



PSYCHOSOMATIC CHANGES AMONG DIALYSIS PATIENTS: A RANDOMISED CONTROLLED STUDY ON PSYCHOLOGICAL AND SOMATIC INTERVENTIONS

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ABSTRACT

This randomised controlled study evaluates the effectiveness of a psychosomatic intervention programme on psychological and somatic symptoms in dialysis patients. A total of 60 patients were randomised into experimental (n=30) and control (n=30) groups. The intervention included cognitive-behavioural therapy (CBT), relaxation techniques, and psychoeducation, administered over 12 weeks. Outcomes were measured using Psychosomatic Assessment Scale for depression, anxiety, fatigue, and sleep disturbances. The experimental group showed significant improvements in psychological and somatic symptoms compared to the control group. This study highlights the importance of integrated psychosomatic interventions in dialysis care.

Keywords: Dialysis, psychosomatic changes, randomised controlled study, psychological interventions, somatic symptoms.

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INTRODUCTION

Background: Dialysis patients often experience psychosomatic changes, including depression, anxiety, and somatic symptoms like fatigue and sleep disturbances. These challenges can significantly impact treatment adherence and quality of life.

Rationale: Despite the known burden of psychosomatic symptoms, structured psychosomatic interventions are rarely implemented in dialysis care.

OBJECTIVES OF THE STUDY

- **Primary Objective:** To evaluate the impact of a psychosomatic intervention programme on psychological and somatic symptoms.
- **Secondary Objective:** To compare outcomes between experimental and control groups.

RESEARCH METHODOLOGY

Study Design: A randomised controlled trial was conducted over 12 weeks.

Participants: —

Inclusion Criteria:

- Adult dialysis patients (age ≥ 18 years) diagnosed with chronic renal failure.
- Patients who have been on dialysis for at least three months.
- Patients able to provide informed consent.

Exclusion Criteria:

- Patients with cognitive impairments or severe psychiatric conditions.
- Patients unable to participate in the therapeutic interventions.

Randomisation: Participants were randomly assigned to the experimental (n=30) or control (n=30) group using a computer-generated random sequence.

Intervention: —

Experimental Group:

1. *Cognitive-Behavioural Therapy (CBT):* Weekly sessions addressing negative thought patterns.
2. *Relaxation Techniques:* Guided progressive muscle relaxation and mindfulness exercises.
3. *Psychoeducation:* Education on managing stress and understanding psychosomatic symptoms.

Control Group:

Received standard care (routine dialysis and medical consultations) without additional interventions.

Data Collection and Analysis:

- Pre- and post-intervention data were collected for both groups.
- Statistical analysis was performed using paired and independent t-tests to compare outcomes.

In this study, data collection involved gathering information from participants both before and after the intervention. Pre-intervention data were collected at the beginning of the study to establish baseline measurements for psychological well-being and somatic symptoms. This allowed researchers to understand the initial state of the participants in both the intervention and control groups.

Post-intervention data were collected at the end of the 12-week period. This data was essential for assessing the effects of the psychological and somatic interventions on the participants. The same validated questionnaires used for pre-intervention assessment were employed to ensure consistency in the measurements.

For the analysis, statistical methods were used to evaluate the data collected. Paired t-tests were applied to compare pre- and post-intervention scores within each group. This analysis helped determine whether there were significant changes in outcomes for the intervention group before and after the treatment.

RESULTS

Descriptive Statistics:

- Mean Baseline Score (Experimental Group): 70.070
- Mean Baseline Score (Control Group): 68.468

Within-Group Change (Experimental):

Baseline to post Intervention:

Mean Change = -25.2, $p < 0.001$

Mean Change = -25.2, $p < 0.001$



Between-Group Comparison:

Post-Intervention Score:

- Experimental Group: Mean = 45.0, SD = 4.2, Mean = 45.0, SD = 4.2
- Control Group: Mean = 66.4, SD = 2.5, Mean = 66.4, SD = 2.5

$t(58) = 12.3, p < 0.001$; $t(58) = 12.3, p < 0.001$

DISCUSSION

The psychosomatic intervention significantly improved both psychological and somatic symptoms in the experimental group, while the control group showed minimal or no changes. These results highlight the potential of integrating mental health interventions in routine dialysis care.

CLINICAL IMPLICATIONS

- **For Healthcare Providers:** Incorporate psychosomatic care in dialysis management.
- **For Patients:** Emphasise the role of mental health in managing chronic illnesses.

CONCLUSION

The findings from this study indicate that psychosomatic interventions have a notable impact on reducing both psychological and somatic symptoms among dialysis patients. The significant improvements observed in the intervention group highlight the importance of addressing not only the physical aspects of dialysis treatment but also the psychological well-being of patients.

Incorporating psychosomatic programs into routine care for dialysis patients could lead to enhanced quality of life and better treatment outcomes. By focusing on holistic care that includes psychological support and somatic therapies, healthcare providers can help patients manage the emotional and physical challenges associated with chronic kidney disease and dialysis. Furthermore, this approach may lead to increased patient satisfaction, adherence to treatment protocols, and potentially even reduced healthcare costs due to fewer complications and hospitalizations. Overall, integrating psychosomatic interventions into standard care practices represents a promising strategy for improving the overall health and well-being of dialysis patients.

REFERENCES

1. Cukor D, et al. Psychological Aspects of ESRD. *Seminars in Dialysis*, 2020.
2. Weisbord SD, et al. Prevalence and Severity of Symptoms in Dialysis Patients. *Journal of the American Society of Nephrology*, 2021.
3. Finkelstein FO, et al. Mental Health in Chronic Kidney Disease. *Advances in Chronic Kidney Disease*, 2019.
4. Beck, A. T., & Alford, B. A. (2009). *Depression: Causes and treatment* (2nd ed.). University of Pennsylvania Press.
5. Cohen, S. D., Cukor, D., & Kimmel, P. L. (2016). Anxiety in chronic kidney disease: A neglected comorbidity. *Seminars in Dialysis*, 29(5), 409–410. <https://doi.org/10.1111/sdi.12500>
6. Feroze, U., Noori, N., Kovesdy, C. P., Molnar, M. Z., Martin, D. J., & Kalantar-Zadeh, K. (2011). Quality-of-life and mortality in hemodialysis patients: Roles of race and nutritional status. *Clinical Journal of the American Society of Nephrology*, 6(5), 1100–1111. <https://doi.org/10.2215/CJN.09231010>
7. Finkelstein, F. O., Watnick, S., Finkelstein, S. H., & Wuerth, D. (2020). The treatment of depression in patients maintained on dialysis. *Journal of Psychosomatic Research*, 130, 109914. <https://doi.org/10.1016/j.jpsychores.2020.109914>
8. Kimmel, P. L., & Peterson, R. A. (2021). Psychosocial factors in patients with chronic kidney disease: An update. *Advances in Chronic Kidney Disease*, 28(5), 374–380. <https://doi.org/10.1053/j.ackd.2021.03.003>
9. Palmer, S., Vecchio, M., Craig, J. C., Tonelli, M., Johnson, D. W., Nicolucci, A., & Strippoli, G. F. M. (2013). Prevalence of depression in chronic kidney disease: Systematic review and meta-analysis of observational studies. *Kidney International*, 84(1), 179–191. <https://doi.org/10.1038/ki.2013.77>
10. Patel, S. S., Peterson, R. A., & Kimmel, P. L. (2005). The impact of social support on end-stage renal disease. *Seminars in Dialysis*, 18(2), 98–102. <https://doi.org/10.1111/j.1525-139X.2005.18208.x>
11. Weinman, J., Petrie, K. J., Moss-Morris, R., & Horne, R. (1996). The illness perception questionnaire: A new method for assessing the cognitive representation of illness. *Psychology & Health*, 11(3), 431–445. <https://doi.org/10.1080/08870449608400270>.