved in learning about and using the research process.

Most participants did not represent themselves as regularly reading health-related journals, and those journals identified as the most frequently read do not usually publish research. This finding is consistent with other reports from hospital-based practice settings (Logan & Davies, 1995). Staff nurses identified time for research activities as a barrier to their participation. This limitation may also affect their ability to leave the clinic and spend time in the library reading or conducting literature searches. How can staff nurses be ensured availability of appropriate research articles and reference material? No participants identified the formation of a journal club as a priority, and only 18% of staff nurses included this idea in combination with other topics, which suggests a need for innovative ways to help nurses keep current in their reading and to be introduced to research literature. The education topic that the nurses identified most as their key area of interest was using research. The leadership group identified a further interest: critically analyzing research. Nurses in leadership positions may view this skill as necessary in disseminating information and lobbying for evidence-based practice.

The nurses showed they were very much aware of the research activity taking place in their environment. Most of the research being conducted in the study hospital related to medical research, in which nurses were involved to the degree of facilitating the work of the investigators. This may be the cause of the overwhelming interest staff nurses expressed for continuing education to train for the position of research assistant or data collector. The leadership group was also keenly interested in learning more about such a role, but this could reflect a desire to develop collaborative relationships between nurses working in research and clinical practice settings to support nursing research activities.

Consistent with previous research findings, nurse characteristics of age, education, and experience contributed significantly to research utilization (Wells & Baggs, 1994). Additionally, nurses' perceived support from the nursing division was a factor in their using research in their practice. These issues could be addressed by creating an environment conducive to individual nurses using research in their work, an environment identifying the expectations of and opportunities for all nurses to be actively involved in research. CNR and CNS roles have been identified as key to meeting such a goal (Fraser Askin et al., 1994). The struggle to meet the demands of advanced nursing roles may be reflected in the leadership nurses' low scores for confidence in their research abilities, as compared to their value for and perceived support for research.

Conclusion

This survey was conducted with a view to assessing nurses' attitudes towards research as a component of their clinical practice. The desired outcome was meaningful information about how nurses view research and their degree of involvement in research activities within the organization, as a basis for developing a strategic plan for nursing research.

Based on the survey results, a guiding framework for such a strategic plan must consider nurses' involvement in research from two perspectives. The first should address nurses' supportive activities for research, primarily direct services to individual investigators conducting studies in a nursing unit. The degree of support, the level of decision-making for resource allocation, and the impact of such activity on nursing should be clarified and measured. The second concerns using the research process within nursing, specifically the ability of nurses to actively participate in using research findings, identifying researchable questions, and contributing as members of a research team.

The survey results indicate that the staff valued research and perceived the nursing division to be supportive of research activity. If the nursing division is committed to designing and conducting studies, then exposure to the resources of nurses with advanced degrees who are confident of their research abilities is critical to a strategic plan. The nurses indicated an interest in becoming involved in all aspects of research, indicating that the nursing division has developed an environment for nursing research. The subjects also identified the educational requirements necessary for research endeavours. The combined effect of education and exposure to knowledgeable resources will increase nurses' confidence. Interaction of nursing administration, education, and practice is central to the development of a strategic plan for nursing research. The factors identified as key to nurses' use of and participation in research – for both leadership and staff nurses – are valuable tools for drawing up the overall plan. Mentoring, role modelling, and developing programs aimed at research utilization are also critical elements of such a strategic plan for nursing research.

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