The Value of Nurses Specialized in Wound, Ostomy, and Continence: A Systematic Review

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ABSTRACT

OBJECTIVE: To critically appraise peer-reviewed evidence concerning the value, or implied sense of worth or benefit, of nurses specialized in wound, ostomy, and continence (WOC) care.

DATA SOURCES: The Preferred Reporting Items for Systematic Reviews and Meta-analyses was used to systematically review current literature in a single database from 2009 to the date of search (July 2019).

STUDY SELECTION: The initial search retrieved 2,340 elements; 10 studies were retained following removal of duplicate records, title and abstract reviews, and application of the inclusion/exclusion criteria.

DATA EXTRACTION: Literature was graded and critiqued with regard to design and research quality and then synthesized using a narrative approach.

DATA SYNTHESIS: Nine values that WOC nurses demonstrate were identified: improved quality of life for patients, teaching and mentoring, cost reduction, improved efficiency, improved wound outcomes, improved incontinence outcomes, advanced treatments, research, and leadership.

CONCLUSIONS: Although current studies suggest that there is value in the WOC nurse role, in all areas of the trispecialty, there is a need for high-quality literature with higher-level designs focused on bias reduction.

KEYWORDS: continence, nursing, ostomy, outcomes, quality of life, specialization, value, WOC, wound care

ADV SKIN WOUND CARE 2021;34:551–9.

DOI: 10.1097/01.ASW.0000790468.10881.90

INTRODUCTION

The term "value" has been defined according to the concept analysis conducted by Marzilli[1] as an implied sense of worth; an appealing benefit; and relevance based on culture, life experiences, and/or personality. Value may be either individual or societal. An implied benefit or value of nurses specializing in wound, ostomy, and continence (WOC) can be seen throughout the literature. For example, involvement of WOC nurses in patient care either directly or indirectly has been shown to decrease treatment cost and improve wound healing time.[2] A previous systematic review focusing on the value of the WOC nurse in home care found multiple benefits including improved healing times, wound closure rates, and decreased cost.[3] Further, WOC nurses are promoted as a valuable educational resource to healthcare staff related to both wound and ostomy care.[4] In addition, these nurses have the skills required to lead program development on important outcomes including incontinence-associated dermatitis, ostomy, wound, and fistula management.[4]

That said, there has been a paucity of literature discussing WOC nurses from geographic regions outside of the US, where the specialty originated.[3] A prior integrative review on the role of wound care nursing found a lack of literature that discussed nursing practice and its value rather than just the desired qualities and qualifications of the wound care nurses themselves.[5] There remains a gap in current literature related to the value of these specialized nurses from a global perspective.

Accordingly, a systematic literature review was completed to answer "What is the value of the wound, ostomy, and continence specialized nursing role?" This question was developed using the PICO (population, intervention, comparison, outcome) framework discussed by Pati and Lorusso.[6] For the purposes of this literature review, the WOC nurse was defined as an RN who has undertaken additional education in one or all of the three specialty areas.

The terms used for WOC nursing vary based on geographic location. In Canada, these nurses are referred to as nurses specialized in wound, ostomy and continence,

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whereas in other locations, they are referred to as enterostomal therapy nurses or wound, ostomy and continence nurses. In some locations, nurses may not have taken additional education in all three specialties and use the title wound nurse, ostomy nurse, or nurse continence specialist.

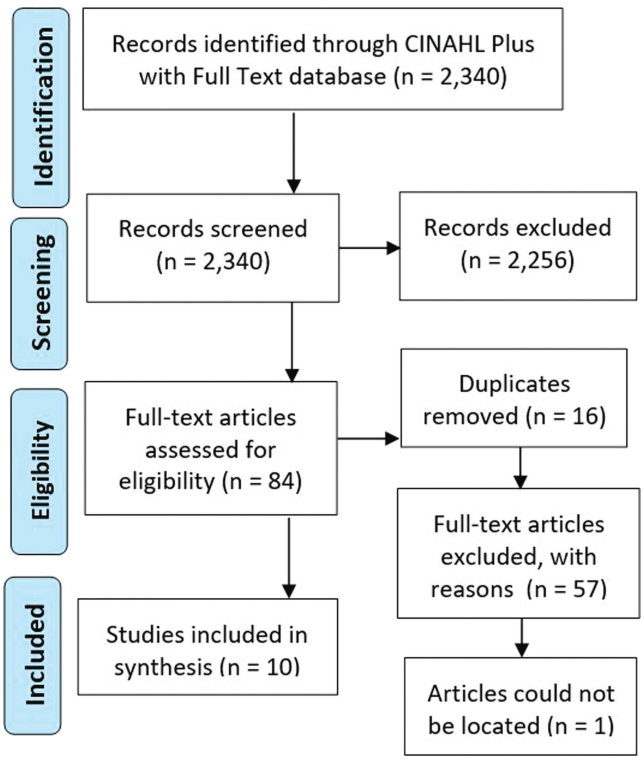
METHODS

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) statement[7] was chosen to guide the development and reporting of this systematic review. This review was aligned with the 2009 PRISMA checklist and flow diagram. During the literature search and review, the researchers adhered to the four phases of systematic flow including identification, screening, eligibility, and inclusion of publications. A protocol was not submitted or registered prior to publication (Figure).

Eligibility Criteria

Studies were included in the review if they were (1) written in English, (2) published between 2009 and 2019, (3) published in a peer-reviewed journal, (4) focused on WOC nurses, and (5) discussed topics related to the value of WOC nurses. Publications were excluded if they were (1) position statements, (2) abstracts, (3) secondary articles such as literature reviews, or (4) editorials. Investigators also excluded gray literature from the review. Both authors assessed the full-text articles to determine their eligibility and came to a mutual agreement on those excluded with reasoning. Any issues were resolved through discussion.

Figure. PRISMA FLOW DIAGRAM



Information Sources and Literature Search

The authors searched the CINAHL (Cumulative Index to Nursing and Allied Health Literature) Plus Full Text database in July 2019. This database was chosen for its focus on nursing and allied health research and specialized nursing in particular. Ten years of literature was searched to ensure relevant and current data.[8] A Boolean search using 12 key terms was conducted with no restrictions outside of the 10-year date range. Keywords/search terms were as follows: "Nurses Specialized in Wound, Ostomy & Continence" OR "Nurse Specialized in Wound, Ostomy & Continence" OR "Wound Ostomy and Continence Nurse" OR "WOCN" OR "NSWOC" OR "WCET" OR "ET Nurse" OR "Enterostomal Therapist" OR "Enterostomal Therapy Nurse" OR "Ostomy Nurse" OR "Wound Nurse" OR "Continence Nurse."

Study Selection

There were 2,340 results initially identified. Title and abstract review excluded 2,256 of these results based on eligibility criteria. Full texts for the remaining 84 results were obtained. An additional 16 articles were duplicates, leaving 68 publications that were read in full. An additional 57 articles were excluded with reasoning. Specifically, 38 results were gray literature, position statements, abstracts, or editorials. Thirteen articles were excluded that did not discuss topics showing the value of WOC nurses.[9–21] Four articles were written in a language other than English.[22–25] Finally, two literature reviews were also excluded.[3,5] One article could not be located.[26] Ultimately, 10 articles were eligible for inclusion in the full review.

Data Collection

Eligible articles were rigorously assessed by the authors. According to Snilstveit and colleagues,[27] a narrative method of systematic literature review synthesis using thematic analysis can be applied to both qualitative and quantitative studies when experimental and quasi-experimental studies are not candidates for meta-analysis because of insufficient similarity, as was the case in this review. A thematic analysis of the studies led to these outcomes or the values of WOC nurses. Findings identified included both positive and negative outcomes and equivocal outcomes; these latter two were combined as they did not demonstrate value. In addition to the study outcomes, study characteristics required for quality evaluation as outlined by the chosen evaluation criteria were tabulated in Microsoft Word (Redmond, Washington) and shared between the authors.

Literature Evaluation

Studies meeting the eligibility criteria were evaluated using the quality framework outlined by Pati[28] for both qualitative and quantitative literature. Based on this framework, studies were first assigned a level of evidence (I–VIII) based on their design. In this review, three levels of evidence were identified (IV, VI, and VIII). Level IV studies include quasi-experimental studies such as single experiments, or natural experiments without random assignment. Level VI studies are nonexperimental studies including descriptive literature, single quantitative noncausal studies, and qualitative research. Level VIII studies involve consensus opinion of respected authorities.[28]

A quality grade of A through D was then assigned to the article based on the provided quality assessment framework[28] assessing the purpose, sampling, design, measurements, and analysis. A quality rating of A indicates minimal issues, whereas D indicates numerous or significant issues with the study based on grading criteria.

Risk of bias was evaluated according to Higgins and Green[29] based on the selection, performance, detection, attrition, reporting, and other biases. Table 1 provides an overview of the included articles and their data by domain as well as the quality grade assigned. Each study was evaluated by consensus between the authors.

RESULTS

The 10 included articles were published between 2009 and 2018. Study samples included 928 National Database of Nursing Quality Indicator (NDNQI) hospitals, seven WOC nurses, one nurse continence specialist, 528 patients with ostomies over two studies, one enterostomal therapy nurse clinic, 43 wound care patients with 89 wounds, and 449,243 episodes of care by a home health agency (HHA). Settings were varied and global, such as NDNQI hospitals, a primary care setting in the Netherlands, six countries in Western Europe, a clinic in Indonesia, a home care setting in the US, HHAs that were Medicare certified between October 2008 and December 2009, Spain, Northern Florida, and a variety of unspecified locations. Paterson et al[30] included a sample population from 19 countries.

Given the lack of current literature on the value of WOC nurses, both qualitative and quantitative literature was included within this study as deemed appropriate by the PRISMA statement definition for a systematic review. Two studies used a qualitative methodology, five used quantitative methodology, and three used mixed methods.

Study designs included descriptive nonexperimental, descriptive comparative, retrospective descriptive, quasi-experimental prospective longitudinal, decision analysis, Heideggerian hermeneutic phenomenology, two-phase mixed-methods survey, and a modified three-round e-Delphi design. Studies collected data via questionnaires, surveys, pre and post assessments, analytical modeling using organizational data, desk search and expert opinion seeking values, interviews, and an outcomes and assessment information set tool. Data analysis by study design and methods can be seen in Table 1. Study findings were grouped into themes (Table 2).

The findings included nine values that WOC nurses provide or enhance: patient quality of life (QoL), teaching and mentoring, cost reduction, improved efficiency, improved wound outcomes, improved incontinence outcomes, advanced treatments, research, and leadership. A summary of these outcomes by level of evidence is provided in Table 3.

Quality of Life

When considering the value that WOC nurses bring, this theme was discussed positively in three articles (grades IV-A to VIII-B). Coca et al[31] compared health-related QoL scores from patients cared for by nurses specialized in ostomy care and nurses who were not trained in this specialty. They concluded that patients who received care from nurses specialized in ostomy care have a higher health-related QoL.[31] This was level IV-A evidence, the highest quality of evidence discovered during this literature review.

Eskes and colleagues[32] discussed QoL in relation to core competencies for WOC nurses. A group of European wound care experts from Belgium, Denmark, the Netherlands, Portugal, Switzerland, and the UK came to consensus that nurses specialized in wound care include QoL in their holistic approach to patient care.[32] Further, QoL was shown to be improved in community-dwelling older adults after a nurse continence specialist was involved in patient care, leading to a decrease in episodes of urinary incontinence.[33]

One article[34] found that patients had a satisfactory QoL whether or not they had been cared for by a WOC nurse. However, this article did not display any independent data allowing review or comparison between the two groups, nor descriptive statistics. No audit trail was presented in the data analysis, and the sample size was far under the calculated requirements for significant conclusions to be drawn. With a very heterogeneous sample and limitations noting a lack of ability to determine the influence of specialty certification on patient satisfaction, the primary outcome of the study, this evidence was of poor quality (level VI-D).

Teaching and Mentoring

Four articles highlighted the value WOC nurses provide by teaching and mentoring others. A level VI-B study by Buckley et al[35] compared the use of digital images in distance WOC nurse consultations that home healthcare nurses would take as compared with not including

Table 1. LITERATURE SYNTHESIS AND LEVEL OF EVIDENCE

Study	Purpose	Sampling	Design and Methods	Measurements	Analysis	Findings	Quality Rating
Aronovitch et al,[34] 2010	To determine whether contact with a WOC nurse improves QOL for patients with ostomies	350 surveys mailed; 126 responses obtained	Descriptive, nonexperimental; quantitative	Ostomy QOL Questionnaire	Wilcoxon signed rank and Kruskal-Wallis tests	More than 50% of study sample reported satisfaction regardless of WOC nurse services	VI-D
Boyle et al,[39] 2017	To describe the number and types of employed WOC certified nurses in acute care hospitals, rates of HAPIs/CAUTIs, and effectiveness of certified nurses in reducing HAPIs/CAUTIs	928 NDNQI hospitals	Retrospective analysis; quantitative	2012 NDNQI RN Survey	χ^2 analyses, covariance models, descriptive statistics were used to summarize findings	Hospitals employing WOC certified nurses have lower HAPI rates than those that do not, but no significant relationship was found with CAUTI rates. Skin assessment, nutrition support, moisture management, redistribution surface use, and repositioning were better at hospitals employing WOC certified nurses	VI-A
Buckley et al,[35] 2009	To examine the impact of digital images on the assessment and recommendations of a WOC nurse providing remote nurse-to-nurse consultations on home care for patients with wounds	43 adult patients with 89 wounds; one WOC nurse	Descriptive comparative; mixed methods	Each case was rated in terms of (dis) agreement between preassessment and postassessment and recommendations by set criteria. Qualitative data were generated by WOC nurse	Crosstabs and κ statistics; qualitative data analyzed by two doctoral-prepared nurses using content analysis and researcher triangulation	WOC nurses mentor home care nurses in wound assessment and care via images and monthly meetings. WOC nurses who provide remote consultations without visualizing the wound put patients at risk for mistreatment	VI-B
Coca et al,[31] 2015	To compare HRQOL of patients cared for in hospitals that employed nurses specializing in ostomy care vs hospitals that did not	402 patients with ostomies	Multicenter, quasi-experimental, prospective, longitudinal study; qualitative	EuroQoL 5D (Spanish version), Montreux questionnaire	Student *t*, χ^2, Fisher exact, Mann-Whitney *U*, Kolmogorov-Smirnov, Wilcoxon rank, sign tests	Patients undergoing ostomy surgery should have access to a nurse specialist. Those with access adapted better to their ostomy; had fewer concerns with appearance; demonstrated increased comfort with cleaning, changing, and disposing of their appliance; and had less fearfulness and improved overall health. Sexual health decreased regardless of nurse specialist; however, those with specialty access had less impact compared with those who did not	IV-A
Eskes et al,[32] 2014	To reach consensus within Western Europe on a core set of desired competencies for specialized wound care nurses compatible with international expectations and educational systems	36 experts, doctors, specialized wound care nurses, university teachers, and managers/head nurses	Modified three-round e-Delphi technique using an internet based questionnaire; mixed methods	Questionnaires based on the Canadian Medical Education Directives for Specialists Framework. Responses ranked on 9-point Likert-type scale	Descriptive statistics and content analysis; consensus was a minimum of 75% agreement	Most chosen competencies belonged to the scholar domain, and a few related to health advocacy. Competencies related to professional knowledge/ expertise, ethical integrity, and patient commitment were more important to those surveyed	VIII-B
Franken et al,[33] 2018	To explore consequences of the OCSS strategy of various healthcare policy scenarios in an aging population	One continence nurse specialist	Decision analysis study; quantitative	Previously adapted analytical model; various costs were considered. Input values for forecasting trends in 2030 used a desk search and expert opinion	A decision analytical model via spreadsheet	Implementation of the OCSS strategy with a continence nurse specialist will most likely lead to reduced urinary incontinence, increased QOL in community-dwelling older adults, decreased costs, and a reduction in care needed by other care providers	VI-A

(continues)

Table 1. LITERATURE SYNTHESIS AND LEVEL OF EVIDENCE, CONTINUED

Study	Purpose	Sampling	Design and Methods	Measurements	Analysis	Findings	Quality Rating
Paterson et al,[30] 2016	To define, characterize, and validate a nurse continence specialist role	Phase 1, 60 survey respondents; phase 2, part 1: 22 respondents in first survey, and 17 in the second; part 2: 430 respondents	Two-phase, mixed-methods survey	Phase 1 was an unpublished survey. Phase 2 part 1 was a Delphi study with two rounds of feedback. Phase 2 part 2 was a survey using Likert-type scales and open-ended comments	Consensus was a minimum of 75% agreement. Median, interquartile range, and content analysis were used	Role definition included diversity of practice setting, regulation/ethics/accountability, leadership through education/effective communication/professional service, person-centered collaborative approach to assessment and care plan, systematic and evidence-based care plan, and use of and participation in research	VIII-B
Sylvia and Jones,[36] 2010	To explore what it means to be a WOC nurse engaged in wound care practice	Six WOC nurses	Heideggerian hermeneutic phenomenology; qualitative	In-person interviews that were audio taped and transcribed verbatim. Reflections were logged by the interviewer	Interpretive analysis accomplished through text immersion, data transformation, and thematic analysis; direct quotations used	Eight themes: (1) Essence of Practice; (2) Holistic Approach; (3) The Dichotomy; (4) Art of Wound Care; (5) Growth in Practice; (6) Allure of the Challenge, (7) Acknowledging Limits; and (8) Teaching, Mentoring and Being a Role Model	VI-A
Westra et al,[38] 2013	To describe the prevalence, incidence, and effectiveness of HHC agencies' services with and without a WOC nurse related to wounds, incontinence, and UTI patient outcomes	449,243 episodes of care from a national convenience sample of 785 HHC agencies	Descriptive and comparative design; quantitative	Data documented by HHC clinicians using the Outcome and Assessment Information Set. Internet survey determined which HCC agencies had a WOC nurse providing services	SAS was utilized for descriptive statistics, prevalence and incidence, modeling for outcomes using mixed-effects logistic regression models. Propensity scores were used to examine association between receiving a WOC nurse on admission	Negative outcomes were increased in those HCC agencies with no WOC nurse; urinary incontinence was twice as high. HCC agencies with a WOC nurse had significantly better outcomes for PIs, lower-extremity ulcers, surgical wounds, urinary incontinence, bowel incontinence, and UTIs, and better stabilization for these items (except lower extremity wounds)	VI-A
Yusuf et al,[37] 2013	To investigate the challenges faced in developing an ETN outpatient clinic in Indonesia	73 patients	Retrospective descriptive study; quantitative	Data collected from medical records	No discussion of data analysis. Descriptive statistics including mean, SD, and percentage used to analyze and display data	ETN clinic decreased visits, reduced wound healing times, achieved wound healing, reduced cost and nursing time, and increased contact between nurses and families	VI-D

Abbreviations: CAUTI, catheter-associated urinary tract infection; ETN, enterostomal therapy nurse; HAPI, hospital-acquired pressure injury; HHC, home healthcare; HRQOL, health-related quality of life; QOL, quality of life; NDNQI, National Database of Nursing Quality Indicators; OCSS, Optimum Continence Service Specification; UTI, urinary tract infection; WOC, wound ostomy and continence.

images in consultation requests. The WOC nurses not only provided a more accurate recommendation for treatment, but also used these images to mentor the home healthcare nurses at their monthly meetings.[35] Eskes et al[32] documented the consensus of wound care specialists that the nurse specialized in wound care is to be a teacher for not only patients when conducting health teaching, but also the staff and students they may mentor or guide during consultations.

A level VIII-B consensus document on nurse continence specialists found that this role promotes continence through the education of others, including supporting interprofessional staff to better assist in patient care.[30] In a high-quality phenomenology study[36] on the lived experience of the WOC nurse in wound care, eight themes emerged; a key theme was teaching, mentoring, and being a role model. On a daily basis, the WOC nurse acts as a role model, demonstrating best practice care and thereby indirectly educating others. The WOC nurses also foster relationships in which they impart their experience and knowledge to novice practitioners.[36]

Cost Reduction

Three articles demonstrated the value the WOC nurse brings through cost reduction. A core competency for specialized nurses was found to be the consideration of

Table 2. LITERATURE THEMES

Study and Quality	Quality of Life	Teaching and Mentoring	Cost Reduction	Improved Efficiency	Improved Wound Outcomes	Improved Incontinence Outcomes	Advanced Treatments	Research	Leadership
Aronovitch et al,[34] 2010 (VI-D)	–								
Boyle et al,[39] 2017 (VI-A)					+	–			
Buckley et al,[35] 2009 (VI-B)		+							
Coca et al,[31] 2015 (IV-A)	+								
Eskes et al,[32] 2014 (VIII-B)	+	+	+	+	+		+	+	+
Franken et al,[33] 2018 (VI-A)	+		+	+					
Paterson et al,[30] 2016 (VIII-B)		+				+		+	+
Sylvia and Jones,[36] 2010 (VI-A)		+							
Westra et al,[38] 2013 (VI-A)					+	+			
Yusuf et al,[37] 2013 (VI-D)			+	+	+				

Note: +, value identified; –, no value identified.

treatment cost-effectiveness.[32] Franken et al[33] in a decision analysis study seeking to explore the consequences of implementing the Optimum Continence Service Specification, which was the introduction of a nurse continence specialist at the master's level, found potential significant cost savings from both healthcare and societal perspectives. Cost savings were calculated "over a 3-year period at two intervals, 2014 and 2030. The 2030 variables were based on desk research and expert opinion.[33] It was found that the potential Netherlands cost savings in 2030 would be between €32.4 million and €72.5 million from the healthcare perspective and €182.0 million and €250.6 million from a societal perspective with implementation.[33]

A retrospective descriptive study noted how, in the wound care process at an Enterostomal Therapy Nurse Outpatient Clinic in Eastern Indonesia, cost-effectiveness was included as a standard of care.[37] Wound management was more cost-effective for patients at the clinic; dressing costs at the clinic were 8% to 30% cheaper, depending on the product and distributor as compared with hospital and pharmacy costs. It was also found that decreased visit frequency and reduced wound healing times there led to reduced total cost.[37] However, this study had poor-quality evidence (VI-D) because findings were often based on improvements to patient care, but neither comparison data were present to demonstrate that there was indeed a decrease in time to heal, nor were there data for the cost of dressings in relation to patient outcomes.

Table 3. SUMMARY OF OUTCOMES BASED ON LEVEL OF EVIDENCE

Value	4a	6a	6b	6d	8b	Total
Quality of life	1 (+)	1 (+)		1 (–)	1 (+)	4
Teaching and mentoring		1 (+)	1 (+)		2 (+)	4
Cost reduction		1 (+)		1 (+)	1 (+)	3
Improved efficiency		1 (+)		1 (+)	1 (+)	3
Improved wound outcomes		2 (+)		1 (+)		3
Improved incontinence outcomes		2 (+); 1 (–)			1 (+)	4
Advanced treatments					1 (+)	1
Research					2 (+)	2
Leadership					2 (+)	2
Totals	1	9	1	4	11	26

Note: Some studies appear multiple times for multiple outcomes. +, value identified; –, no value identified.

Improved Efficiency

In addition to cost reduction, Yusuf et al[37] found an outpatient enterostomal therapy nurse clinic lead to reduced nursing time. However, it was unclear how the authors arrived at this conclusion outside of noting that implementation of best practice wound care evidence is more time-efficient than traditional care. A higher-quality evidence level study (VI-A) determined that implementation of a nurse continence specialist in general practice would result in a reduction of time invested by caregivers.[33] This would allow those caring for individuals with continence issues at home to instead focus their time on other tasks. In the Netherlands, this was estimated to result in a potential 1.27 million fewer hours dedicated to informal caregiving.[33] Expert opinion on the wound care nurse specialist was that one of their core competencies is making timely decisions in patient care.[32]

Improved Wound Outcomes

Eskes et al[32] discussed how the results of a consensus study that determined the competencies of the nurse specialized in wound care could be used to allow physicians to defer tasks related to wound management to the specialized nurse. Based on prior literature demonstrating

appropriately trained nurses can produce high-quality health outcomes equal to those of doctors, physicians could work in collaboration with the specialized nurse to manage wounds according to their competencies.[32] Westra et al[38] found that those HHAs that did not employ a WOC nurse had higher incidences of wounds. Those agencies that did have WOC nurses had improved outcomes for pressure injuries, lower extremity wounds, and surgical wounds. Stabilization of these wounds in agencies with a WOC nurse was also significantly improved, with the exception of lower extremity ulcers as almost all agencies achieved stabilization of their lower extremity ulcers.[38]

Yusuf et al[37] found that implementation of an outpatient enterostomal therapy clinic led to reduced wound healing times and improvements in pain at dressing changes and wound odor management. There were, however, no descriptive statistics included in the study to validate these claims. Boyle et al,[39] in a high-quality retrospective study (VI-A) studying NDNQI hospitals, found that those hospitals with a wound care specialty–certified nurse had lower hospital-acquired pressure injury rates, improved risk assessment, and better preventive practices. Those organizations employing a wound care specialty–certified nurse had nearly half the incidence of hospital-acquired pressure injuries than those hospitals that did not.[39]

Improved Incontinence Outcomes

In a high-quality descriptive comparison study (VI-A), HHAs with WOC nurse specialists had a lower incidence and prevalence of both urinary and bowel incontinence compared with those organizations with no WOC nurse specialist.[38] Those HHAs with no WOC nurse had an incidence twice that of their counterparts. The HHAs with WOC nurses also had improved outcomes and stabilization of patients with incontinence issues compared with agencies without.[38] Paterson et al[30] achieved consensus in that nurse continence specialists, when developing care plans, include a mechanism for ongoing evaluation, goal setting, outcome measurement, and self-management strategies to improve incontinence outcomes. However, a retrospective analysis of survey data found no significant relationship between nurses with specialty certification in continence and the rates of catheter-associated urinary tract infections within the hospital setting.[39]

Advanced Treatments

Although in current literature it has only been discussed as a consensus document (VIII-B), the use of advanced skill and treatment during patient care is a perceived value of the nurse who has specialized wound care knowledge. Eskes et al[32] reached consensus from a group of wound care experts that WOC nurses can perform specialized skills such as sharp debridement. The consensus also was that they examine current practices and evaluate traditional methods of wound management based on theoretical knowledge, thereby advancing treatment methods.[32]

Research

Two consensus documents (both VIII-B), one on nurses who specialized in wound care and the other on nurses who specialized in continence, drew conclusions on research regarding these nurses' practice. Consensus found that nurse continence specialists can critique literature and appraise evidence to transfer knowledge to practice based on the best evidence available.[30] The nurse continence specialist also can participate in, design, undertake, identify, and develop new research based on their level of development to evaluate current practice and improve outcomes.[30] Eskes et al[32] found through consensus that nurses specialized in wound care can interpret, participate, perform, help develop, and publish scientific research. Although research was considered to be less relevant than other competencies of the nurse specialized in wound care, this conclusion was softened by noting that research along with competencies such as teaching may set these specialist nurses apart from their colleagues.[32]

Leadership

The same two consensus documents spoke to leadership as a competency expected of WOC nurses.[30,32] A key competency of the nurse specialized in continence was that they educate and support patients, families, caregivers, communities, and health professionals in promotion of bladder, bowel, and pelvic floor health, thereby demonstrating leadership.[30] Eskes et al[32] found that wound care specialists agreed that the nurse specialized in wound care can take control, lead, and coordinate care for patients with wounds.

DISCUSSION

Ten full-text articles met the criteria of this systematic literature review describing nine themes. Of these themes, QoL and improved wound outcomes had the highest-quality evidence (IV-A and VI-A) and two level VI-A outcomes, respectively (Table 3). Teaching and mentorship had the most positive evidence including two level VI studies graded A and B and two level VIII-B studies. The value with the least supporting literature was advanced treatments, which was discussed in one level VIII-B study. This was closely followed by research and leadership, which both had two level VIII-B supporting studies.

Of the 26 outcomes that were found, 14 were either evidence level VI-A, VI-B, or VI-D across 7 studies.[33–39]

Eleven outcomes demonstrated evidence at level VIII-B across two studies.[30,32] The final outcome was considered level IV-A evidence.[31] When assessing the level of literature present, it is noted that a majority were level VI, which indicates that advances in the quality of literature being produced on this topic are required.

These review findings are supported by prior literature. A systematic review of enterostomal therapy nurse value in the Canadian home care sector found nine benefits to these specialists working in the home care setting.[3] Findings in both literature reviews include multiple improvements in wound management; reduction in cost; and support, mentorship, and education for nursing staff.[3]

In the current review on the value of WOC nurses, a lack of research on these specialists from a Canadian context within the past decade was evident. However, Baich et al[3] concluded in their review of the literature that although there is limited evidence, available literature strongly supported the value of enterostomal therapy nursing in the Canadian home care sector, further supporting the present findings in that these specialized nurses provide value in multiple clinical and geographic regions.

Dutton et al,[5] in an integrative review on the role of the wound care nurse, found that (as with the Baich et al[3] review and this current review) available literature provided evidence that a wound care nurse improves wound outcomes. Unlike the review by Dutton et al,[5] only three studies in this systematic review discussed the nurse and expectations around the role, whereas the other seven studies focused on the value these specialists bring to practice. Further, Dutton et al[5] found more studies discussing the expected qualities and qualifications of WOC nurses rather than their impact on practice. This demonstrates a greater focus on the value of the nursing specialty in WOC from a practice perspective within the recent literature.

Eskes et al[32] note how teaching and research may be key roles that set the specialist nurse apart from their colleagues, although they noted that these competencies were less relevant during their survey. Although there were further studies found in this literature review that identified teaching and mentorship as part of the WOC nurse role, only the consensus studies by Eskes et al[32] and Paterson et al[30] identified research utilization as a competency of this specialized nurse. This demonstrates the need for future literature to focus on how WOC nurses integrate research into practice and how they themselves participate in and lead research. This same argument can be made for the leadership role of the specialized nurse. Given the lack of current literature on the leadership role these specialized nurses have in their practice, future research should focus on the impact these nurses have on their colleagues and on the circle of care as a whole.

There is a need for further research into the value that WOC nurses bring to healthcare based on the small pool of scholarly, peer-reviewed literature to draw from. In some areas of the world, the WOC nurse remains a new and expanding role, and research is required from a global perspective to introduce and understand the impact these nurses can make.

More specifically, further research is needed to understand the role that WOC nurses have in preventing catheter-associated urinary tract infections.[39] Franken et al[33] note there remains a significant gap in the literature surrounding various aspects of incontinence care, and more investigation is required to assess the impact of the nurse continence specialist. Further cost-effectiveness research has also been recommended to determine the benefit of the ostomy nurse specialist following the creation of a stoma.[31]

Current literature has been building upon what is known of the impact WOC nurses have on QoL and improved wound outcomes. Although there remains much to understand of the value these specialized nurses bring to healthcare, the recent literature does demonstrate a positive impact. This information can be used by nurse managers, administrators, and healthcare leaders when determining staffing needs and forming a healthcare team.

Limitations

Given the inclusion criteria, there may be further literature not published in English or published outside of the 10-year time frame that may have impacted these findings. There may also be terms used for those specializing in the WOC globally that were not included within the literature search. Only one database was reviewed; accordingly, future research might include more databases to broaden the search for relevant literature. The primary author is a certified nurse specialized in WOC. To reduce bias, the coauthor (who is not a WOC nurse) conducted the initial literature search, and investigator triangulation was used in full-text study selection and article quality review.

CONCLUSIONS

The objective of this review was to determine the value of WOC nurses. Findings indicate that the nurse specialized in WOC provides nine key value-added themes: QoL, teaching and mentoring, cost reduction, improved efficiency, improved wound outcomes, improved incontinence outcomes, advanced treatments, research, and leadership. The highest-quality evidence demonstrated value through increased patient QoL. A large portion of outcomes was from high-quality descriptive research and consensus studies, although these are themselves lower-level research designs. This demonstrates a significant need for better evidence using higher-level research

designs. Although the current literature is limited, there is an emerging body of evidence that suggests that the WOC nurse provides value to the healthcare system in all areas of the trispecialty. ●

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