

STUDY PHILOSOPHY OF WOUND CARE ON DFU IN AN EFFORT OF WOUND HEALING AND PREVENT INFECTION BASED ON SELF-CARE

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Abstract

Actualization of the self-care concept that affects DFU client wound healing in terms of the need for independent wound care that is able to facilitate the success of achieving client goals and preventing infections that can progress to gangrene. This literature aims to find out the study of the philosophy of DFU wound care based on independent wound care by clients. This literature study was carried out by searching scientific publications starting in 2018-2022. The databases used are PubMed, Science Direct, and ProQuest. A literature search was carried out according to the topic with four groups of keywords based on Medical Subject Heading (MeSH) and combined with the Boolean operators AND, OR and NOT, the keywords Wound Care AND DFU AND Self-Care AND Wound Healing. Results: Study of wound care for DFU clients based on self-care which is a study of ontology, epistemology, and axiology. Self-care philosophy focuses on self-ability as an active agent through a dynamic process that directs the behavior of DFU clients in caring for their own wounds to achieve wound healing. Wound care interventions are quality, evidence-based tools that support self-care and can be used with or without the direct supervision of a healthcare professional. The motivational approach is carried out to prevent negative impacts and avoid them. A holistic approach to the health and well-being of everyone, taking into account their circumstances, needs and desires throughout life, as well as the environment in which they live will improve the client's coping so that independent wound care by a DFU client will increase the efficiency of wound healing. Conclusion: The concept of wound care for DFU clients based on self-care is beneficial for families, especially for DFU clients themselves because they can be done at any time and have a better understanding and achieve their expected goals.

Keywords: Philosophy; Wound Care; DFU; Self-Care; Wound Healing

How to cite:	Manalu, N. V., Yunitasari, E., & Pandin, M. G. R. (2024). Study Philosophy of Wound Care on DFU in an Effort of Wound Healing and Prevent Infection Based on Self-Care. <i>Syntax Literate</i> (9)1, http://dx.doi.org/10.36418/syntax-literate.v9i1
E-ISSN:	2548-1398
Published by:	Ridwan Institute

Introduction

Wound care of Diabetic Foot Ulcer (DFU) is increasing with the need for a long time and qualified skills. DFU problems range from mild superficial skin damage to damage to the structures of the foot affecting the vascular and soft tissue blood supply and leading to infection, which in turn due to pressure and peripheral neuropathy results in gangrene which carries the risk of amputation.

Expertise in treating wounds is necessary because it helps the DFU healing process by preparing the red wound bed to easily grow new tissue. The nurse as a change agent for this problem is how to prevent DFU from being exacerbated by infection, besides being able to reduce costs, namely by treating wounds independently by patients, where wound nurses will provide training so that patients are able to do it themselves. Involving people with DFU in their own treatment plan is an integral part of disease awareness and prevention of complications.

WHO recommends self-care interventions for every country and economic environment, as an important pathway to achieving universal health coverage, improving health, keeping the world safe and serving the vulnerable. Self-care recognizes individuals as active agents in managing their own health care, in areas including health promotion; disease prevention and control; self-medication; provide care to dependent people, and rehabilitation, including wound care. (Martin & Orem, 2005)

Wound care interventions are quality, evidence-based tools that support the wound healing process. This includes medicines, counselling, diagnostics and/or digital technologies that can be accessed wholly or partially outside of formal health services. Depending on the intervention, they can be used with or without the direct supervision of a health worker (Diabetes Indonesia., 2022).

Self-care interventions can empower individuals and communities to manage their health and well-being, strengthen national institutions with the efficient use of domestic resources for health, and improve primary health care (PHC) and contribute to achieving universal health care (UHC) (Abraham & Denford , 2017).

Methods

This literature study was carried out by searching scientific publications starting in 2018-2022. The databases used are PubMed, Science Direct, and ProQuest. A literature search was carried out according to the topic with four groups of keywords based on Medical Subject Heading (MeSH) and combined with the Boolean operators AND, OR and NOT, the keywords Wound Care AND DFU AND Self-Care AND Wound Healing.

Results and Discussion

The development of nursing theory that started with Florence Nightingale which focused on patient personal hygiene and Orem (Peptirin, 2020) which directed the patient's ability to meet his needs aimed at independence in the healing stage. One way to promote wound self-care is to highlight caring from Orem's perspective.

Self Care based on the Wound Care ontology study of DFU clients

Wound care is an important procedure that needs to be done when you have a wound or injury to the skin. The skin regulates body temperature, senses, and produces vitamins. Because it is the outermost organ, the skin is prone to injury. Therefore, wounds on the skin, especially open wounds, need to get intensive care. This is because open wounds can easily become infected by viruses and bacteria that cause disease (Al-Bakri et al., 2021).

Wound care aims to clean the wound from pus and dead skin cells, prevent the wound from becoming infected, change bandages or dressings, speed up healing, and minimize scars or keloid formation (Djavid et al., 2020).

When treating a wound, there are many factors to consider. These elements include proper care for wound management, and once the wound is properly diagnosed and all elements have been considered, the best treatment option can be determined. The stages of wound care that are trained by wound nurses to patients (Edmonds et al., 2004), namely:

- 1) Assess the wound (depth, extent, outline, color, pus, smell) (Sheahan et al., 2017)
- 2) Prepare tools such as washing fluid, gauze, and bandages
- 3) Washing the wound with low pH soap (you can use baby soap)
- 4) Prepare the base of the red wound (wound bed preparation) by removing dead skin cells/debridement and cleaning (Zubair et al., n.d.).
- 5) Stop the bleeding if it continues. By pressing the wound gently using a sterile or clean cloth. Position the wound facing up (Zhong et al., 2017).
- 6) Apply dressings, keep moisture/moist and close the wound (MacDonald et al., 2019)
- 7) Record the assessment before and after wound care

Each stage has its own rationale for preventing infection and further severity. The concept of moist wound care must be understood to promote wound healing. The success that the patient achieves (Ryan & Deci, 2017) will foster self-confidence and be able to do well, because naturally what is felt is a change that brings healing (Hüsers et al., 2022).

Epistemology of the Wound Healing study of DFU clients

The wound healing process (Wound Healing) is a natural reaction when tissue injury occurs. But this process is quite complex because it involves the interaction of cells and blood vessels. First there is an injury, platelets work to stop bleeding. This is followed by an influx of inflammatory cells (such as neutrophils). These cells release cytokines and other constituents for angiogenesis, thrombosis, and re-epithelialization. The four phases of Wound Healing (Lin et al., 2020) are:

- 1) The fibroblast phase lays out extracellular components that function as platforms.
- 2) The inflammatory phase exhibits hemostasis, chemotaxis, and increased vascular permeability, eventually precluding further damage and wound closure. The duration of this phase lasts several days
- 3) The proliferative phase occurs with the formation of granulation tissue, re-epithelialization, and neurovascularization. The duration can be up to several weeks

4) The maturation and remodeling phase is the final stage of wound closure.

In wounds that fail to heal there is often a complex mix of local and host factors that need to be assessed and treated. A complete and detailed patient assessment will highlight the underlying etiology of the wound and other factors that can hinder healing such as poor nutrition and pain (Johani et al., 2017). The underlying cause needs to be addressed if wound bed preparation is to be successful. Wound bed preparation is a way of systematically focusing on all the important components of a non-healing wound to identify possible causes of the problem (Callender et al., 2021). It is a concept that links treatment to the cause of the wound by focusing on the local components of wound care (Sheahan et al., 2017): debridement; bacterial balance; and moisture balance.

In the process of wound healing, it is necessary to treat wounds with procedures that can be carried out by trained people using the selected dressings. Basically, everyone has the ability to meet self-care needs since being independent, but when someone gets DFU, they need a way to be able to overcome their problems (Mohammad Zadeh et al., 2019). This is where the nurse functions professionally to provide training so that patients are able to perform wound care independently, so that their own needs are resolved, the wound healing process can occur by means of consistent wound care. This not only brings healing (Cutshall et al., 2007) and prevents infection, but saves costs and time (Osborn, 2006).

Axiology study of Wound Care in efforts to heal wounds and prevent DFU infections based on Self Care

The patient knows the problem of meeting his needs, then determines when nursing is needed. And when they feel unable or have limitations in meeting their own needs, the patient needs a nurse to help how to fulfill them (TK & Chandran, 2017). With all the limitations of the patient, the wound nurse adjusts the patient's ability to involve him in carrying out self-care. In this case the wound nurse trains the patient how to carry out systematic wound care until the patient is successful (Li et al., 2020), and can meet his own needs gradually until he experiences recovery (Zubair et al., n.d.). In this case, the family is involved in collaborating together in procuring equipment, medicine and dressings. The achievement of patient-centered nurse goals requires continuous evaluation until the patient is truly independent. And if necessary, consult wound nurses and doctors (Regulski et al., 2021).

Conclusion

Wound care can have both positive and negative impacts. The positive impact of wound care through motivation will be able to produce positive coping and be able to perform wound care independently which leads to the wound healing process. While the negative impact of wound care, DFU clients are unable to have good coping to build independence in caring for wounds, they can even experience depression and stress because their failures create a need for finances and time for the wound healing process.

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First publication right:

Syntax Literate: Jurnal Ilmiah Indonesia

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