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Psychological Support and Its Relationship to Psychosocial Adjustment Among Patients with End-Stage Renal Disease Undergoing Hemodialysis

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ABSTRACT

This study investigates the relationship between psychological support and psychosocial adjustment among patients diagnosed with end-stage chronic renal failure (chronic kidney disease [CKD]) undergoing maintenance hemodialysis—a life-threatening condition imposing severe somatic, psychological, and lifestyle limitations. Employing a descriptive–correlational methodology, this investigation assesses the associative and predictive dynamics between multidimensional social support (emotional, informational, and material) and patients' mental health and adaptive capacities. Empirical data were collected from a purposive sample of 150 hemodialysis patients using a 28-item Social Support Questionnaire and Zeinab Mahmoud Choukeir's Psychosocial Adjustment Scale. Psychometric properties were validated, demonstrating robust internal consistency via Cronbach's alpha across all primary subscales. Statistical analysis revealed a statistically significant positive correlation between emotional and informational support and psychosocial adjustment ($p < .05$), whereas material (financial) support exhibited no statistically significant correlation ($rs = -.111$, $p > .05$). Furthermore, goodness-of-fit evaluations revealed that 59% of patients experienced moderate support and 39% reported high support. These empirical findings confirm that emotional validation and informational guidance represent vital clinical and relational buffers that alleviate depressive and anxious comorbidities, strengthen adaptive coping mechanisms, and significantly enhance health-related quality of life in nephrology patients.

Keywords: Psychological support, psychosocial adjustment, end-stage renal disease (ESRD), hemodialysis, chronic illness, health psychology.

1. INTRODUCTION

Throughout the human life cycle, individuals encounter numerous traumatic and stressful life circumstances that exert deleterious effects on somatic equilibrium and psychological integrity. Such disruptions reach their apex when manifested as a chronic, debilitating medical illness necessitating permanent therapeutic surveillance, medical dependency, and rigorous functional restrictions, exemplified by chronic renal failure (chronic kidney disease [CKD] Stage 5 / End-Stage Renal Disease [ESRD]). The initial diagnosis and subsequent disease trajectory represent a catastrophic psychological trauma for the individual. Characterized by the progressive, irreversible destruction of renal parenchyma and nephrons, this condition compels patients to undergo lifelong, intermittent hemodialysis sessions to sustain survival. In addition to rigorous somatic therapies, the disease imposes profound dietary, fluid, and occupational constraints, which collectively precipitate severe affective morbidities, including chronic state-trait anxiety, depressive episodes, learned helplessness, and pervasive social isolation.

In confronting these multidimensional adversities, psychological and social support emerges as a primary salutogenic resource and an essential protective pillar enabling patients to endure the biopsychosocial sequelae of chronic illness. Operatively provided through moral encouragement, emotional reassurance, and informational guidance by family members, peer networks, and healthcare personnel, psychological support instills existential reassurance, optimism, and perceived self-efficacy. Far from merely serving as an acute palliative buffer against reactive psychological distress, effective support significantly fortifies psychosocial adjustment—defined as the patient's capacity to reconstitute personal equilibrium, adapt to the alterations imposed by the somatic condition, and maintain meaningful, constructive interactions within their broader socio-ecological environment.

2. PROBLEM STATEMENT AND THEORETICAL FRAMEWORK

A substantial proportion of individuals navigate stressful life transitions and severe chronic disorders that compromise psychological and somatic well-being, serving as primary etiologic triggers for debilitating psychosomatic conditions. Such disorders profoundly restructure individual lifestyles, confronting patients with intractable clinical trajectories that rarely permit complete physiological remission. Under such clinical conditions, medical management shifts from curative intent toward palliative stabilization and chronic symptom regulation (Taylor, 2008). Chronic renal insufficiency represents a preeminent life-threatening pathology globally, inducing profound functional disability and elevated mortality rates. According to the World Health Organization, non-communicable chronic conditions, including advanced renal failure, constitute over 60% of catastrophic health burdens worldwide (WHO, n.d.).

Extensive inquiries within clinical and health psychology demonstrate that social support dimensions significantly elevate subjective well-being, life satisfaction, and psychophysiological resilience against chronic disease stressors (Bergman et al., 2008). As articulated by Bayoumi (1996), social support encompasses all modalities of tangible, emotional, and cognitive assistance provided to patients, elevating morale, alleviating perceived somatic and psychological distress, and reinforcing coping mechanisms. Mental health fundamentally reflects an individual's capacity to achieve dynamic harmony between subjective intrapsychic demands and external ecological constraints. Khairallah (1990) conceptualized psychological adjustment as the individual's capacity to establish reconciliation between personal needs and societal expectations, fostering emotional stability and constructive social adaptation.

In hemodialysis-dependent patients, psychosocial adjustment is not merely an auxiliary psychological attribute; it serves as a critical prognostic indicator of treatment compliance, therapeutic adherence, and longitudinal survival. Empirical literature has consistently evidenced significant positive correlations between social support and psychological adjustment across various clinical populations (Al-Madhoun, 2003; Tavallaii et al., 2009), demonstrating that comprehensive social support optimizes mental health outcomes and enhances patients' capacity for adaptive adjustment (Abu Eisha, 2021; Awadallah et al., 2008). Synthesizing these empirical trajectories, this study formulates the core research problem through the following foundational questions:

- **Primary Question:** Is there a statistically significant interactive relationship between perceived multidimensional psychological support and psychosocial adjustment among patients suffering from end-stage renal failure?
- **Sub-Question 1:** What is the prevailing level of psychosocial adjustment manifested by patients undergoing maintenance hemodialysis?
- **Sub-Question 2:** What is the perceived level of multidimensional psychological and social support received by these patients?

Research Hypotheses

- **General Hypothesis:** There is a statistically significant correlation between multidimensional social support indicators and psychosocial adjustment among patients with end-stage chronic renal failure.
- **Sub-Hypothesis 1:** Patients suffering from chronic renal failure demonstrate a high level of perceived social support.
- **Sub-Hypothesis 2:** Psychosocial adjustment among hemodialysis patients differs significantly as a function of relational and emotional support quality rather than direct material assistance.

SIGNIFICANCE OF THE STUDY

The practical and theoretical value of this research lies in its empirical contribution to understanding the dynamic interplay between multidimensional social support and psychological adaptation in end-stage chronic illness. By elucidating how emotional, informational, and material support distinctly impact patient outcomes, this investigation provides concrete, evidence-based recommendations for clinical psychologists, nephrologists, and multidisciplinary healthcare teams aiming to design integrated psychosocial intervention programs in dialysis centers.

Conceptual and Operational Definitions

- **Social Support (Conceptual):** The material, emotional, and informational assistance derived from family members, colleagues, peers, and health professionals to buffer against stressful life circumstances (Ali, 2005).
- **Social Support (Operational):** The cumulative raw and standardized score obtained by the participant on the 28-item Social Support Questionnaire across its three sub-dimensions: material, emotional, and informational support.
- **Psychological and Social Adjustment (Conceptual):** The individual's capacity to maintain dynamic equilibrium between subjective psychological and physical needs and the normative demands of their social environment, resulting in psychological stability and constructive social engagement (Badawi, 1987).
- **Psychosocial Adjustment (Operational):** The total score obtained on Zeinab Mahmoud Choukeir's Psychosocial Adjustment Scale across its four sub-dimensions: personal/emotional, health/physical, family, and social adjustment.
- **Chronic Renal Insufficiency / ESRD (Pathological):** A severe, irreversible clinical state characterized by extensive destruction (>75%) of functional nephrons, leading to uremic toxin retention, fluid overload, systemic metabolic derangements, and absolute dependence on artificial renal replacement therapy (hemodialysis).

3. METHODS

Research Design

In accordance with the epistemological nature of the research problem and objectives, an empirical descriptive–correlational design (Descriptive Survey Method) was employed. This approach allows for the rigorous quantification and analysis of the statistical associations between the predictor variable (multidimensional social support) and the criterion variable (psychosocial adjustment) within a natural clinical setting, without experimental manipulation.

Target Population and Sampling Strategy

The target population comprised male and female adult patients diagnosed with end-stage chronic renal failure receiving maintenance hemodialysis at the specialized dialysis center. Prior to main data collection, an exploratory pilot sample (N = 20) was surveyed to verify linguistic comprehensibility, response feasibility, and psychometric properties. The primary research sample consisted of 150 patients selected via purposive sampling (Non-Probability Purposive Sampling) based on confirmed clinical criteria (ESRD diagnosis, maintenance hemodialysis duration > 6 months, and cognitive-linguistic competence).

Table 1 : Demographic Distribution of the Exploratory Sample by Gender (N = 20)

Gender Category	Frequency (n)	Percentage (%)
Male	14	70.0%
Female	06	30.0%
Total	20	100.0%

Data Collection Instruments

Data were collected utilizing two psychometrically standardized self-report instruments tailored to the clinical profile of the participants:

Table 2: Demographic Distribution of the Primary Research Sample by Gender (N = 150)

Gender Category	Frequency (n)	Percentage (%)
Male	59	39.3%
Female	91	60.7%
Total	150	100.0%

- **1. Social Support Questionnaire:** Constructed based on foundational theoretical frameworks and psychometric tools, primarily incorporating dimensions from Ibrahim Al-Samadoni's (1994) Social Support Scale and Alan Vaux's (1982) Social Support Scale (adapted into Arabic by Hassan, 1996). The final instrument comprises 28 items rated on a 5-point Likert scale (5 = Always, 4 = Often, 3 = Sometimes, 2 = Rarely, 1 = Never; scoring is inverted for negative statements). The instrument measures three dimensions: Material Support (9 items, items 5–8 negative), Emotional Support (10 items, items 13, 14, 16, 17, and 19 negative), and Informational Support (9 items, item 27 negative).
- **2. Psychosocial Adjustment Scale (Zeinab Mahmoud Choukeir, 2002):** A validated multidimensional clinical inventory of 80 items covering four specific domains (20 items each): Personal/Emotional, Health/Physical, Family, and Social Adjustment. Scored using a 3-point format (0, 1, 2 for positive items; 2, 1, 0 for negative items), yielding cumulative scores between 0 and 160 points.

Table 3: Structural Dimensions, Item Distribution, and Severity Tiers of the Psychosocial Adjustment Scale

Dimension	Item Numbers	Scoring Weight	Score Range	Severity Tiers
Personal / Emotional	Pos: 1–14; Neg: 15–20	0, 1, 2 (Rev: 2, 1, 0)	0–40	0–10: Poor
Physical / Health	Pos: 21–28; Neg: 29–40	0, 1, 2 (Rev: 2, 1, 0)	0–40	11–20: Low
Family Adjustment	Pos: 41–55; Neg: 56–60	0, 1, 2 (Rev: 2, 1, 0)	0–40	21–30: Moderate
Social Adjustment	Pos: 61–74; Neg: 75–80	0, 1, 2 (Rev: 2, 1, 0)	0–40	31–40: High

Note. Overall cumulative score ranges: 0–40 = Poor Adjustment; 41–80 = Low Adjustment; 81–120 = Moderate Adjustment; 121–160 = High Adjustment.

Psychometric Properties: Validity and Reliability

Content and face validity were verified by submitting the initial draft of the Social Support Questionnaire to a panel of expert judges (faculty members in clinical psychology and psychometrics), who confirmed semantic precision and construct representation. Construct validity was confirmed via item-total and dimension-total Pearson correlation analysis. Internal consistency reliability was established via Cronbach's alpha coefficient across all scales.

Table 4: Construct Validity and Internal Consistency Reliability (Cronbach's Alpha) for the Social Support Questionnaire

Subscale Dimension	Items (k)	Correlation with Total (r)	Cronbach's Alpha (α)
Material Support	9	.810**	.816
Emotional Support	10	.897**	.720
Informational Support	9	.716**	.599
Total Social Support Scale	28	1.000	.853

** $p < .01$.

** $p < .01$.

Table 5: Construct Validity and Comparative Reliability for the Psychosocial Adjustment Scale

Subscale Dimension	Correlation with Total (r)	Choukeir's Alpha (α)	Current Study Alpha (α)
Personal Adjustment	.928**	.70	.84
Physical / Health Adjustment	.557**	.53	.50
Family Adjustment	.905**	.61	.82
Social Adjustment	.709**	.59	.81
Overall Adjustment Scale	1.000	—	.61

Statistical Analysis Methods

Statistical computations were performed using SPSS. Methods included: (a) Cronbach's Alpha coefficient for internal consistency; (b) Pearson correlation coefficients to assess construct validity; (c) Spearman's rank correlation coefficient (rs) to test bivariate associations between study variables; and (d) Chi-Square Goodness-of-Fit tests (χ^2) and non-parametric Friedman tests to evaluate frequency distributions and ordinal variations.

4. RESULTS

Testing the General Hypothesis

To test the general hypothesis postulating a significant correlation between social support indicators and psychosocial adjustment among ESRD patients, Spearman's rank correlation coefficient was computed across all subscale dimensions.

Table 6: Spearman Rank Correlation Matrix Between Social Support Dimensions and Psychosocial Adjustment (N = 150)

Social Support Dimension	Spearman's Rho (rs)	p-value	Statistical Decision
Material / Tangible Support	-.111	> .05	Null Retained (Not Significant)
Emotional Support	.208*	< .05	Statistically Significant
Informational Support	.206*	< .05	Statistically Significant
Total Social Support Score	.179*	< .05	Statistically Significant

** $p < .05$.*

The statistical output in Table 6 indicates that overall social support is significantly and positively correlated with psychosocial adjustment ($rs = .179$, $p < .05$). When analyzing individual dimensions, emotional support ($rs = .208$, $p < .05$) and informational support ($rs = .206$, $p < .05$) demonstrated statistically significant positive associations with adjustment. Conversely, material support demonstrated a slight negative and statistically non-significant relationship ($rs = -.111$, $p > .05$). Hence, the empirical findings validate the research hypothesis with respect to affective and cognitive support modalities.

Testing the First Sub-Hypothesis

The first sub-hypothesis posited that hemodialysis patients would report high perceived levels of social support. A Chi-Square goodness-of-fit test evaluated the dispersion of observed cases across five standardized tiers.

Table 7: Chi-Square Goodness-of-Fit Distribution Across Perceived Social Support Levels (N = 150)

Perceived Support Level	Observed Frequency (n)	Percentage (%)
Very Low	0	0.0%
Low	2	1.0%

Table 7: Chi-Square Goodness-of-Fit Distribution Across Perceived Social Support Levels (N = 150) *(continued)*

Perceived Support Level	Observed Frequency (n)	Percentage (%)
Medium / Moderate	89	59.0%
High	58	39.0%
Very High	1	1.0%
Total	150	100.0%

The analysis revealed that 59% of patients experienced moderate support, while 39% reported high support. Very low (0%) and very high (1%) tiers were minimal. The Chi-square test revealed statistically significant differences across levels ($p < .01$), disconfirming the assumption that patients uniformly experience high support, and establishing that perceived support is predominantly concentrated at moderate-to-high levels.

5. DISCUSSION

The empirical findings of this study demonstrate the critical distinction between relational-cognitive support and tangible material assistance in the adaptation to severe somatic illness. The significant positive association observed between emotional support, informational guidance, and psychosocial adjustment demonstrates that adaptive coping in ESRD is heavily mediated by relational empathy, empathetic reassurance, and disease comprehension. Living with end-stage renal failure induces existential dread, bodily alteration, and profound lifestyle disruptions. In this context, emotional validation from family and nursing staff counteracts feelings of alienation, depressive resignation, and hopelessness.

Similarly, informational support provides patients with cognitive clarity regarding dialysis protocols, diet-fluid compliance, and symptom etiology, thereby enhancing their sense of internal locus of control and somatic agency. These findings are consistent with prior investigations in clinical health psychology (Al-Madhoun, 2003; Awadallah et al., 2008; Tavallaii et al., 2009; Abu Eisha, 2021), which affirmed that social resources buffer the psychological strain of chronic diseases. Conversely, the non-significant correlation observed between material support and adjustment reflects the clinical realities of public healthcare systems, where hemodialysis treatments and essential medications are state-subsidized. Thus, financial aid does not resolve the intrapsychic and relational challenges of living with kidney failure.

6. CONCLUSION AND RECOMMENDATIONS

CONCLUSION

This study concludes that psychological and social support—specifically emotional warmth and informational guidance—serves as an indispensable protective factor fostering psychosocial adjustment among patients undergoing maintenance hemodialysis for end-stage renal disease. Integrating structured psychosocial interventions alongside somatic nephrology protocols is essential for elevating overall health-related quality of life.

Clinical and Institutional Recommendations

- **1. Institutionalization of Clinical Psychologists:** Mandate the formal integration of specialized clinical and health psychologists across all hospital hemodialysis and nephrology units to provide structured psychotherapy, crisis intervention, and coping skills training.
- **2. Family-Centered Psychoeducation:** Establish systematic psychoeducational workshops for primary caregivers and families, cultivating adaptive communication, empathy skills, and effective support strategies to prevent caregiver burden and patient isolation.
- **3. Healthcare Staff Training Programs:** Implement continuous professional development seminars for nephrologists, hemodialysis nurses, and technicians, focusing on therapeutic empathy, informational clarity, and patient-centered communication.

- **4. Prospective Longitudinal Inquiries:** Promote future multi-center, prospective longitudinal studies to evaluate the long-term effectiveness of tailored psychosocial interventions on clinical adherence, immunological markers, and survival rates among hemodialysis patients.

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