

APPLICATION OF DOROTHEA OREM'S SELF-CARE DEFICIT NURSING THEORY IN PRACTICE: A CASE STUDY

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DOI: <https://doi.org/10.5281/zenodo.23054853>

Keywords

Dorothea Orem; self-care deficit; nursing theory; intensive care unit; critical illness; case study

Article History

Received: 01 June 2026

Accepted: 23 August 2026

Published: 08 September 2026

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Abstract

Background: Nursing theories can provide a systematic framework for identifying patients' self-care needs and guiding individualized nursing care. **Case Presentation:** A 28-year-old male was admitted to the intensive care unit after a severe road traffic accident and developed acute respiratory failure with multiple traumatic injuries. He required mechanical ventilation for 20 days and, following extubation, remained dependent on nursing staff because of respiratory compromise, generalized weakness, impaired airway clearance, reduced mobility, and dependence in activities of daily living. **Application of Theory:** Dorothea Orem's Self-Care Deficit Nursing Theory was applied to identify the patient's self-care deficits, self-care requisites, and appropriate nursing system. Nursing interventions included airway-clearance measures, oxygen monitoring and therapy, enteral feeding support, repositioning, skin assessment, oral care, breathing exercises, and gradual participation in self-care activities. **Conclusion:** Orem's framework provided a structured approach for identifying the gap between the patient's self-care agency and therapeutic self-care demand and for planning compensatory and participatory nursing interventions during recovery.

INTRODUCTION

Nursing theories provide conceptual frameworks that can guide assessment, clinical decision-making, and individualized nursing interventions. Dorothea Orem's Self-Care Deficit Nursing Theory focuses on the relationship between a person's ability to perform self-care and the self-care activities required to maintain health and well-being. When an individual's self-care agency is insufficient to meet therapeutic self-care demands, nursing assistance becomes necessary (McEwen & Wills, 2023).

This case study describes the clinical application of Orem's theory to a critically ill patient

recovering after prolonged mechanical ventilation. The purpose was to identify the patient's self-care deficits and demonstrate how the theory could guide nursing care aimed at maintaining essential needs while progressively supporting participation and independence.

Case Presentation

A 28-year-old male patient was admitted to the Intensive Care Unit (ICU) after a severe road traffic accident. He developed acute respiratory failure due to multiple traumatic injuries and remained on mechanical ventilation for 20 days. He was successfully extubated one day before the

nursing assessment. Following extubation, his oxygen saturation decreased to 80%; therefore, high-flow nasal oxygen therapy was initiated.

The patient was receiving enteral nutrition through a nasogastric tube, and a Foley catheter remained in place for accurate monitoring of urine output. His vital signs were blood pressure 100/60 mmHg, pulse 82 beats/min, respiratory rate 26 breaths/min, and temperature 98°F. He remained extremely weak, lethargic, anxious, and irritable following prolonged critical illness.

During nursing assessment, the patient had an ineffective cough and was unable to clear airway secretions independently, requiring frequent suctioning to maintain airway patency. He was unable to move independently because of generalized muscle weakness and was at increased risk of pressure injury because of prolonged immobility. He was dependent on nursing staff for personal hygiene, oral care, repositioning, feeding, and other activities of daily living. His oral hygiene was poor after prolonged intubation, increasing the risk of oral complications.

Overall, the patient demonstrated substantial self-care deficits associated with prolonged mechanical ventilation, generalized muscle weakness, impaired airway clearance, and reduced functional mobility. Comprehensive nursing support was required to meet his basic self-care needs and support recovery.

Application of Orem's Self-Care Deficit Nursing Theory

Assumptions and Major Concepts

Orem's theory assumes that individuals can learn and perform self-care when they have adequate knowledge, motivation, and physical ability. Self-care is learned behavior that contributes to health and well-being. When illness, injury, or disability limits self-care ability, nursing assistance is required. Nursing may support, educate, or compensate for patients until their ability to perform self-care improves (McEwen & Wills, 2023).

Self-care refers to activities performed by individuals to maintain life, health, and well-being. Self-care agency is the individual's ability,

knowledge, motivation, and skills to perform self-care. Therapeutic self-care demand represents the total self-care actions required to meet health-related needs. A self-care deficit occurs when self-care agency is insufficient to meet therapeutic self-care demand. Nursing agency refers to the knowledge and skills nurses use to assess deficits and provide appropriate nursing care.

Self-Care Requisites

The patient's universal self-care requisites included adequate oxygenation, nutrition, elimination, activity and rest, and prevention of hazards such as pressure injuries and infection. Developmental self-care needs were related to adaptation during recovery from a major traumatic event and critical illness. Health-deviation self-care requisites included airway management, oxygen therapy, enteral feeding, respiratory exercises, mobility support, and adherence to the prescribed treatment plan.

Nursing System and Clinical Interventions

The patient's self-care agency was markedly reduced by generalized weakness, respiratory compromise, prolonged immobilization, and dependence for activities of daily living. His therapeutic self-care demand remained high. This mismatch represented a clear self-care deficit and indicated the need for nursing assistance.

Airway clearance was a major focus of nursing care. Deep-breathing exercises, coughing techniques, incentive spirometry, and chest physiotherapy were encouraged. Suctioning was performed when required, and oxygen saturation was monitored regularly. The patient was repositioned every two hours to support ventilation, reduce pressure over bony areas, and prevent pressure injuries.

Regular skin assessment was performed, including assessment of areas around the intravenous cannula, oxygen tubing, nasogastric tube, and Foley catheter. Personal hygiene and oral care were provided. Nutritional support was maintained through enteral feeding. As the patient's strength improved, nurses encouraged participation in breathing exercises, assisted

repositioning, gradual mobilization, and other self-care activities.

The partly compensatory nursing system was applied because the patient was conscious and able to communicate but remained too weak to perform most activities independently. Nurses provided the care he could not perform while encouraging participation in activities that he could safely undertake. This approach was intended to support progressive improvement in self-care agency.

Discussion

This case illustrates the practical application of Orem's Self-Care Deficit Nursing Theory to a critically ill patient recovering from prolonged mechanical ventilation after a road traffic accident. The patient's physical limitations reduced his self-care agency, while his therapeutic self-care demand remained high because of his respiratory, nutritional, mobility, hygiene, skin-integrity, and elimination needs.

The theory helped organize the assessment around the patient's self-care requisites and the degree of nursing assistance required. Universal and health-deviation requisites were particularly relevant during the post-extubation period. Nursing interventions were directed not only toward meeting immediate physiological needs but also toward encouraging safe participation in self-care as the patient's condition improved.

The partly compensatory nursing system was appropriate for the described clinical condition because the patient could communicate and participate but could not independently complete most activities of daily living. The approach therefore combined direct nursing assistance with encouragement of patient participation. This reflects the central principle of Orem's theory that nursing support should correspond to the patient's self-care limitations and change as self-care capacity changes (Alligood, 2023; McEwen & Wills, 2023).

Clinical Implications

Regular assessment of self-care capacity can help nurses adjust the level of assistance according to

the patient's changing condition. Airway-clearance support, oral hygiene, nutritional management, skin care, safe mobilization, and respiratory rehabilitation should be incorporated into an individualized care plan. Emotional support and multidisciplinary collaboration may also support continuity of care and progression toward greater independence.

Conclusion

This case demonstrates how Dorothea Orem's Self-Care Deficit Nursing Theory can provide a structured framework for identifying and addressing multiple self-care deficits in a patient recovering from prolonged mechanical ventilation. The theory guided assessment of self-care needs and supported individualized nursing interventions. The partly compensatory nursing system was applicable because the patient was conscious but physically weak and dependent on assistance for most daily activities. As self-care capacity improved, nursing care could progressively emphasize patient participation and independence.

Ethics Statement

Not applicable. The case describes the application of Orem's Self-Care Deficit Nursing Theory during routine nursing care, without an experimental intervention or research procedure.

Funding

The authors received no external funding.

Conflict of Interest

The authors declare no conflict of interest.

Author Contributions

Rizwana Ibrahim: Conceptualization, Methodology, Clinical case analysis, Application of Orem's Self-Care Deficit Nursing Theory, Writing - Original Draft, Writing - Review & Editing.

Rizwana Amin: Investigation, Clinical case analysis, Literature review, Writing - Review & Editing.

Hira Shakoor: Investigation, Clinical case analysis, Literature review, Data Curation, Writing – Review & Editing.

Tahira Batool: Investigation, Clinical case analysis, Literature review, Writing – Review & Editing.

Anna Rana: Supervision, Methodology, Clinical case analysis, Writing – Review & Editing, Final approval of the manuscript.

All authors: contributed to the development of the manuscript, critically reviewed and approved

the final version, and agreed to be accountable for the work.

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