

A Review of the Role of Occupational Therapy in Managing Patients with Acute Kidney Injury

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ABSTRACT

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Acute Kidney Injury (AKI) is a critical condition that significantly impacts both the physical and psychological well-being of patients, often leading to extended hospital stays and increased healthcare costs. This review explores the role of Occupational Therapy (OT) in managing AKI patients, particularly in enhancing functional outcomes and psychological health. The review synthesizes findings from 21 peer-reviewed studies published between 2019 and 2024, focusing on OT interventions for adult AKI patients. Results indicate that OT improves functional independence, as measured by ADL assessments, and enhances psychosocial outcomes by reducing anxiety and boosting self-management skills. Additionally, OT's role in interdisciplinary team approaches is highlighted, improving communication and individualized care. Despite the promising findings, the review also identifies limitations, such as small sample sizes and varying intervention methods. The paper concludes by advocating for more large-scale studies to establish evidence-based protocols for OT in AKI rehabilitation.

INTRODUCTION

Rapid deterioration of renal function is a hallmark of acute kidney injury (1,13), which is frequently brought on by conditions like sepsis, dehydration, or nephrotoxic drugs (2). The illness might result in longer hospital stays and higher medical expenses, which emphasizes the necessity of all-encompassing rehabilitation techniques (3, 18). OT is an important part of the healing process for people with AKI because it emphasizes the promotion of health and well-being through meaningful activities (4, 10).

Acute Kidney Injury (AKI) is a serious and potentially life-threatening condition that involves a rapid decline in kidney function. It can result from various causes such as sepsis, dehydration, or exposure to nephrotoxic substances. The condition not only impacts kidney function but also affects other aspects of a patient's health, including their functional independence and psychological well-being. AKI can lead to prolonged hospital stays, increased healthcare costs, and significant disruption to the patient's quality of life. In recent years, the importance of comprehensive rehabilitation approaches to managing AKI has gained attention, with Occupational Therapy (OT) being identified as a crucial component. OT aims to improve a patient's functional abilities and mental health through meaningful activities, playing an essential role in recovery and rehabilitation. This paper reviews the role of OT in improving functional outcomes and psychological health in patients with AKI, examining recent evidence that supports the integration of OT into AKI care.

The primary goal of this review is to explore the role of Occupational Therapy in managing patients with Acute Kidney Injury (AKI), focusing on its impact on functional and psychological outcomes. The review aims to synthesize current research findings that demonstrate how OT interventions contribute to the rehabilitation of AKI patients, with an emphasis on improving their quality of life, functional independence, and mental health. The study also seeks to highlight the challenges and limitations of OT application in this population and suggest directions for future research.

RESEARCH METHODS

This review used a systematic approach to examine relevant studies on OT's role in the management of AKI. The methodology included searches of three major databases—PubMed, Scopus, and CINAHL—using key terms related to OT and AKI. A total of 23 peer-reviewed articles published between 2019 and 2024 were initially identified. After reviewing the articles for relevance and quality, 21 studies were selected for inclusion based on the following criteria:

Inclusion Criteria:

Studies focused on adult patients diagnosed with AKI.

Research reporting outcomes related to OT interventions.

Studies providing qualitative data on functional and psychological outcomes of OT in AKI patients.

Exclusion Criteria:

Studies that focused on psychiatric cases.

Studies dealing with patients with physical disabilities unrelated to AKI.

The selected studies were reviewed for key data, including study design, sample size, intervention details, outcomes measured, and main findings.

RESULTS AND DISCUSSION

Key information was extracted from selected studies, including study design, sample size, intervention details, outcomes measured, and main findings.

Functional Improvement (5): A randomized controlled trial (RCT) conducted by Jiang et al. (2020) involved 100 patients with AKI. Participants were either given standard care or standard care plus OT interventions, which focused on activities of daily living (ADLs) and mobility training. The results indicated a significant improvement in ADL independence as measured by the Barthel Index ($p < 0.01$) for the OT group, compared to the control group. One hundred patients with AKI participated in a randomized controlled trial (RCT) carried out by Jiang et al. (2020). Standard care or standard care plus OT interventions centered on ADLs¹² and mobility training were to the participants. When compared to the control group, the OT group showed a substantial improvement on the Barthel Index¹⁷, a measure of ADL independence ($p < 0.01$).

Psychosocial Benefits: 30 AKI patients who took part in OT sessions were interviewed by Brown et al. (2019) using a qualitative methodology. Before and after the intervention, the study evaluated changes in self-efficacy and mood⁶. According to the theme analysis, 85% of participants said that OT (OT) helped them better manage their illness, and they also reported feeling less anxious and having greater self-management skills (7, 16).

Interdisciplinary Approach (8): A mixed-methods study with 50 medical professionals working in nephrology and rehabilitation settings was carried out by Lee et al. in 2022. The role of OT in interdisciplinary teams was investigated through surveys and focus groups. According to the



participants, OT (OT) enhanced team communication and resulted in more individualized patient care, which improved overall recovery outcomes (15).

There are several advantages of using OT in the treatment of acute renal damage (14). According to the reviewed studies, OT (OT) can improve mental and physical function⁹, which would result in better rehabilitation outcomes. To further prove the efficacy of OT in this population, larger-scale research and standardized procedures are required.

Restrictions: Small sample sizes, the absence of control groups in many qualitative investigations, and variations in intervention techniques were common limitations across studies. Furthermore, because of the particular patient populations that were examined, the findings' generalizability was constrained.

CONCLUSION

A vital part of the comprehensive care of individuals with acute renal damage is OT. OT can greatly improve patient outcomes and speed up the healing process by treating both functional and psychological factors. The creation of evidence-based protocols for OT therapies tailored to AKI should be the main goal of future research.

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