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Facilitators and barriers for nurses when educating people with chronic wounds – A qualitative interview study*

Ljubiša Pađen [a,b], Géraldine Gschwind [c], Renata Vettorazzi [b], Sebastian Probst [d,e,f,g,*]

[a] Division of Nursing, Midwifery and Social Work, Faculty of Biology, Medicine and Health, The University of Manchester, Oxford Rd, M13 9PL, Manchester, UK
[b] Division of Nursing, Faculty of Health Sciences, University of Ljubljana, Zdravstvena pot 5, 1000, Ljubljana, Slovenia
[c] Wound Care Outpatient Surgery Unit, Jura Hospital, Fbg des Capucins 30, 2800, Delemont, Switzerland
[d] Geneva School of Health Science, HES-SO University of Applied Sciences and Arts, Western Switzerland, 47, av. de Champel, 1206, Geneva, Switzerland
[e] Care Directorate, University Hospital Geneva, Geneva University Hospitals, Rue Gabrielle-Perret-Gentil 4, 1205, Geneva, Switzerland
[f] Faculty of Medicine Nursing and Health Sciences, Monash University, 27 Rainforest Walk, Melbourne, Victoria, 3800, Australia
[g] College of Medicine Nursing and Health Sciences, University of Galway, University Road, H91 TK33, Galway, Ireland

1. Introduction

Chronic wounds are non-healing wounds that fail to heal within a normal timeframe [1] posing a significant public health concern [2]. With an estimated prevalence of approximately 2.21 per 1000 population [3] chronic wounds impose a burden not only on affected individuals but also on their families [4]. Nurses play an important role in wound care [5] which encompasses various tasks such as wound prevention, dressing changes, and patient education [6].

Patient education in wound care aims to enhance self-management skills, including wound cleansing, dressing changes, and recognizing signs of infection [7–9]. Patient education refers to the process in which healthcare professionals provide information to patients and their families, with the intention of changing their health behaviors or enhancing their overall health status [10]. To change health behavior, knowledge is essential for self-management, particularly for individuals living with chronic conditions like chronic wounds [11]. To make well-informed decisions about their care it is therefore important to understand their condition and the factors that impact wound healing. The more patients take responsibility for managing their illness, the more motivated they become and the lower the likelihood of complications such as recurrences [12]. Therefore, it is crucial to apply methods of enhancing an individual's ability to engage in self-care behaviors [13,14]. Traditional patient education involves providing raw information to individuals with chronic wounds. In contrast, self-management support involves assessing their behavioral skills to make decisions about managing chronic wounds in their daily lives and provide personalized education to improve their knowledge, skills, and understanding of their condition [8,15]. Recent systematic reviews and meta-analysis demonstrate efficient patient education results in ulcer size reduction [15], especially when wearing compression [16] as well as significant effects on pain, quality of life, and functional analysis [15]. All healthcare providers, especially nurses who have extensive contact with patients with chronic wounds, can offer self-management support by reinforcing patients' problem-solving skills and delivering consistent, proactive healthcare messages [17]. Such health care messages can be delivered through various means, including patient information leaflets, brochures, multimedia resources, computer-based tools, and one-on-one sessions [18].

Nurses hold a vital role in wound care education due to their substantial presence as the largest group of healthcare professionals in regular contact with individuals with chronic wounds [12,19]. However, what facilitators and barriers specialist nurses encounter when providing patient education to individuals with chronic wounds is not explored. This information would be important to improve the quality of nursing wound care education. We therefore explore the encountered facilitators and barriers of nurses specialized for wound care when educating individuals with chronic wounds in their daily practice.

2. Materials and methods

A descriptive qualitative design was employed, enabling rich descriptions of experiences of nurses specialized for wound care [20]. Ethical approval was granted by the committee of the Faculty of Arts, University of Ljubljana (282–2022). In Switzerland according to the Federal Act on Research involving Human Beings, together with the

* This project was conducted without any funding.
* Corresponding author. Geneva School of Health Science, HES-SO University of Applied Sciences and Arts, Western Switzerland, 47, av. de Champel, 1206, Geneva, Switzerland.
E-mail address: sebastian.probst@hesge.ch (S. Probst).

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associated Ordinances, no ethical approval is needed.

2.1. Sample and setting

We used a purposive sample to access nurses specialized for wound care. Nurses were recruited by the authors in wound care clinics or community care in Western Switzerland G.G. and Slovenia L.P. To protect the participant anonymity, we used fictional names to protect participant anonymity.

2.2. Data collection

We conducted twenty semi-structured face-to-face interviews between August and November 2022. An interview guide was developed using the current literature and pilot tested with specialist in the field for readability, understanding and comprehension of questions before the first interview. The mean interview duration was 27.2 min (range between 15 and 44 min). We recorded the Interviews digitally audio-recorded and transcribed verbatim.

2.3. Data analysis

Data was analyzed using Braun and Clarke's thematic analysis [21]. The six step included familiarization and reading of transcripts, initial coding and generation of coding tree, searching, and reviewing themes, defining and naming themes to reflect data, and reporting of themes. Throughout this process, all researchers L.P., G.G., R.V., S.P. operated autonomously and subsequently collaborated to achieve consensus on the identified themes. The data analysis was conducted using MAXQDA® software.

2.4. Rigour

To ensure the study's rigor, we adhered to the COREQ guidelines [22] and implemented the trustworthiness criteria for qualitative research outlined by Lincoln and Guba [23]. We maintained detailed documentation of the entire process to establish dependability. The data collection phase was followed by analysis, allowing researchers to make modifications as necessary. To enhance credibility, the analysis was subjected to triangulation by four independent researchers (BLINDED). To support the interpretation of the results, literal quotes from nurses were included, contributing to the confirmability of the findings.

3. Results

We identified three themes "characterizing wound education", "facilitating wound education" and "barriers to wound education". A total of 20 nurses (10 from Slovenia and 10 from Western Switzerland) with a mean age of 44.2 years (range 29–63 years) having between 2 and 37 years of experience in wound care were included. Sociodemographic characteristics are listed in Table 1.

Table 1
Sociodemographic characteristics.

Name	Age	Gender	Years of experience as wound care specialist	Degree of wound education	Work context
Nurse 1	52	M	10	CAS	Hospital
Nurse 2	50	M	10	CAS	Community care
Nurse 3	63	F	16	CAS	Community care and outpatient clinic
Nurse 4	45	F	10	CAS	Outpatient clinic
Nurse 5	32	F	3	CAS	Hospital
Nurse 6	35	F	3	CAS	Hospital and outpatient clinic
Nurse 7	45	F	2	CAS	Hospital
Nurse 8	54	F	4	CAS	Outpatient clinic
Nurse 9	47	F	7	CAS	Hospital
Nurse 10	52	F	17	CAS	Hospital
Nurse 11	54	F	37	RN - Specialist knowledge in ACWC	Hospital outpatient clinic
Nurse 12	38	F	15	RN - ET	Hospital outpatient clinic
Nurse 13	32	F	8	RN - Specialist knowledge in ACWC	Hospital outpatient clinic
Nurse 14	29	F	8	EN - CPD	Hospital outpatient clinic
Nurse 15	54	F	30	RN - Specialist knowledge in ACWC	Hospital outpatient clinic
Nurse 16	38	F	15	RN - Specialist knowledge in ACWC	Hospital outpatient clinic
Nurse 17	36	M	15	RN - Specialist knowledge in ACWC	Hospital outpatient clinic
Nurse 18	54	M	25	RN - Specialist knowledge in ACWC	Hospital outpatient clinic
Nurse 19	36	F	14	RN- CPD	Community care
Nurse 20	38	F	15	RN - CPD	Community care

CAS is a Certificate of Advanced Studies in Wound care and is a postgraduate education. Specialist knowledge in ACWC refers to registered postgraduate education involving 280 h. ET refers to enterostomal therapist (WCET standardized education), CPD education – local and international seminars and courses.

3.1. Theme 1: characterizing health education

This theme explores the circumstances under which participants provide patient education. All participants stressed that educating patients is a complex process that demands time. The theme is divided into two subthemes: "following patient goals" and "being unstructured."

3.1.1. Following patient goal

Participants emphasized the importance of tailoring patient goals to individualized objectives while providing the necessary tools and information, often requiring some clarity. Additionally, all participants expressed a commitment to adapting interventions to meet the specific needs of each patient.

> "*When trust is installed and we see that we bring knowledge, information that is relevant, that we adapt to their environment, that we provide care that is centred around the patient and that we not only interested in their wounds, but in the whole person (…) I think this is one of the keys that makes it easier for the patient to adhere.*" (Nurse 4, Switzerland)

In addition to customizing education to suit the patient's needs, demonstrating empathy was deemed crucial by the interviewees, particularly nurses, to mitigate negative emotions associated with wound care. This approach empowered patients to exert greater control over decisions and actions concerning their wound and overall health. For example, Nurse 2 highlighted:

"*I've always made a point of giving patients a choice in their treatment.*" (Nurse 2, Switzerland)

3.1.2. Using an unstructured approach

Nurses commonly utilize an unstructured method for patient education, often integrating it into dressing changes without a formal protocol. Goal setting and outcome assessment lack systematic approaches, and education processes are typically undocumented or documented using checkboxes. The initiative for education sessions largely stems from the nurse rather than following a standardized approach. Consequently, this lack of structure results in inconsistent information delivery, compounded by insufficient documentation and nurse rotations, leading to patients receiving redundant or conflicting information.

"Unfortunately, the health education is not structured and documented. I would say that health education depends more on the initiative of us, the nurses." (Nurse 12, Slovenia)

Nurses highlighted the complexity of health education, noting its extensive focus on physiological aspects and health-related topics, often neglecting psychological and social factors. They observed that patients' difficulties in socializing due to their wounds were common, compounded by the impact of prescribed antidepressants on both well-being and wound healing.

"We often address physical health topics such as care for exudate, pain, wound and foot/leg in general, but we don't pay enough attention to the psychological aspects. Many people are depressed, often on antidepressants, which can also affect wound healing." (Nurse 14, Slovenia)

3.2. Theme 2: facilitating wound education

This theme focuses on nurses assisting patients and their relatives in gaining, retaining, and applying knowledge and skills. It's subdivided into two parts, presenting viewpoints from patients and relatives, as well as nurses. Nurses emphasized that the efficacy of education depended on available resources like space, staff, and time.

3.2.1. Patient and relatives' involvement

Participants emphasized that having a relative or friend present during patient education provides a sense of security and confidence. This is because it encourages more questions and discussions about care, and allows family members acting as caregivers to seek advice on how to best support the patient. Nurses highlighted the importance of involving both patients and relatives in educational sessions, as it facilitates the process and encourages more engagement. Additionally, nurses noted that educating patients is easier when they are autonomous, in good health, and have a good level of literacy.

"*Because it is always easier when the patient has a high level of literacy because often when there is a precisely higher level. He will be more in demand, so inevitably, it's easier to build when it comes from him in fact.*" (Nurse 6, Switzerland)

Motivation plays a pivotal role in driving patients to learn and adopt healthier lifestyle habits. Interviewees unanimously acknowledge motivation as a critical factor influencing patient adherence to treatment plans, resulting in better health outcomes. Moreover, empowering and supporting relatives can reinforce health education efforts.

"If there is a motivated relative, a close person, at the beginning we may lean a little more on them and if, of course, the patient himself is motivated to listen, cooperate, shows a certain interest." (Nurse 18, Slovenia)

3.2.2. Nurses' facilitating skills and knowledge

Nurses' perceptions of the value of health education, along with their pedagogic and professional skills, are crucial for successful wound education. All interviewees emphasized that their experience and expertise in wound care play a significant role in guiding patients and their relatives through wound education. Participants highlighted that they honed their skills over time spent in wound care. Nurse 4 narrated:

"In fact, it's in relation to the experience I've had with the patients I accompany, in relation to their disease." (Nurse 4, Switzerland)

Establishing a trusting nurse-patient relationship is identified as a crucial facilitator, fostering mutual respect and encouraging patients to openly share their fears and reasons for non-adherence. Nurses emphasized that trust is built gradually over time, requiring consistent follow-up and engagement to earn patients' trust and foster a collaborative partnership with them.

"It is really about building a good relationship with a patient and [their] family. It's also about not judging but rather accepting. I think if you achieve that then you can do much more." (Nurse 19, Slovenia).

Some nurses utilize appropriate educational resources, such as videos or leaflets, to facilitate wound education.

Nurse 6 said:

"I use it (leaflet) a lot because it gives a guide and above all, we know that the message can be repeated by the patient when he wants it, where it is most appropriate." (Nurse 6, Switzerland)

While not all nurses use such supports due to availability constraints, participants underscored the importance of employing innovative didactic and pedagogical methods for effective health education. They emphasized the significance of creating tailored, evidence-based educational content and materials for patients with wounds.

"It is important that there would be more evidence-based educational material that would be written in a popular format for lay people, non-experts and a wider audience, which would address people in such a way as to stimulate patients' desire for greater engagement." (Nurse 18, Slovenia)

3.3. Theme 3: barriers to wound education

All participants identified various barriers to wound education, categorized under two sub-themes: "barriers related to patients" and "barriers related to nurses".

3.3.1. Barriers related to patients

Nurses discussed different patterns of patient behavior and their adherence to healthcare advice. They noted that patients lacking initiative and displaying passive behavior were significant barriers to health education. Nurses also described how passivity could escalate, leading patients to disregard medical advice or even engage in reckless behavior due to a lack of understanding of their health conditions, resulting in unwise decisions impacting their health.

"*I also notice, that there is often a lack of education, that is, lack of knowledge; therefore we repeat information and recommendations several times to them. Especially in young people with diabetes I even observe frivolity and heedlessness. They don't take their underlying illness seriously enough.*" (Nurse 12, Slovenia)

Nurses highlighted that patients with complex wounds often struggle to acquire knowledge due to their compromised physical and psychoemotional state, hindering their ability to comprehend and retain healthcare information. Factors such as patients' emotions, cognitive ability, and functional capacity contribute to this limitation.

"Our patients are, in general, quite old, and they can't follow certain things easily. They have issues with understanding all complex information (…) They sometimes don't even know when it is necessary to go to the physician (…)" (Nurse 17, Slovenia)

Furthermore, all interviewees noted that patients may not always be prepared to engage in wound education because it may not be the appropriate moment for them. They may have more pressing health concerns than their wound.

> "*It is not the concern of the patient themself. And they are there for something else. And then, there's this wound that's been there for months and then it's their general practitioner who takes care of it. And then even if the protocol is not adequate and then it's been dragging on for 6 months, it's not their priority*." (Nurse 10, Switzerland)

3.3.2. Barriers related to nurses

The lack of competence in health education among nurses was identified as a significant barrier. Some nurses suggested that pursuing post-graduate training could help improve their skills, while others expressed a need for more hands-on coaching at the patient's bedside. Additionally, nurses highlighted systemic barriers within the nursing context, including ineffective work organization, resource shortages, and inefficient communication among providers, which hindered patient education efforts. Interestingly, nurses also mentioned coping mechanisms, such as suppressing their concerns, to continue working within an ineffective system, which they considered as another barrier.

> *"It's unfortunate that when you reach a certain stage you simply don't feel like doing it or care anymore, you just hustle: you have a high flow of patients, you finish with each care [process] as soon as possible, and your goal is to send the patient out as soon as possible to continue to work further, even if you are aware that it is wrong."* (Nurse 17, Slovenia)

Nurse 9 explicitly mentioned that she does not allocate time for therapeutic education, and she is aware of this decision.

> *"I don't give time to that. I do not give time and I will not resume an appointment with the person to give me that time in fact."* (Nurse 9, Switzerland)

4. Discussion

This study aimed to investigate the barriers and facilitators faced by specialist nurses when educating individuals with chronic wounds in their daily practice. The findings underscore the importance of creating environments that transcend physical infrastructure in health education. Successful programs depend not only on addressing tangible factors but also on understanding the complex interplay of individual, situational, and professional elements [15,24]. Nurses in the current study demonstrated proficiency in addressing patient and relative needs for health education, yet they acknowledged that day-to-day education is often unstructured, potentially impacting intervention effectiveness. Evidence mirrors this concern, highlighting common issues such as non-individualized learning objectives, inconsistent content delivery, difficulty assessing learning outcomes, and a lack of adaptation to diverse learning styles and patient preferences [25,26]. Furthermore, the absence of fundamental elements in education processes may limit its efficacy, leading to ad hoc information dissemination rather than facilitating self-management. Effective self-management support, essential for optimal wound management and recurrence prevention, is grounded in principles of self-efficacy, realistic goal-setting, creating action plans, and proactive barrier identification, with an emphasis on individual empowerment rather than prescriptive directives [27].

Chronic wound education programs vary in effectiveness, but those integrating behavioral and psychosocial strategies tend to yield better outcomes. Therefore, programs should set specific objectives tailored to individual patients and their close relatives [28]. Active involvement of patients and relatives emerges as a key facilitator, yet studies reveal challenges with treatment adherence. Hence, integrating patient motivation and adherence to education objectives is crucial [29–31]. Collaborative partnerships between patients and healthcare providers, built on trust, enhance patient engagement in self-care. Availability of didactic materials is essential, with alternative formats like health apps potentially more effective for specific groups. Individual adaptation of materials is crucial, balancing comprehensibility and depth of information [27,32,33]. Healthcare professionals require contemporary expertise, sufficient time, and readiness for engaging discussions with patients. These findings underscore the importance of tailored and accessible educational approaches for effective health education [34,35].

Research indicates that the physical and emotional challenges of chronic wounds can reduce individuals' motivation, adherence, and responsiveness to health education efforts [4,36], potentially leading to maladaptive behaviors like declining support from relatives [37]. Nurses have observed that inadequate self-management may result in poorer health outcomes, highlighting the need for tailored interventions and involving relatives in education when patients are unable to collaborate. While strategies such as using phone apps [38,39], photography as motivators [40], and motivational interviewing [41] have been suggested to address these barriers, heir routine implementation is hindered by a lack of high-certainty evidence. Additionally, barriers related to nurses' work context, such as high workload and patient-to-nurse ratios, contribute to distress and moral burden among nurses, potentially affecting the quality of care and patients' health outcomes [42–44].

4.1. Strengths and limitations

Our study offers a valuable cross-national perspective on the facilitators and barriers encountered in educating individuals with wounds, highlighting more similarities than disparities in the challenges faced by nurses in developed countries.

Despite the limitations of conducting a qualitative study across two countries, including concerns about data collection, translation, and the credibility of the analysis process, we implemented protocols to address these issues. We used a uniform interview topic guide in both countries to ensure consistency, and data analysis was conducted independently by pairs of researchers in the local languages. Collective discussions facilitated the development of themes and subthemes in a credible manner.

5. Conclusion

Study findings highlight barriers and facilitators relevant to the health education for individuals with chronic wounds, providing insights into personal and contextual factors that influence education delivery. Structured planning with clearly defined objectives is emphasized, with education tailored to individual needs to improve patient compliance and adherence to treatment regimens. Additionally, health education should be adaptable to accommodate patients' limitations while promoting self-management. These findings underscore the importance of allocating appropriate staff and resources, including dedicated time for health education initiatives, to enhance nursing practice. Furthermore, there is a need for further training among nurses in health education methodologies and the development of accessible educational materials for individuals with wounds and their caregivers. Future research may focus on identifying specific educational requirements for individuals with wounds and evaluating the impact of educational interventions.

Authors' declaration

All authors have made substantial contributions to the conception and design of the study, acquisition of data, analysis and interpretation of data, drafting the article and revising it critically for important intellectual content. All authors have approved the final version to be submitted.

Declaration of interest

The authors have no competing interests.

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