Access, Utilization, and Implementation of Research Among Rehabilitation Nurses: A Qualitative Study

Jessica Pope Mitro[1], PhD, ATC, J. Mary Louise Pomeroy[2], MPH, Sarah Osman[3], Virina Matta[3], MPH, Cindy Cai[4], PhD, Steven Garfinkel[4], PhD & Ali A. Weinstein[3], PhD

Abstract

Purpose: This study aimed to understand rehabilitation nurses' perceptions of research information, related barriers, and avenues for future research, specifically in those caring for individuals with burn injury, spinal cord injury, or traumatic brain injury.

Design: Qualitative semistructured interviews were conducted.

Methods: Eighteen interviews were conducted. A thematic network approach identified codes and developed basic, organizing, and global themes.

Results: Researchers identified factors that facilitated research uptake, determined organizational structures that support research culture, and described nurse engagement with literature.

Conclusions: Although participants desired to engage with the research literature, they identified barriers including time constraints, heavy workloads, and lack of access. To facilitate research uptake, research must be easily accessible, be easily digestible, and include clinical practice recommendations. Research must expand its scope to address issues relevant to the rehabilitation population.

Clinical Relevance: Our findings may be used to drive improvements in research competence, facilitate knowledge translation, and support evidence-based practice among rehabilitation nurses.

Keywords: Knowledge translation; rehabilitation nursing; evidence-based practice; rehabilitation research; implementation science.

Introduction

Rehabilitation nurses are responsible for providing post-acute care to enhance the quality of life for patients with disability or chronic disease. This highly collaborative nursing practice demands team-based research and famil-

Correspondence: *Ali A. Weinstein, PhD, Department of Global and Community Health, George Mason University, Fairfax, VA 22030. E-mail: aweinst2@gmu.edu*

1 School of Kinesiology, George Mason University, Fairfax, VA, USA.

2 Department of Health Administration and Policy, George Mason University, Fairfax, VA, USA.

3 Department of Global and Community Health, George Mason University, Fairfax, VA, USA.

4 American Institutes for Research, Washington, DC, USA.

iarity with evidence-based practice critical to the success of their nursing actions. Rehabilitation nurses practice in a wide variety of settings (e.g., acute care, inpatient/outpatient rehabilitation facilities, long-term care hospitals, skilled nursing facilities, and home health), are charged with the majority of patient interactions in most nonacute settings, help with goal setting and decision-making in the course of patient care, and are integral to successful transitions across care settings (Camicia et al., 2021; DiazGranados et al., 2018). Integration of research into practice advances nurses' professional development, expands the core competencies associated with rehabilitation nursing as a discipline, improves quality of care and patient outcomes, and allows nurses to better inform future research (Bench et al., 2019; Berthelsen & Hølge-Hazelton, 2018; Patterson et al., 2017; Rose et al., 2017). For these reasons, it is important to explore rehabilitation nurses' familiarity with clinical rehabilitation research as little is published regarding how rehabilitation nurses perceive research in practice.

Although previous studies have not focused specifically on rehabilitation nurses' use of research information, it has demonstrated that nurses, in general, seldom read, engage in, or conduct research (Bench et al., 2019;

Berthelsen & Hølge-Hazelton, 2018; Lam & Schubert, 2019; Rose et al., 2017; Saunders & Vehviläinen-Julkunen, 2016). Familiarity with research may be more common among nurses in managerial, organizational, or administrative positions but remains relatively low overall (Patterson et al., 2017; Saunders & Vehviläinen-Julkunen, 2016). In 2007, the Institute of Medicine found that nurses incorporated research into practice less than 10% of the time and set a goal to advance this metric to 90% by 2020 (Institute of Medicine Roundtable on Evidence-Based Medicine et al., 2007; Mensik, 2011). It is unclear whether this goal was met and if findings from other specialties can be generalized to rehabilitation nurses.

Despite limited familiarity with research, many nurses recognize the value of research competence, believe that nursing practices should be based on research, and express a desire to be involved in conducting research (Bench et al., 2019; Berthelsen & Hølge-Hazelton, 2015; Horntvedt et al., 2018; Rose et al., 2017; Ryan, 2016; Saunders & Vehviläinen-Julkunen, 2016). Accordingly, individual, organizational, and cultural barriers, rather than personal attitudes, may make it difficult for nurses to meaningfully engage with the research literature (Bench et al., 2019; Patterson et al., 2017; Saunders & Vehviläinen-Julkunen, 2016).

On an individual level, nurses may perceive themselves as unqualified to evaluate research, particularly if they lack exposure, confidence, or the theoretical or practical knowledge to digest peer-reviewed literature (Bench et al., 2019; Berthelsen & Hølge-Hazelton, 2015; Horntvedt et al., 2018; Lam & Schubert, 2019; Ryan, 2016; Saunders & Vehviläinen-Julkunen, 2016). At the organizational level, heavy workloads, time constraints, the structural nature of shift work, budgets, and institutional philosophies may constrain creativity, force nurses to prioritize other clinical responsibilities, or cause them to feel that research is not part of their role (Bench et al., 2019; Berthelsen & Hølge-Hazelton, 2015; Lam & Schubert, 2019; Patel et al., 2017; Patterson et al., 2017; Rose et al., 2017; Ryan, 2016). Culturally speaking, the hierarchical nature of medicine may result in nurses feeling subordinate or underpowered in their efforts to incorporate research into practice (Bench et al., 2019; Berthelsen & Hølge-Hazelton, 2015, 2018; Ryan, 2016). In addition, research-oriented nurses may feel like "hybrids" in that they must combine the roles and expectations of both nurses and researchers, sometimes leading to peers perceiving them as engaged in frivolous work (Berthelsen & Hølge-Hazelton, 2018, p. 1575; Rose et al., 2017). A desire to maintain harmony with colleagues could combine with individual and organizational

barriers to limit the feasibility of engaging with research for many nurses (Chen et al., 2013).

The barriers to research use that are confronted by rehabilitation nurses merit further investigation. Generally speaking, a lack of time and a lack of institutional support for research have been reported in other studies (Bench et al., 2019; Horntvedt et al., 2018; Patel et al., 2017; Patterson et al., 2017). However, the highly specialized, complex, and long-lasting conditions faced by rehabilitation patients may prompt unique research needs for rehabilitation nurses (Camicia et al., 2021). Conceivably, a lack of relevance or applicability of research may represent one such barrier (Lam & Schubert, 2019; Patel et al., 2017). Despite the recent increase in randomized controlled trials in clinical rehabilitation research, rigorous study designs may be less prevalent, leaving nurses with a smaller pool of literature from which to draw evidence for clinical practice (Honkanen et al., 2019; Morris et al., 2020). With regard to content, studies that address issues most germane to rehabilitation, such as long-term functioning, complex social needs, return to independence, and vocational outcomes, are fewer in number, as are studies that include nursing home residents and participants with cognitive or functional impairments (Camicia et al., 2021; Gerber et al., 2020; Rose et al., 2017; Sheehan et al., 2019). These and other qualities specific to the rehabilitation setting suggest that a better understanding of the research barriers experienced by rehabilitation nurses is warranted.

There are three prior studies that examined nursing research in rehabilitation. However, the focus of these articles was on ethical concerns related to research, performing educational training, and conducting primary research (Blackmer, 2003; Mauk, 2013; Rose et al., 2017), not nurses' use of research literature to inform best practice.

Current literature on nurses' use of research information is often dated, based outside the United States, limited to the hospital setting, and based on nurses in general as opposed to those working in rehabilitation specialties (Akerjordet et al., 2012; Breimaier et al., 2011; Brown et al., 2009, 2010; Chen et al., 2013; Fink et al., 2005; Leasure et al., 2008; McMaster et al., 2013; Patterson et al., 2017; Roxburgh, 2006; Saunders & Vehviläinen-Julkunen, 2016). Although some barriers may transcend country lines and nursing specialties, the use of research information and the unique challenges of evidence-based practice in rehabilitation nursing are not well understood. This qualitative study aimed to understand the perceptions of the use of research information, related barriers, and avenues for future research among rehabilitation nurses caring for individuals with burn injury, spinal cord injury, and/or traumatic brain injury.

Methods

Participants and Recruitment

Registered nurses across the United States were recruited through e-mail listservs via professional organizations and flyers to participate in interviews for a qualitative study, specifically, grantees from the National Institute on Disability, Independent Living, and Rehabilitation Research-funded spinal cord injury, traumatic brain injury, and burn model systems. In addition, recruitment messages were sent via e-mail to rehabilitation-focused hospitals. Participants had to be at least 18 years of age; have worked as a registered nurse in a post-acute setting with individuals with spinal cord injury, traumatic brain injury, and/or burn injury for at least 5 years; and must have worked in one of those settings within the last 5 years. Participants were excluded if they did not meet the inclusion criteria.

Data Collection

Semistructured interviews were conducted via telephone from August 2018 to October 2018. Prior to beginning the interviews, the interviewer read the informed consent to the participants, answered any questions they had, and obtained their oral informed consent. This study was approved by the George Mason University Institutional Review Board.

The senior author, a medical psychologist, trained all interviewers in semistructured interviewing techniques. Interviewers collected information about participants' demographics, work settings, and clinical experiences. Semistructured interviews were audio-recorded, and the analyzable parts of the interview averaged 32.8 ± 9.3 minutes (this does not count informed consent, contact information, etc.). The interviews sought to understand how nurses access research literature, usefulness of the current literature, ability of nurses to apply research into clinical practice, areas of concern and potential topics for future research, and how nurses prefer information to be communicated and disseminated (Table 1). Respondents were compensated for participation in the form of a $125 gift card.

Data Preparation for Analysis

The recordings from each interview were transcribed by a transcription service. To establish accuracy of the transcription, research team members listened to the audio recording while reading each transcript multiple times. Transcripts were edited as necessary to ensure accuracy. The transcribed interviews were then used for data coding and analysis.

Coding

Data-driven codes were developed using the data from the transcripts. To develop the codebook, two research

Table 1 Semistructured Interview Questions

Do you believe the published literature is useful and/or relevant to your practice?

Does the existing literature adequately answer your patient-related questions?

Which literature do you access for information? (prompt for PubMed, case reports, websites of foundations, special interest groups)

If you could craft a centralized comprehensive system to translate research findings to clinicians, what would this resource include?

Which publications or research journals do you reference the most in understanding the current changes in your field? Do you have restricted or full access to these?

How helpful do you think the current literature is to your patients when they read it themselves? Please explain.

What type of research do you find the most helpful to your practice and why? (prompt for clinical trials, randomized experiments, quasi-experimental studies, observational, cross-sectional, population surveys, expert opinions)

Have you ever participated in conducting research in your field? If so, please elaborate.

Describe a time when you had difficulty translating research findings into practice?

Do your patients ever bring their own researched materials to appointments to discuss the findings and possible changes to the course of their care? If yes, is it helpful? What type of content do you want your patients to have?

What areas in your field do you believe should be the focus of new research? Describe outcomes of interest you would associate with each area. (prompt for functionality, impairment, social support, quality of life, clinical outcomes)

How would targeting a specific area (functionality, impairment, social support, etc.) improve your practice or your ability to provide information to your patients?

team members, a health behavior researcher and a health services researcher, immersed themselves in the data. The drafted codebook was developed using a random number generator to select three interviews from nurses who had worked with each injury type (i.e., one spinal cord injury, one traumatic brain injury, and one burn injury nurse). The health behavior researcher and the health services researcher used the method described by Boyatzis (1998) to develop the codebook. These researchers independently read the transcripts, wrote syntheses of the interviews, and observed and noted patterns and themes that emerged from the data (Boyatzis, 1998). Subsequently, these authors discussed patterns, themes, and codes. The codebook was primarily prepared by the health behavior researcher, and then the health services researcher and the medical psychologist reviewed it and provided feedback. After revisions, the preliminary codebook included 16 codes.

Once the preliminary codebook was established, two research assistants who were not involved in the development of the codebook, coded a fourth interview using a qualitative data analysis software package, NVivo for Mac (QSR International, 2014). These two team members

were trained in qualitative coding. After the interview was coded, an interrater reliability analysis was conducted using NVivo, which measures percent agreement between the two researchers' coding. There was a 98% agreement between coders. The research team held a meeting to discuss differences in coding, questions about the codebook, and further refined the codebook. Subsequently, the first interview was recoded, and then the remaining 17 interviews were coded. During the coding process, eight new codes were developed, resulting in a final codebook that included 24 codes. Previously coded interviews were reanalyzed to incorporate any new codes that had been developed, as appropriate. Saturation was observed during coding as coders reached a point in which no new codes were emerging and added interviews did not add new information to the analysis.

Data Analysis

Once all transcripts were coded, data were reviewed and summarized by the health behavior researcher and one of the research assistants. The lead author conducted an analysis to identify themes from the coded data. A thematic network analysis approach was used to systematize the extraction of the coded data (Attride-Stirling, 2001). With this approach, codes were assigned to basic themes and then grouped into more abstract organizing themes and finally into global themes, which encapsulated the primary themes and interpretations of the data. Once the themes were established, they were arranged into

networks, examined, and interpreted by the medical psychologist and the health behavior researcher. To increase the validity of the results, triangulation was used to mitigate bias by involving multiple researchers of differing expertise throughout coding and analysis (Denzin, 2017).

Results

As seen in Table 2, 94% of the participants were female with an average of 13 years of nursing experience. The majority of work time for the participants was spent in direct patient care (63%). The majority of participants worked in hospital settings (78%), and most worked with patients with spinal cord injury (83%) and traumatic brain injury (67%), with 22% having worked with patients with burn injury. Most of the nurses were from the Midwest (56%), with 28% from the Southeast and 6% each from the Southwest, Northeast, and West.

Three global themes emerged from the data: (1) facilitation of research uptake by nurses, (2) organizational structures that support a research culture, and (3) nurse engagement with research. Table 3 presents the basic, organizing, and global themes that were induced from the data.

Facilitation of Research Uptake by Nurses

This global theme examined nurses' ability to access research literature and the relevance and applicability of the research. Participants reflected on the challenges with

Table 2 Participant Characteristics

ID	Age (years)	Gender	Highest Degree	Years in Practice	Amount of Time Spent in Direct Patient Care	Amount of Time Spent in Research
Average	40 ± 9	94% Female	56% Bachelor's	13 ± 7	63% ± 38%	0% ± 0.1%
301	47	Female	Associate's	22	0%	10%
302	44	Female	Bachelor's	11	40%	0%
303	48	Female	Master's	28	80%	0%
304	48	Female	Master's	28	20%	25%
305	59	Female	Associate's	23	50%	10%
306	41	Female	Bachelor's	11	100%	5%
307	27	Female	Bachelor's	5	100%	0%
308	42	Female	Bachelor's	9	1%	0%
309	33	Female	Bachelor's	8	100%	0%
310	35	Male	Bachelor's	6	100%	0%
311	32	Female	Bachelor's	10	100%	30%
312	30	Female	Master's	8	100%	0%
313	49	Female	Master's	12	10%	10%
314	31	Female	Bachelor's	6	80%	8%
315	50	Female	Master's	10	75%	0%
316	38	Female	Bachelor's	13	50%	0%
317	37	Female	Associate's	16	100%	0%
318	37	Female	Bachelor's	9	30%	10%

Table 3 Basic, Organizing, and Global Themes

Basic Themes	Organizing Themes	Global Themes
Nurses need for an easily searchable online system for information dissemination with real-time support.	Disseminated research materials need to be easily accessible, be user-friendly, and provide practical application recommendations.	Facilitation of research uptake by nurses
Dissemination materials should include summaries with recommendations for clinical practice.		
Resources for patient support and education are needed.		
Research literature should be written with language appropriate for its audience with recommendations for clinical practice.		
Research should include a variety of study types for comprehensive evaluation of issues and generalizability.	Future research needs to expand its scope to cover quality of life and management of injuries throughout the life span.	
Research needs to address all levels of injury severity, in a variety of settings, throughout the continuum of care.		
Research should focus on quality of life, health, and long-term management of injuries.		
Research should be disseminated to nurses within their department/unit.	Organizations can support research culture through dissemination of information.	Organizational structures that support a research culture
Full access to research literature, especially at the workplace, aids in engagement with research.		
Work organizations should disseminate information through dedicated staff, up-to-date policies, and opportunities for discussion of research.		
Nurses need education and staff support to learn how to obtain, understand, and translate research.	Organizations can mitigate barriers to engagement with and implementation of research.	
Organizations must mitigate barriers to implement research into clinical practice.		
Most nurses want to engage with and utilize research in their clinical practice.	Nurses understand the needs of patients and want to engage in research.	Nurse engagement with research
Nurses should be involved in research projects as they understand clinical relevance and needs of patients.		
Current nurse culture is "busy," focused on patient care, and with little time for research engagement.	Nurse culture needs to change to support engagement with research.	
Nurses should have time in workday for engagement with research.		

the structure of the current literature and why it was difficult to both access and utilize. The first organizing theme addressed the dissemination of research material, specifically that the literature needed to be easily accessible, user-friendly, and provide practical application recommendations.

> #301: I find it easier to get through an entire research paper if they're—if it's—I don't want to say it's done in lay terms, but if it's a little less scientific, if you will. I know that's really helpful at some levels. But at my level and for what I do, you know, doing a lot of quality and performance improvement projects, it's just easier for me to decipher if there, you know, is less raw data. I really like the explanation of what does that—you know, show me the raw data, but also explain and summarize what that data really means.

> #308: I think sometimes the articles are written at more on like doctorate type level, and when you're trying to pull just basic information, if you don't have the degree in statistics to understand that, it can be a little bit confusing.

> #312: So for me, mostly I generally can work through information, but there has been studies where there's so many statistical or even non-statistical findings that are translated that it kind of just becomes a blur, and it—you know, if you're not really fresh on those terms or you know, how that relates into medicine or anything into your practice, I think it's really difficult sometimes to be able to kind of relate it to your practice when it's things such as, it's not statistical, it is statistical. It kind of gets blurry as to what that actually means for your practice.

Suggestions for improvement were also explored. Nurses reflected on the need to have an easily searchable online system for research dissemination with real-time support.

#302: It really depends how much time you have in your workday and how quickly you can find this information. So a lot of it is, you know, the efficiency of trying to do the search, I guess, right? The more specific it can be, more filters you can apply, then you know, I guess the better the amount of research you're going to find and the more relevant hopefully. You know, like anything, the—you know, if you're crunched for time, then they only have say 15 minutes, then you know, chances— what are the chances that you're going to be able to find that exact relevant information within that timeframe.

#309: It has to be accessible, very easily. Like everything is on app now. If I can have like the app just with the nursing research in it, that would be pretty awesome, instead of like taking multiple steps to get where I want to be.

In addition, the nurses endorsed expanding the scope of rehabilitation research itself to cover broader areas, including longer term care, quality of life for the injured person and their families, and management of injuries throughout the life span. Nurses also recognized the need to understand the outcomes and needs of specific populations.

#318: I did something on autonomic dysreflexia, and the information—like it was, you know, 100 patients, but you know, once I learned they only monitor them for 24 hours, and to me like (laughs) what? 24 hours. Like why is this study even published? Like in 24 hours if a patient is sick or if a female patient's on their period, like there are different things that could affect that, and some kids won't have any episodes of autonomic dysreflexia [AD], and then they will have many, and like it was just—I was like why is this—okay, it's a topic that I find interesting, and I was hoping to gain some insight on AD that like I—and the results have—It was just like, you know, I felt like there was no validity. Like 24 hours? So I feel like that's the type of stuff I've found when I was kind of looking.

#301: I just wanted to note that I think it is so important to do research on how spinal cord injury affects caregivers and family members or friends of people with spinal cord injury, because it just—it truly impacts them, but we often times are so focused on the person with the spinal cord injury that we forget that those other people are definitely affected as well.

#303: We have a large number of underprivileged populations, especially African American

young males, and there just doesn't seem to be a lot of information out there on, you know, their outcomes necessarily or how we as clinicians can provide better education and care to that population.

Organizational Structures That Support a Research Culture

This global theme explored the impact that the organization has on nurses' ability to utilize the research literature. Nurses discussed how organizations can support a research culture as well as mitigate barriers to engagement with and implementation of research. Organizations should ensure access to research literature, create materials for dissemination of research to nurses, and provide opportunities to discuss research at work.

#304: Well, I guess what I do and encourage my nursing staff to do is—so we have—like I said, we primarily care for spinal cord injured patients, and both new injuries and chronic injuries that are readmitted for maybe an additional problem. So we have selected various other leaders and myself, periodically review the literature to create, you know, patient education materials. So we have standardized the materials we provide them, and so as patients ask questions, we encourage the use of those resources.

#309: I wish my hospital would be involved in more things like that [journal clubs], because they provided us with the articles, we were able to read the articles, we were able to discuss them in a journal club, but we don't do that as frequently as I would like.

#315: The hospital or the, you know, the medical staff office provide more opportunities to look at and discuss research, then I mean, I guess I'm saying like if I were kind of prodded and nudged a little bit more, and I had access to great synthesized centrally located repositories of research, then I would probably do a better job with my patients.

Nurse Engagement With Research

The global theme of nurse engagement with research has two main themes. The first was that nurses have continual direct contact with injury survivors more than other members of the healthcare team, so they have an in-depth understanding of patients' needs. Therefore, to help create clinically relevant research questions and outcomes, nurses should be included in the research process.

#301: Where physicians may focus more on the actual physical symptoms, and you know, how to keep—how to prevent spasticity from becoming a problem, whereas maybe doctors and nurses—I'm sorry, nurses and therapists take sometimes I think a more holistic approach to it and take a look at how can we help this person live their life to the fullest and be happy.

#304: Patients with severe depression or anxiety or chronic—acute and chronic pain management is a struggle when you feel, you know, you've exhausted all of your options and your patient still is struggling…it's hard to support those patients, so I think if we had more research in those areas, among others, but those are the ones that I guess come to my head first, would definitely help us hopefully translate that into some new interventions or ways that we can help these patients.

The other main theme within this global area addressed nursing culture. Specifically, data in this study revealed that nursing culture must change to be more supportive of engagement with research. Nurses are focused on patient care and busy with the associated tasks, so there is little time for engagement with research. In addition, engagement with research is not considered a responsibility of nurses, particularly staff and/or bedside nurses.

#309: Just time, you know, being able to spend time over there [in the library], because I mean, for the most part we feel guilty going to the cafeteria and taking our lunch there instead of on the unit. You know, what if something happens and I'm not serving my patients as well as I could?…So yeah, just being able to have the time.

#312: I don't think that some staff nurses even think to go to the literature, and I don't always think that it is easily understood by maybe some people as it would be maybe others. But so I don't also think that it's taken upon the staff nurse as individuals to kind of look up that research.

Discussion

The purpose of this study was to investigate the research utilization, including barriers, and future research directions among rehabilitation nurses. Rehabilitation nurses spend most of their work time with patients. Therefore, it is crucial that they are familiar with evidence-based best practices and collaborative research. In this study, rehabilitation nurses were asked about their viewpoints on the relevance of published literature, how helpful the research is, and their ability to understand and implement findings from the literature.

Consistent with published literature on the use of research information, our study found that, among the nursing population, seldom did nurses read peer-reviewed research, academic journals, or scholarly research articles, nor did they engage in or conduct research (Bench et al., 2019; Berthelsen & Hølge-Hazelton, 2018; Lam & Schubert, 2019; Rose et al., 2017; Saunders & Vehviläinen-Julkunen, 2016). Although 67% of our participants did not engage with or read the research literature, most of the nurses in this study stated their desire to engage in research. However, there were barriers to this engagement, such as lack of relevant and user-friendly research, organizational structures that prevented nurses from accessing research, and cultural norms that discouraged nurses' pursuit of research. These barriers, rather than individual factors, played a critical role in the engagement of rehabilitation nurses with research.

Lack of time to research evidence-based literature was a major issue. Although nurses viewed research as important to ensuring high-quality health care, they stressed that they do not have the time to conduct searches or read literature, with 89% of our participants reporting barriers to accessing literature. As found in this study and others (Bench et al., 2019; Patel et al., 2017; Patterson et al., 2017), heavy workloads and time constraints prevent nurses from keeping abreast of research literature. In addition, there was an inability to access research. These two concerns are ones that organizations can and should take into account. Nurses are the healthcare professionals who spend the most time with patients and are expected to provide patients with exceptional care. To help nurses improve the care that they provide, organizations should provide the proper resources and time to engage with evidence-based best practices.

Nurses offered various suggestions for facilitating research uptake. For practical application of findings to occur easily in clinical practice, research materials need to be easily accessible, navigable, and explicit with practice recommendations. There are two main avenues for addressing these suggestions. The first is to make research literature easily accessible. This can be accomplished by making the search process easier, either by providing a more user-friendly online system with support or by having organizational structures that help with the search process (e.g., dedicated staff that summarize and disseminate information). Second, research that is relevant to nurses should be written with language appropriate for that audience. Many nurses have not received formal research and/or statistics training. The need to understand

Key Practice Points

- Implementation of journal clubs at work can help rehabilitation nurses engage with the research literature.

- Utilization of organizational structures (i.e., librarians who help with the search process) to access the research literature is an essential step to enhancing the engagement of rehabilitation nurses with the research literature. Clinical organizations should ensure that the research literature is freely accessible to rehabilitation nurses.

- Rehabilitation nurses should be more involved in research, if feasible, because they have an in-depth understanding of patient needs and the topics that research should be addressing.

research methods and analysis in many articles hinders the average nurse's ability to implement research into practice. Previous research supports this, as many nurses did not feel they had the knowledge base to evaluate research methods and analyses (Bench et al., 2019; Berthelsen & Hølge-Hazelton, 2015; Horntvedt et al., 2018; Lam & Schubert, 2019; Ryan, 2016; Saunders & Vehviläinen-Julkunen, 2016). By presenting information in plain language with recommendations for clinical practice, it allows nurses to digest the presented information and helps them to understand its practical applications.

Unsurprisingly, the data demonstrate that there is an evident lack in utilizing, engaging in, and conducting research among the rehabilitation nursing population. Although this void exists, it is not unique to rehabilitation nurses, as nurses across many fields report the same (Bench et al., 2019; Berthelsen & Hølge-Hazelton, 2018; Lam & Schubert, 2019; Rose et al., 2017; Saunders & Vehviläinen-Julkunen, 2016). The participants acknowledged the presence of this void and the yearning to fill it. These findings emphasize the need for organizations to provide their nursing staff with the resources needed to access and engage in research. Because of the fact that rehabilitation nurses spend the most time with injury survivors compared to the rest of the healthcare team, it is integral that they have the most up-to-date research to better meet the needs of their patients. Enabling engagement with research would serve as an essential supplement to the care that rehabilitation nurses provide to their patients. As many nurses discussed, they desired for nursing culture to be more supportive of research engagement. By including nurses as a part of the research team, it would allow for the development of clinically relevant research questions, identification of relevant research measures, a better understanding of the needs of injury survivors,

and clinically relevant outcomes and recommendations (Glasson et al., 2008).

In addition, the research literature needs to expand its scope to better understand and address the long-term issues experienced by injury survivors and their families, including the management of injuries throughout the life span. In rehabilitation research, acute and short-term phases of injury often garner greater attention in the literature than transitional or long-term care. This observation was an area of frustration for the nurses. To better support injury survivors beyond initial diagnoses and care, these areas require more attention. Nurses found there was a lack of strong evidence-based educational materials to provide to injury survivors, family members, and caregivers of those who have been injured. To help improve the quality of life for these injury survivors, researchers must investigate issues that impact these individuals over the long term, and materials must be developed to translate and disseminate information to them.

Limitations

We acknowledge that the findings from this study may have some limitations. The participants in this study were all registered nurses, and the vast majority of participants were working in hospital settings. Therefore, the experiences of the participants in this study may not represent the opinions and experience of other nursing professionals or those that practice outside hospital settings. In addition, we offered a monetary incentive for participation ($125 gift card), which may have attracted a different group of nurses to this investigation. We have previously conducted semistructured interviews with clinicians with this same incentive amount and have not found it to be coercive.

Implications for Nursing Practice

Participants in this study provided new insights into the rehabilitation nursing perspective on the use of research information, related barriers, and avenues for future research. Participants discussed how organizations can support nurses' engagement in research literature and knowledge translation and offered suggestions on ways research literature can be enhanced to make meaningful contributions to clinical practice. Our findings may be used to drive improvements in research competence, facilitate knowledge translation, and support evidence-based practice among rehabilitation nurses caring for individuals living with spinal cord injury, traumatic brain injury, and burn injury. By refocusing efforts of organizational structures to be more supportive and expanding access to research, nurses' implementation of rehabilitation research

can be enhanced, which may result in improved care and optimal quality of life for injury survivors.

Conflict of Interest

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