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## **Nursing Care for Type 2 Diabetes Mellitus Patients Using Dorothea Elizabeth Orem's Nursing Theory Model Approach**

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### **Abstract**

Type 2 Diabetes Mellitus requires long-term management and patient involvement in self-care. Dorothea Elizabeth Orem's Self-Care Theory provides a comprehensive approach to facilitate patient independence through identifying self-care needs, self-care agency capabilities, and determining appropriate nursing systems. This study aims to provide a comprehensive overview of Dorothea Elizabeth Orem's conceptual model and theory and analyze the application of Orem's theory in nursing care for patients with type 2 diabetes mellitus through a case study of Mrs. S, a patient with poor blood sugar control, medication non-compliance, dietary ignorance in diabetics, and slow-healing foot wounds. The research method uses a case study approach, through prerequisite assessment, identification of self-care deficits, determination of nursing systems, and preparation of interventions based on SIKI-SLKI standards. The results showed that Mrs. S experienced knowledge deficits, ineffective health management, and risk of infection. The nursing system required includes a supportive-educational system and some compensatory. These interventions provide increased patient understanding, medication adherence, wound care, and general self-care skills. The application of Orem's theory has been shown to provide a systematic framework to increase the independence of patients with Type 2 DM and prevent complications.

Keywords: Orem's theory, self-care deficit, type 2 diabetes mellitus, nursing care, diabetic foot ulcers.

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## Introduction

Nursing developed the self-care deficit theory in nursing, also known as the Orem Nursing Model. Orem's nursing theory emphasizes an individual's ability to perform self-care and how nurses can assist individuals experiencing self-care deficits. (Muhlisin & Irdawati 2010)

Orem had a distinguished career in nursing, earning several honorary doctorates. From 1958 to 1959, Dorothea Elizabeth Orem also served as a health education and welfare consultant, actively contributing to the advancement of vocational nursing practice. This led Orem to ask, "Under what conditions and when does a person need nursing services?" Orem later discovered the idea that a nurse is a "Self." This idea developed into her nursing concept of "self-care." In 1959, Orem's concept was first published. In 1965, Orem collaborated with several American universities to form the Nursing Model Committee.

The development of the nursing concept "Self-Care" in 1971 and the publication of the book "Nursing; Concepts of Practice". Orem developed the theory of self-care deficit into 3 interrelated theories, namely: 1). Self-Care 2). Self-Care Deficit 3). Nursing system. The three theories are connected by six main concepts, namely; Self-Care, Self-Care Agency, Self-Care Therapy Needs, Self-Care Deficit, Nursing Agency, and nursing system, as well as one supporting concept, namely basic conditioning factors.

The development of Orem's theory is also explained comprehensively in various

nursing literature which emphasizes that this theory has 3 main components, namely: Self Care, Self Care Deficit and Nursing system which are interconnected in the nursing process (Gaper et. al., 2024).

Therefore, Dorothea Orem's Salvage Deficit Theory of Care is highly relevant for patients with type 2 diabetes mellitus (DM) because this disease requires active patient involvement in long-term management, including diet management, medication adherence, blood sugar monitoring, and foot care. Based on the case study analysis, there are several key reasons that indicate that the application of Orem's theory is very appropriate for Mrs. S's case.

This paper aims to explain the application of Orem's theory in nursing care for patients with Type 2 Diabetes Mellitus through a case study, as well as to identify the strengths and weaknesses of this theory in clinical practice.

## Research methods

This study is a theoretical literature review applied to case analysis of patients with type 2 diabetes mellitus, using an approach based on Dorothea Elizabeth Orem's theory. Then, an analysis of Dorothea Elizabeth Orem's theory was conducted on patients with type 2 diabetes mellitus. The results of interviews, observations, physical examinations, and nursing care were obtained. Primary data were obtained directly from the patients and secondary data were obtained directly from the patients' families, health workers, and other documentation.

## Results and Discussion

This case study applies Orem's theory to the nursing care of a patient with type 2 diabetes mellitus. This theory emphasizes the nursing abilities of individuals experiencing self-care deficits. The analysis steps include:

### 1. Orem Salve Treatment Assessment Basic Conditioning Factors

- (1) Age: Mrs. S is 50 years old
- (2) Female gender
- (3) Developmental status: Middle age, requires support to maintain health and prevent complications of type 2 Diabetes Mellitus.
- (4) Sociocultural orientation: Islam, geography of Jambi (Indonesia)
- (5) Health status: Uncontrolled type 2 diabetes, high GDP, GD2PP, HbA1c results, there is a wound on the left foot that is difficult to heal.
- (6) family system: Mrs. S is a widow who has 2 sons who live with her.
- (7) Lifestyle: Nutrition: Eating 3-4 times a day, unable to control eating, not knowing the diet for people with diabetes mellitus. Activity: Easily tired during activities. Rest and sleep: Difficulty sleeping at night.
- (8) Environment: Mrs. S lives with her 2 sons who work as traders at the market.
- (9) Resources: Daily needs are met by Mrs. S's child who works at the market.

### Self-Care Requirements

- a) **Universal:** 1). Air: good breathing, 2). Water: Mother often feels thirsty, 3). Diet: Mother eats 3-4 times a day, 4) Elimination: Mother urinates 6-7 times a day, which indicates problems with fluid and blood sugar regulation, 5). Activity and Rest: Mother tires easily during activities, which can affect the ability to care

for herself and daily activities, 6). Social Interaction: Mother is a widow who lives with her son who is busy working, which can affect the social support available to her, 7). Hazard Prevention: There is a small wound on Mother's foot that is slow to heal, indicating a risk of infection and further complications, 8). Well-being: Needs further assessment, for Mother's psychological and emotional well-being.

- b) **Development:** Mrs. S's condition as a 50-year-old woman with type 2 diabetes requires special attention to the changes that occur with age and her chronic illness.
- c) **Health Deviations:** 1). Treatment: Mrs. S often forgets to take her metformin medication, which affects her blood sugar control. 2). Diet: Mrs. S does not know the proper diet for people with diabetes mellitus and cannot control her diet. 3). Wound Care: The wound on her left leg requires proper care to prevent infection and speed up healing.

### Self Care Agency

Mrs. S is able to carry out daily activities, but tires easily, has limited knowledge about DM diet and disease management, often forgets to take medication, and has limited motivation.

2. **Self-Care Deficit:** Self-care deficit: 1). Medication management 2). Diet management 3). Wound care

3. **Nursing System:** Based on the identified self-care deficits, the appropriate nursing system for Mrs. S is: 1). Partial Compensatory Nursing System: Assistance in medication management, diet, and foot care. 2). Supportive-Educative System: Provide education about DM diet, wound care, and the importance of taking medication regularly.

**4. Nursing Diagnosis: Based on SDKI:** 1) Knowledge deficit. 2) Ineffective health management. 3) Risk of infection.

**5. Nursing Interventions:** After conducting an assessment and making a diagnosis, the researcher then carries out interventions: Including: 1). Health education 2). Family support 3). Care management 4). Wound care 5). Monitoring for signs of infection.

## Discussion

Based on the results of the case study, it shows that Orem's theory can be applied effectively to patients with type 2 diabetes mellitus.

Identifying a patient's self-care deficit needs helps nurses provide appropriate care.

Dorothea Elizabeth Orem's theory is highly relevant because type 2 diabetes mellitus (DM) is a long-term condition that requires ongoing self-care. Patients also need to manage their diet, medication, physical activity, blood sugar monitoring, and wound care. Self-care has also been shown to be consistent with DM in general.

Limitations in the application of Orem's theory are evident in the social and economic aspects of patients, which affect their ability to perform self-care. Cultural factors, family busyness, and lack of resources can hinder the effectiveness of interventions.

discussion explains how Dorothea Elizabeth Orem's self-care deficit theory is applied to the case of Mrs. S, a Type 2 Diabetes Mellitus patient who experiences several self-care deficits. The implementation of nursing care is structured based on Orem's 3 theoretical structures: Self-Care, Self-Care Deficit, and Nursing System, which are then

integrated into the nursing process from assessment, planning, implementation, to evaluation.

This discussion describes the results of nursing care for Mrs. S based on the perspective of Dorothea Orem's self-care theory. Orem's theory emphasizes that nursing care is given when the patient experiences a deficit in self-care abilities. In Mrs. S's case, it shows a real illustration of the application of three components of Orem's theory: *self-care, self-care deficit, and nursing system*.

### 1. Self Care and Self Care Agency in the Case of Mrs. S

According to Orem, Self Care agency is an individual's ability to actively carry out self-care (Allgood, 2015). In Mrs. S, it is seen that: There is an ability to recover, by coming for regular check-ups, but lack of knowledge and bad habits such as often forgetting to take medication and uncontrolled eating patterns, physical conditions that are easily tired, and there is a wound on the left foot. Thus, Mrs. S's self-care agency is at a medium-low level, so she is unable to meet the therapeutic self-care demand related to DM.

### 2. Self-care deficit in diabetes mellitus patients

Self-care deficits are evident in several areas: Knowledge deficits prevent patients from managing their diets properly, non-compliance with medication leads to uncontrolled blood sugar, and inadequate wound care increases the risk of infection. Orem explains that chronic illnesses increase self-care needs, while individual abilities can decline. Mrs. S's condition aligns with Orem's Health Deviation Self-Care Requisites, where patients require assistance

in undergoing therapy, understanding their condition, and preventing complications.

### **3. Nursing System Provided**

#### **a. Supportive Educational System**

This type of nursing system was dominant in NY. S's case because the patient was still able to perform most activities but needed education and support. Educational interventions regarding diet, medication, and wound care align well with the concept of a supportive educational system.

#### **b. Partly Compensatory System**

Used for aspects that patients are not yet able to perform independently, such as initial wound care, medication administration, and compliance monitoring. The application of these two systems is consistent with the theory that nurses must assess the patient's needs and abilities and then determine the appropriate level of assistance.

### **4. The Relationship between Parenting Outcomes and Orem's Theory**

- (1) Increased knowledge; After education, patients were able to understand the diabetes diet, the importance of medication adherence, and wound care. This indicates increased self-care agency, in line with the theory that knowledge is a key component of self-care.
- (2) Health Behavior Change: With support and reminders, patients are more compliant with medication and eating habits. This represents a concrete implementation of the Orem method for improving self-care behaviors through teaching, guidance, and support.
- (3) Infection Risk Prevention; Wound care and education reduce the risk of complications. This reinforces Orem's concept that nurses help meet health deviation requirements.

### **5. Why Is Orem's Theory Appropriate for Type 2 DM Cases?**

Orem's theory is very suitable for patients with chronic diseases, including type 2 DM, because: DM requires long-term self-care to manage diet, activity, medication, and blood sugar monitoring., DM patients often have knowledge deficits and difficulty changing lifestyles., Orem emphasizes independence, which is the main goal of DM education., DM complications (foot wounds, neuropathy, etc.) require nurse support in the form of supportive educative and partly compensatory systems. Mrs. S's case shows that after Orem-based interventions, the level of independence increased and the risk of complications decreased.

### **6. Evaluation of the Success of Nursing Care Based on Orem's Theory**

Care is considered successful when there is an increase in the patient's self-care agency. In Mrs. S, this has occurred;

- (1) Increased knowledge; Increased ability to make self-care decisions.
- (2) Increased Medication Compliance; Self-care Agency increased.
- (3) More Independent Wound Care; Reduced Self-Care Deficit.

This shows the success of applying Orem's theory in increasing patient independence.

### **Conclusion**

The application of Dorothea Elizabeth Orem's Self-Care Theory to patients with type 2 diabetes mellitus provides a clear framework for identifying self-care needs, deficits, and appropriate interventions. In Mrs. S's case, knowledge deficits, ineffective health management, and infection risk were the primary focus of intervention.

Through a supportive-educational and partially compensatory nursing system approach, patients' abilities are significantly improved. Orem's theory has been shown to

be effective in increasing patient independence, preventing complications, and supporting holistic nursing practice.

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