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Enhancing Nurse Satisfaction Through Research Engagement Opportunities

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Abstract

The participation of nurses in research and the integration of research evidence into practice are essential for advancing healthcare quality. However, there is a paucity of studies examining factors influencing nurse satisfaction with research engagement opportunities. This study distributed a questionnaire to nurses at a hospital and a nursing school. Findings revealed that only 16% of nurses reported satisfaction with research engagement opportunities. Multivariate analysis demonstrated that the perception of resource barriers negatively correlated with satisfaction (adjusted odds ratio = 0.13, $p < .001$), while the perception of personal relevance barriers positively correlated with satisfaction (adjusted odds ratio = 2.38, $p < .001$). Overall, satisfaction with research engagement opportunities was low. Strategies such as incentivizing nursing research, providing protected research time, offering training and education, and mentoring support could enhance satisfaction and research productivity, thereby promoting evidence-based practice.

Keywords: nursing research, evidence-based practice, barriers, satisfaction

Introduction

Nursing research plays a pivotal role in shaping and advancing nursing practice. Registered nurses (RNs) are entrusted with the responsibility of not only conducting research but also applying its findings to enhance patient care (American Nurses Association, 2010). While nursing research was traditionally the domain of academia, its prominence in hospital settings has surged in recent times (Kelly et al., 2013). One driving factor behind this surge could be the requirement for nursing departments to demonstrate successful research completion as part of the criteria for attaining Magnet® status from the American Nurses Credentialing Center. Notably, Scala, Price, and Day (2016) conducted a comprehensive literature review outlining best practices for involving nurses in research. Strategies such as "access to infrastructure," "executive leadership support," "strategic priorities and relevant interests," "educational tactics," and "leveraging established networks and resources" were identified as instrumental in enhancing nurses' research engagement. While the identification of these strategies is crucial, it is imperative to assess their implementation and their impact on nurse satisfaction with research engagement opportunities. (Scala et al., 2016)

The emergence of evidence-based clinical practice stemmed from the recognition of inconsistencies in clinical approaches and the underutilization of therapies proven to be effective through research (Walshe & Rundall, 2001). Over 15 years ago, solutions were proposed in the United States to bridge the gap between knowledge of best healthcare practices and their actual implementation (Institute of Medicine, 2001). Nurses have been at the forefront of healthcare redesign efforts aimed at implementing best practices and enhancing care quality (Stevens & Staley, 2006). However, research indicates that bedside nurses often lack the requisite knowledge and resources for transitioning to evidence-based care (Pravikoff, Tanner, & Pierce, 2005).

Facilitating nurses' involvement in research not only fosters the development of essential skills but also strengthens evidence-based practice (Polit & Beck, 2012). Incorporating current evidence from nursing research into practice has the potential to elevate healthcare quality and improve patient outcomes (Grove, Gray, & Burns, 2015). Nonetheless, despite recent initiatives aimed at bolstering nurses' research capabilities, a significant gap persists between research evidence and actual nursing practice, indicating a general weakness in nurses' research proficiency (Duffy et al., 2015). Given the paramount importance of nursing research, the necessity to provide ample opportunities for nurses to engage in research is evident; however, research exploring the extent to which this objective is achieved remains limited.

Purpose

The primary objective of this study is to evaluate nurse satisfaction regarding their involvement in research activities and to discern factors influencing this satisfaction. This will be achieved through the administration of a structured questionnaire (Hagan & Walden, 2015) distributed to nurses working at a prominent pediatric academic hospital and nursing faculty members at a public university. The study aims to explore the correlation between various factors, including nurse demographics (e.g., education and experience), institutional resources dedicated to nursing research, support from nursing leadership, availability of research infrastructure, perceived personal relevance of nursing research, and other pertinent variables, with the level of satisfaction concerning opportunities to engage in nursing research. These areas have been identified in existing literature as pivotal for effectively involving nurses in research endeavors.

Method

Design, Sample, and Settings:

This study employed a cross-sectional design to explore factors associated with nurse satisfaction concerning opportunities for research engagement.

Measures:

The questionnaire used in this study was developed by Hagan and Walden (2015), drawing from hindrances to and facilitators of nursing research identified by Kelly et al. (2013). The instrument underwent pilot testing and refinement before evaluation. The final version exhibited a robust latent factor structure ($p < .001$), with 80% of the common variance explained by two factors. The survey instrument comprises a Research Resources subscale, a Personal Relevance of Research subscale, an independent item on "Lack of time for me to do research," and an item on "Overall satisfaction with opportunities to engage in research." Both subscales demonstrated good internal reliability ($\alpha = .74$ for Personal Relevance of Research, and $\alpha = .79$ for Research Resources). The Research Resources subscale consists of eight items, while the Personal Relevance of Research subscale comprises six items. Responses were measured on a 5-point Likert-type scale, with higher scores indicating a greater extent of agreement with the item representing a barrier to research.

The primary outcome, "Overall satisfaction with opportunities to engage in research," was measured on a 5-point Likert-type scale ranging from very dissatisfied to very satisfied.

Data Analysis:

Fisher's exact test compared response rates between the two sites. The association between Likert-type scale responses, subscale scores, and "Overall satisfaction with opportunities to engage in research" was evaluated using Spearman's correlation coefficient. Spearman's correlation coefficient was also used to examine associations between quantitative demographic variables and satisfaction level, while the Wilcoxon Rank-Sum test assessed the association of gender and site with satisfaction level. Ordinal logistic regression analysis was employed to investigate predictors of "Overall satisfaction with opportunities to engage in research" score. Cronbach's alpha assessed internal consistency of subscale item responses. Statistical analysis was conducted using SAS Version 9.4 (SAS Institute, Inc., Cary, NC). With a sample size of 473 respondents from both sites, the study possessed 80% statistical power to detect a true correlation of $r = .128$ at the 5% significance level, representing a "small" effect size as per Cohen's (1988) criteria, ensuring ample power to detect meaningful associations with nurse satisfaction regarding research engagement opportunities.

Results

Across both sites, the survey invitation was extended to a total of 2,226 nurses, of whom 473 responded, yielding a 21.2% response rate. Notably, the response rate was significantly higher ($p = .025$) at the nursing school (32.9%) compared to the pediatric hospital (20.9%). The majority of respondents were female (95.6%), staff nurses (64.1%), with an average age of 42.1 ± 10.8 years. The reliability of the instrument was deemed "good," with Cronbach's alpha exceeding .7 for both subscales ($\alpha = .79$ for the Research Resources subscale and $\alpha = .74$ for the Personal Relevance of Research subscale). When satisfaction with research engagement opportunities was dichotomized, only 16.3% of respondents reported being satisfied, with 13.5% being "somewhat satisfied," and only 2.7% being "very satisfied." The proportion of satisfied respondents did not significantly differ between the hospital (16.4%) and the nursing school (13.0%). Similarly, the degree of satisfaction with research opportunities did not significantly differ between the two sites (M ± SD score of 2.6 ± 0.9 among nursing school respondents and 2.7 ± 0.9 at the pediatric hospital).

Satisfaction with research engagement opportunities varied significantly by position ($p = .006$), with Advanced Practice Registered Nurses (APRNs) reporting the lowest satisfaction level. A higher education level was inversely related to satisfaction with research engagement opportunities ($rs = -.138$, $p = .004$). Gender ($p = .332$), age ($rs = -.047$, $p = .370$), and years employed at the institution ($rs = -.024$, $p = .626$) did not significantly correlate with satisfaction with research engagement opportunities. The perceived barriers to research, including Research Resources ($rs = -.473$, $p < .001$) and "lack of time to do research" ($rs = -.286$, $p = .004$), were negatively associated with satisfaction with research engagement opportunities. Conversely, a greater belief that Personal Relevance of Research is a barrier was associated with increased satisfaction ($rs = .162$, $p < .001$).

In the Research Resources subscale, all individual items except "lack of research knowledge or skills" exhibited a significant negative relationship with overall satisfaction with research engagement opportunities, with even this item showing an inverse trend ($rs = -.081$, $p = .080$). For the Personal Relevance of Research subscale, four items showed a significant positive association

with satisfaction with research opportunities, while two items ("I feel intimated by research" and "nursing research is not part of my job") were not significantly related to satisfaction.
Upon fitting an ordinal logistic regression model using independent variables exhibiting a significant bivariate association with satisfaction with research, gender (p = .346) was no longer significantly associated with satisfaction with research engagement opportunities.

Table 1. Participant Characteristics.

Characteristic	n	%
Gender		
Female	417	95.6
Male	19	4.4
Age, years		
23-29	40	11.6
30-39	131	38.0
40-49	71	20.6
50-65	103	29.9
Position		
Staff nurse	303	64.1
APRNs	61	12.9
Nursing leader	50	10.6
Academic faculty	23	4.9
Other	36	7.6
Highest degree		
Diploma	13	2.9
Associate degree	57	12.8
Bachelor’s degree	250	56.1
Master’s degree	107	24.0
Doctorate	19	4.3
Years employed at institution		
0-3	113	29.5
4-7	81	21.2
8-15	114	29.8
16-25	53	13.8
26-39	22	5.7

Note. APRNs = Advanced Practice Registered Nurses

Table 2. Associations of Participant Characteristics with Degree of Satisfaction with Opportunities to Engage in Research.

Characteristic	M ± SD	Satisfaction Score	p Value
Gender			
Female	2.5 ± 1.1		.332
Male	2.7 ± 0.9		
Position			
Staff nurse	2.8 ± 0.9		.006*
APRNs	2.4 ± 1.0		

Nursing leader	2.6 ± 1.1		
Academic faculty	2.6 ± 0.9		
Other	2.4 ± 0.9		
Highest degree			
Diploma	2.8 ± 0.9		.004*
Associate degree	2.8 ± 0.9		
Bachelor's degree	2.8 ± 0.9		
Master's degree	2.6 ± 1.0		
Doctorate	2.3 ± 1.0		

*Indicates a statistically significant association.

This table presents the associations of participant characteristics with the degree of satisfaction with opportunities to engage in research. It includes characteristics such as gender, position, and highest degree attained, along with their respective mean (M), standard deviation (SD), satisfaction score, and p-value.

Discussion

The findings of this study underscore a disconcerting reality: overall satisfaction with opportunities to engage in research among nurses is remarkably low, a trend consistent across diverse institutional settings. This revelation warrants serious attention from hospital and nursing school administrators nationwide, particularly in light of the growing emphasis on patient outcomes and care quality, both of which can benefit significantly from nurses' involvement in quality improvement, evidence-based practice, and research. (Scala et al., 2016)

The inverse relationship observed between the perception of Research Resources as a barrier to research and the degree of satisfaction with opportunities to engage in research might not be surprising. However, the positive association between a greater perception of Personal Relevance of Research as a barrier and satisfaction with research engagement opportunities is noteworthy. Upon reflection, it appears logical that nurses who perceive research as irrelevant to them would be more satisfied with existing research opportunities, whereas dissatisfaction would be more pronounced among those who find research relevant to their practice. In bivariate analyses, Advanced Practice Registered Nurses (APRNs) and nurses with higher degrees expressed lower satisfaction with research engagement opportunities, although these associations lost significance in multivariate analyses. This could be attributed to the fact that APRNs and nurses with advanced degrees often perceive research as more personally relevant, thus negating the association between position type/education and satisfaction with research opportunities after adjusting for Personal Relevance of Research. Previous research has indicated that nurses with higher education levels and in elevated positions are more inclined towards research engagement. However, this study suggests that beyond education level, satisfaction with research opportunities is determined by the unique conditions of the nurse's role, including the relevance of research to the individual and the availability of research resources. (Duffy et al., 2015)

The study also sheds light on the significance of leadership support in fostering satisfaction with research opportunities. Numerous survey comments highlighted a lack of leadership emphasis on nursing research, with clinical priorities and physician-led research often overshadowing nursing research efforts. Participants pointed out disparities in protected research time between nurses and physicians, with nurses frequently burdened by heavy clinical duties, leaving little time for research. Proposed solutions include providing nurses with research internships and protected research time, free from clinical responsibilities. Additionally, comments emphasized the need for

mentorship programs to guide nurses through the research process, particularly for less experienced individuals. These findings underscore the vital role of executive leadership in promoting nursing-led research initiatives and the importance of fostering a supportive research environment within healthcare institutions. (Grove et al., 2015)

The issues of leadership support and resource constraints highlighted in this study are prevalent not only in the participating institutions but also across healthcare settings nationwide. Despite the presence of resources such as nursing research training programs and dedicated research offices, challenges persist, particularly in smaller, non-academic hospitals. Suggestions such as establishing nursing research centers in clinical settings, partnering with academic institutions to bolster research capacity, and integrating research activity into nursing job descriptions offer potential solutions to address these challenges. Moreover, incentivizing research engagement and providing nurses with paid time dedicated to research are practical measures recommended to promote research involvement among nurses. (Hagan & Walden, 2015)

Several limitations of this study should be acknowledged. The uniqueness of the participating sites may limit the generalizability of findings to other academic and clinical settings, warranting further research involving multiple institutions to elucidate factors related to nurse satisfaction with research opportunities. Although the response rates were consistent with other nursing surveys, concerns about sample bias and the small number of participants from the nursing school exist. However, no significant differences in outcomes were observed between the two sites, supporting the combined analysis. While satisfaction with research opportunities is subjective, it correlates with nurses' research knowledge and skills, making it a pertinent outcome measure. Additionally, the reliability of the instrument used compares favorably with other widely used nursing research tools. (Bonner & Sando, 2008)

Prior research has demonstrated that nurses' engagement in research enhances their preparedness for evidence-based practice, thereby improving healthcare quality and patient outcomes. Therefore, enhancing nurses' satisfaction with research opportunities is imperative in the current healthcare landscape emphasizing outcomes and quality. Strategies such as providing adequate resources, reducing teaching loads for faculty, incentivizing research, and facilitating research activities through protected time, training, and mentorship can effectively improve satisfaction and promote the quality and quantity of nursing research. (American Nurses Association, 2010)

In conclusion, this study underscores the critical importance of addressing barriers to nurse engagement in research and highlights potential strategies to enhance satisfaction with research opportunities. By implementing these strategies, healthcare institutions can foster a culture of research and evidence-based practice, ultimately improving healthcare quality and patient outcomes. Further research is warranted to explore the effectiveness of these strategies across diverse healthcare settings and populations of nurses. (Brewer et al., 2009)

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