

ORIGINAL RESEARCH

INTENSIVE CARE

Assessment of patient satisfaction regarding nursing care in hemodialysis units: a cross-sectional study

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ABSTRACT

Background & objective: The increasing number of patients requiring long-term dialysis is driving a growing demand for nursing care in hemodialysis units. This necessitates ongoing evaluation of the quality of nursing care provided by measuring patient satisfaction with this care in these units, as this plays a crucial role in promoting adherence to treatment plans and ultimately contributing to improved health outcomes. To assess patient satisfaction with the quality of nursing care in hemodialysis units.

Methods: A descriptive cross-sectional study was conducted with 230 patients undergoing hemodialysis in three units. Non-probability convenience sampling was used. Data were collected between November 24, 2025, and December 29, 2025. Patients were interviewed using the Patient Satisfaction with Quality of Nursing Care Questionnaire (PSNCQQ-Ar), Arabic version. The questionnaire consists of 17 items, and responses are measured on a five-point Likert scale, covering various aspects of patient satisfaction with nursing care. This tool was used to objectively measure patient satisfaction, enhancing the validity and reliability of the study.

Results: The results indicated high overall satisfaction with the quality of nursing care, with a mean of 3.68 and a standard deviation of 0.46. 52.6% of patients expressed complete satisfaction, while moderate levels of satisfaction were observed in the areas of information provision and family involvement.

Conclusion: More than half of the patients expressed complete satisfaction with the quality of care provided, while some aspects of care require improvement. Adopting a patient-centered and more patient-centered approach may contribute to enhancing the quality of nursing care and increasing patient satisfaction levels.

Keywords: patient satisfaction, nursing care, hemodialysis units

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1. INTRODECTION

Hemodialysis is the most common treatment for patients with end-stage renal failure. The dialysis machine works by purifying the blood of waste and toxins, in addition to removing excess fluid from the body and helping to maintain internal balance¹. Globally, in the twenty-first century chronic kidney disease is one of the leading

causes of mortality, affecting nearly 800 million people.¹ In Iraq, chronic kidney failure is ranked as the fifth effective communication, competence, and emotional support are some of the most life-threatening disease, with a death rate of 6,879 in 2015.²

Table 1: Descriptive statistics for the demographic data of hemodialysis patients'

Demographic data		(N=230) (%)
Age / Years	19-31	44 (19.2)
	32-44	56 (24.3)
	45-57	56 (24.3)
	58-70	51 (22.2)
	71-83	23 (10.0)
Sex	Male	123 (53.5)
	Female	107 (46.5)
Marital Status	Married	169 (73.5)
	Divorced	4 (1.7)
	Single	42 (18.3)
	Widowed	15 (6.5)
Educational Status	Don't Read and Write	42 (18.3)
	Primary School	73 (31.7)
	Intermediate School	62 (27.0)
	Preparatory School	32 (13.9)
	Diploma	10 (4.3)
	College or above	11 (4.8)
Residence	Urban	173 (75.2)
	Rural	57 (24.8)
Occupations	Free Jobs	4 (1.7)
	Unemployed	86 (37.4)
	Housewife	98 (42.6)
	Student	2 (0.9)
	Employee	12 (5.2)
	Retired	28 (12.2)
Frequency of Hemodialysis	1	4 (1.7)
	2	137 (59.6)
	≥ 3	89 (38.7)
Hospital	Al-Sadr Teaching Hospital	112 (48.7)
	Al-Hakim General Hospital	95 (41.3)
	Al-Najaf Teaching Hospital	23 (10.0)

Patients with hemodialysis face both of psychological and physical pressures that affect their activity such as pain, mood swings, and stress.³ The patient point of view is used to measure the quality of the service using personal experiences, including comfort, privacy, and safety, and the general level of satisfaction. Respect, factors that are important in patient satisfaction.⁴

One of the most important factors that determine the quality of the services is patient satisfaction since the

global healthcare industry has shifted towards a provider-focused strategy to the patient-focused approach, which focuses on patients, their needs and satisfaction.⁵

Patient satisfaction is a complex and multidimensional concept, influenced by personal factors such as individual characteristics and health status, as well as past experiences receiving care and how the patient perceives the concept of "care." Therefore, there is no single, simple definition of patient satisfaction that is universally agreed upon by researchers.⁶

Patient satisfaction is the person's feeling of comfort after comparing their expectations with the actual results of the care they received and is considered one of the most important indicators of high-quality health care.⁷

Compared to the general population, patients with hemodialysis are more susceptible to a range of psychological disorders such as anxiety and depression⁸. In addition, frequent hemodialysis requires patients to spend long periods in hemodialysis units. Therefore, patient satisfaction with nursing care is a crucial factor.^{7,8}

Studies indicate that higher patient satisfaction is associated with better adherence and improved outcomes, particularly in hemodialysis settings.⁹

Poor adherence to treatment and decreased quality of life are associated with the prevalence of mental illnesses among patients with hemodialysis, such as depression and anxiety.¹⁰

Patient satisfaction is not only a measure of the quality of care, but also impacts clinical outcomes, patient

adherence to care plans, and trust in care providers.¹¹ The importance of patient satisfaction is highlighted by its impact on identifying strengths and weaknesses in the health system, which facilitates the development of a plan to improve the quality of care.¹²

This study aimed to determine the level of satisfaction among patients undergoing hemodialysis with the quality of nursing care.

Table 2: Assessment and mean of scores for patients' satisfaction with quality of nursing care				
No	Items	Study Group		
		MS	SD	Assess.
1	Information provided to you: How clear and comprehensive were the explanations given by nurses regarding examinations, treatments, and what was expected of you?	3.53	1.01	Moderate
2	Instructions: How would you rate the quality of instructions provided by nurses regarding examinations and procedures?	3.55	1.07	Moderate
3	Ease of obtaining information: How willing were the nurses to answer your questions and respond to your inquiries?	3.97	0.92	High
4	Information provided by nurses: How effective was nurses' communication with patients, family members, and physicians?	2.70	1.05	Moderate
5	Informing family and friends: How well did nurses communicate with your family and friends about your condition and needs?	2.47	1.14	Moderate
6	Involving family and friends in care: To what extent did the nursing staff allow your family and friends to participate in your care?	2.22	1.25	Low
7	Nurses' care and concern: How polite, respectful, and caring were the nurses while providing care?	4.13	0.82	High
8	Attention and follow-up: How attentive were nurses in monitoring your condition and following up on your needs?	4.14	0.92	High
9	Respect for your opinions: To what extent did nurses ask for your opinion about procedures and decisions related to your care and provide you with choices?	3.19	0.91	Moderate
10	Consideration of your needs: How flexible and willing were nurses to meet your individual needs?	4.05	0.87	High
11	Nurses' daily routine: How well did nurses organize their work in a way that met your needs?	4.10	0.88	High
12	Assistance: How effective were nurses in reassuring you and helping you feel comfortable?	4.01	0.88	High
13	Response time: How quickly did nurses respond when you called for assistance?	4.43	0.97	High
14	Nurses' skills and competence: How well were nursing procedures performed (e.g., medication administration, intravenous fluids)?	3.86	0.90	High
15	Organization of care: How would you rate teamwork among nurses and other healthcare providers during your care?	4.00	0.76	High
16	Calm and reassuring environment: How would you rate the sense of calm, reassurance, and safety provided by nurses?	4.15	0.95	High
17	Privacy: To what extent did nurses respect your privacy?	4.17	0.93	High
overall satisfaction		3.68	0.46	High
MS: Mean of Scores; SD: Standard Deviation; Low: MS =1-2.33; Moderate: MS=2.34-3.66; high: MS≥3.67				

2. METHODOLOGY

A descriptive cross-sectional study design to determine the satisfaction of patients undergoing hemodialysis with the quality of nursing care in Najaf hospitals in Iraq. Study data were collected between November 24, 2025 and December 29, 2025.

The study was conducted in three hemodialysis centers in Iraq, in the Najaf Governorate: Al-Sadr Medical City, Al-Hakim General Hospital, and Najaf Teaching Hospital, these are the only hospitals in the city with hemodialysis centers. Non-probability convenience sampling consisted of 230 patients undergoing hemodialysis in three hospitals.

Patients ≥ 18 years of age; undergo hemodialysis in the targeted centers and undergoing regular dialysis for at

least 6 months. Patients undergoing hemodialysis who are in critical condition, with cognitive impairment and who refuse to participate in the study were excluded.

Use Patient Satisfaction with Quality of Nursing Care Questionnaire (PSNCQQ A-r) to determine the level of patient satisfaction with nursing care

The content validity of the study instruments was established through expert evaluation. For the Arabic version of the Patient Satisfaction with Quality of Nursing Care Questionnaire (PSNCQQ A-r), a panel of six experts reviewed the preliminary translated version of the scale to assess its content and accuracy in measuring patient satisfaction.¹³

Reliability for (PSNCQQ–Arabic version) Cronbach's alpha coefficient was (0.87).

3. RESULT

(Table 1) showed that the majority of patients were middle-aged, especially 32-44 years (24.3) and 45-57 years (24.3), and that a minor majority of patients were male (53.5). Most of them were married (73.5%), had primary education (31.7%), and resided in cities (75.2%). The principal occupational

groups were housewives (42.6) and the unemployed (37.4). The majority of patients were on dialysis twice a week (59.6%), with the highest number at Al-Sadr Teaching Hospital (48.7%), followed by Al-Hakim General Hospital (41.3%).

Overall, high satisfaction was reported for nurses' responsiveness, professionalism, skills, interpersonal care, teamwork, and respect for privacy. Moderate satisfaction was noted for information provision, communication, instructions, and involvement in decision making. Low satisfaction was observed only for involving family and friends in care. These results indicate a strong appreciation for technical and supportive nursing behaviors, with room for improvement in communication and family centered care.

4. DISCUSSION

Table 2 reports patients' satisfaction with nursing services, indicating a high level of overall satisfy action. This observation lends weight to the view that therapeutic interaction and technical responsiveness were perceived favorably by patients in this unit. The significance of this result lies in its implications for chronic care. In hemodialysis, patients do not only receive a technical procedure. They also navigate fatigue, dietary restrictions, uncertainty, financial strain, and dependence on continuous treatment. Under these

circumstances, nursing care is experienced in relational and procedural terms. Previous hemodialysis studies similarly found generally positive levels of satisfaction with dialysis care, especially regarding nurses' roles and the ongoing support.⁶ reported that patients were generally satisfied, with the highest satisfaction regarding aspects related to nurses, while ¹⁴. also found that most patients were satisfied with the care provided at dialysis centers.¹⁵ Earlier work also showed that patients undergoing hemodialysis can report high overall satisfaction with care.

The Iraqi context supports this interpretation: one study found high satisfaction with clinical nursing care and with patient–nurse communication in Baghdad hemodialysis units, in good agreement with the present results.¹⁶ However, not all studies have reported equally favorable findings. An international survey found that in-center hemodialysis patients were less satisfied with more complex aspects of care, including information, coordination, and social or emotional support.¹⁷ Another study also noted important problem areas despite overall satisfaction.⁶ This discrepancy could be attributed to differences in instruments, health system resources, patient expectations, and dimensions emphasized by each survey. In lower-resource settings, patients may rate direct nursing responsiveness positively while still experiencing unmet needs in education, coordination, or psychosocial support.

A key finding is that patients valued immediacy, attentiveness, and prompt nursing action more than family centered participation. This can be explained by the fact that hemodialysis units are highly task-oriented environments in which nurses must constantly monitor vascular access, hemodynamic stability, alarms, fluid removal, and acute symptoms. In such settings, rapid responses become highly visible to patients and may be interpreted as markers of competence and safety. This pattern aligns with the broader literature, which indicates that communication quality and responsiveness are central determinants of patient-centered outcomes and satisfaction¹⁸. found a significant association between nurse–patient communication and satisfaction, and¹⁹.concluded that quality communication improves patient-centered health outcomes.

Hemodialysis caregivers frequently report unmet informational and supportive needs, which may be reflected in patients' lower satisfaction with family care.^{20,21} One study found that informal caregivers of patients receiving hemodialysis often experience substantial unmet needs, particularly regarding information, emotional support, and inclusion in care processes.²⁰ Another study similarly highlighted the broad psychosocial and supportive challenges faced by patients undergoing hemodialysis and their families.²² In

the Iraqi literature, one study reported only moderate satisfaction with nursing health education despite high satisfaction with communication, suggesting that relational care may be stronger than structured family education or involvement.¹⁶ This pattern of results offers a useful perspective on service improvement: units may perform well in direct bedside responsiveness while still needing to strengthen their family-centered care.

5. CONCLUSION

The current study concludes that patient satisfaction with the quality of nursing care is high, indicating a high standard of care provided, whether in terms of nurses' responsiveness or professional competence. The results pointed to a high level of technical and supportive aspects of nursing practice, while showing variation in satisfaction levels regarding communication with families and their involvement in the care plan. This highlights the need for improvement in this area of nursing care. Therefore, it is recommended to strengthen the patient- and family-centered approach to care, which will improve nursing care overall.

6. Data Availability

The numerical data generated during this research is available with the authors.

7. Conflict of Interest

The authors declare no conflict of interest.

8. Authors contribution

ZA. KA: Conceptualization of the study, literature search, data collection, statistical analysis, manuscript writing and editing.

Hu.Mu.AM: contributed to the conceptualization of the study, assisted in data collection and analysis, participated in drafting and revising the manuscript, provided critical feedback throughout the research process and helped shape the final version of the article

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