

# Evaluation of Patients' Knowledge toward Pain Management in Hemodialysis Unit

Esraa Ali Hanoon<sup>1</sup>, Khalida Mohammed Khudur<sup>2</sup>

<sup>1</sup>Al-Diwaniyah Health Directorate, Ministry of Health, Al-Diwaniyah, Iraq.

<sup>2</sup>Department of the Adult Nursing, College of Nursing, University of Baghdad, Baghdad, Iraq.

<sup>2</sup> [Khalidam@conursing.uobaghdad.edu.iq](mailto:Khalidam@conursing.uobaghdad.edu.iq)

<sup>1</sup> Correspondence Author: Esraa Ali Hanoon,  
[israa.ali2102m@conursing.uobaghdad.edu.iq](mailto:israa.ali2102m@conursing.uobaghdad.edu.iq)

## Abstract

**Background:** Patients with chronic renal disease who get hemodialysis frequently complain of pain. pain is a challenging condition for hemodialysis patients to manage.

**Objective:** To evaluate patient knowledge about pain management in hemodialysis Unit

**Methodology:** A descriptive design carried out at the Hemodialysis Unit in Al-Diwaniyah Teaching Hospital the duration of the study from (14th December 2022, to 20th May 2023) for 30 sample.

**Result:** The results of the study showed the existence of highly statistically significant differences for the knowledge of hemodialysis patients after application educational program in the post test.

**Conclusion:** The study showed the positive effect on patients' knowledge about pain management at hemodialysis unit after implementing educational program that for 30 study sample.

**Recommendation:** Provide educational programs in the future could be conducted to improve hemodialysis patients' knowledge about pain management.

**Keywords:** patients' knowledge, pain management, hemodialysis

## Introduction:

End-stage kidney disease (ESKD) is the final stage of chronic kidney disease (CKD) that requires renal replacement therapy (RRT), such as hemodialysis (HD), which appears to be the most popular kind. Compared to people who obtain a kidney transplant, HD patients still experience significant rates of death and morbidity<sup>(1)</sup>.

Renal failure was the fourth-leading cause of death in Iraq in 2014, according to the Ministry of Health's annual report, with a percent (5.71%), among the top twenty causes of death<sup>(2)</sup>.

The number of symptoms associated with the disease and its treatment is significant for those with renal failure. Similar to other terminal conditions like cancer, heart failure, and lung disease, this ailment has a severe burden of symptoms. In addition to these symptoms, pain has been noted as a frequent issue. The most common symptoms of kidney failure include

fatigue, pruritus, decreased appetite, and muscular cramps<sup>(3)</sup>.

Pain is a real or prospective injury to tissue that is both physically and emotionally uncomfortable. Since inadequate pain control has been found to affect patient outcomes by lengthening the hospital stay and delaying the healing process, pain control has important consequences<sup>(4)</sup>.

**Methodology:** A descriptive design was applied in the current study utilizing a pre-test/post-test technique for the study group and control group following the execution of the educational program. Data collection took place twice: at the baseline (before the research group received any intervention) and 21 days after the educational program was given to the study group.

**Sample of the study:** A non –probability (purposive) sample treat in (Hemodialysis Unit) in AL-Diwaniyah Teaching Hospital at hemodialysis center.

## Result:

**Table (4.1): Descriptive the Distribution of the Study Samples (according to the Demographical Data. Results and Findings**

Variable	Groups	Study group	
		F.	%
Gender	Male	21	70
	Female	9	30
	Total	30	100
Level of Education	Don't read and write	2	6.7
	Read and write	5	16.7
	primary school graduation	13	43.3
	intermediate school graduation	6	20
	preliminary school graduate	1	3.3
	institute graduate	2	6.7
	University graduate	1	3.3
	Total	30	100

F (Frequency), % (Percent).

Table 4.1. presented that most of the study group 70 percent were males. Regarding level of education, 43.3 percent of the study group have primary school qualification.

**Table (4.5): knowledge scores for the study sample.**

score	N	M	SD	t	df	P.value	Sig.
Pretest and Post-test knowledge (Study Group)	30	1.26 1.73	.449 .58	6.88	29	.000	H.S

N= number, M = mean of score, SD= standard deviation, NS =non-significant at  $P>0.05$ , S= significant at  $P<0.05$

Table (4.5) presented highly significant differences of the knowledge of the study group between pre-test and post-test score at p value (.000).

## Discussion:

### 5.1. Discussion of the Socio-Demographic Characteristics of the Study Sample, table (4.1):

The results in table (4.1) showed that most of the study group 70% were male participants. This result agrees with the study by <sup>(5)</sup>, according to the research's findings, majority of patients were male. This result agrees with study by <sup>(1)</sup>, who reported that, the most (55.3%) of the hemodialysis patients were males. This result agrees with study by <sup>(6)</sup> Research that was done in Iraq on 80patients, were majority percent male. This finding is also confirmed research done by <sup>(2)</sup> the greater number are male and accounted 65.0%.

Additionally, the result agrees with research by <sup>(7)</sup> According to the research's findings, majority of

patients were male. <sup>(8)</sup> reported greater number are male and account (77.53 %).

Regarding level of education, the majority of respondents have primary school qualification. This result agrees with the study done by <sup>(9)</sup> most of them graduated with primary school degree (27%). Additionally, the result agrees with study done by <sup>(10)</sup> who discovered the greater percentage of them were primary school graduates and they accounted for (24.7%) of the sample and (1.3%) of them were post graduate. This finding is also confirmed research done by (5) the majority of the study sample read and write.

Additionally, this finding disagrees with the result obtained from the study done by <sup>(11)</sup>, who reported that the majority number (48.3) of hemodialysis were not read and write.

## 5.2. Discussion of the Patients' Knowledge about Hemodialysis for study group

Results in table (4.5.) presented comparison between pretest and posttest knowledge score of the study group which revealed effective of educational on the study group. Result of the presented study confirmed by <sup>(12)</sup>. This conclusion made clear that there had been a very statistically significant improvement in patients' satisfaction with their understanding of ESRD causes, risk factors, symptoms, diagnosis, complications, therapy, and prevention following educational recommendations (p 0.01).

Researchers discovered that the use of educational intervention had a beneficial effect on overall patients' understanding of what hemodialysis is, how to care for vascular access, complications, nutritional and hydration limitations, medicines, and activities that assist patients adjust to the condition <sup>(13)</sup>. The results of the study by <sup>(14)</sup> revealed that the knowledge, pretest score was not significant for study group while the mean in posttest knowledge for study group were higher (M = 2.00).

This finding was supported by <sup>(15)</sup> who stated that an intervention program can increase hemodialysis patients' knowledge, compliance, and quality of life. For patients' practices addressing hypotension, numbness or tingling in the feet, issues before to and during a dialysis session, vascular access problems, and taking medicine as prescribed by a doctor, there was a highly statistically significant improvement in the posttest compared to the pretest. This conclusion might be explained by the fact that patient education has been linked to better patient outcomes and is backed by global recommendations that offer useful resources for renal disease patient education.

To enhance quality of life, self-care management practice, knowledge, biochemical parameters, and therapeutic adherence among dialysis patients, individual discipline has demonstrated that educational intervention is useful <sup>(16)</sup>. Additionally, study done by <sup>(17)</sup> shows that the mean score and relative sufficiency of patients' knowledge for the study group in post-test were high, that were also observed through the grades of relative sufficiency (low, moderate, high). The findings of the study done by <sup>(18)</sup> indicated that patients have low level of knowledge in pretest. But post evaluation revealed good level of knowledge among hemodialysis patients toward alleviation of itching

### Conclusion:

There are highly significant differences between the study groups during post-test after of the education applied of the education in regarding general information about hemodialysis and pain management. The study showed the positive effect on patients' knowledge about pain management at hemodialysis unit after implementing educational program.

### Recommendation:

Educational programs could be conducted to improve hemodialysis patients' knowledge about pain management.

### Reference:

- 1- Marzouq MK, Samoudi AF, Samara A, Zyoud SE, Al-Jabi SW. Exploring factors associated with pain in hemodialysis patients: a multicenter cross-sectional study from Palestine. *BMC nephrology*. 2021 Dec; 22:1-2.
- 2-Naser AM, Mohammed WK. Effectiveness of Instructional Health Educational Vascular Access on Hemodialysis Patients' Knowledge at Al-Hussein Teaching Hospital in AL-Nasiriyah City. *Iraqi National Journal of Nursing Specialties*. 2016;29(1).
- 3-Ng MS, Wong CL, Ho EH, Hui YH, Miaskowski C, So WK. Burden of living with multiple concurrent symptoms in patients with end-stage renal disease. *Journal of Clinical Nursing*. 2020 Jul;29(13-14):2589-601.
- 4- Saied DR, Mansour KA. Effectiveness of an Educational Program on Nurses' Knowledge and Attitudes about Pain Assessment and Management in Imam Hussein Medical City in Holy Karbala. *Indian Journal of Forensic Medicine & Toxicology*. 2021 Jun 2;15(3):5337-43.
- 5- Al-Ashour IA, Mohammed WK. Effectiveness of A Nutritional Instructional Program on Health-Related Outcomes for Hemodialysis Patients. *Indian Journal of Forensic Medicine & Toxicology*. 2021 May 17;15(3):3273-82.
- 6- Shinjar FJ, Bakey SJ, Khudur KM. Effectiveness of an Education Program on Hemodialysis Patients, Knowledge towards Dietary Regimen at Al-Hussein Teaching Hospital in Al-Nasiriyha City. *Indian Journal of Public Health Research & Development*. 2018 Oct 1;9(10).
- 7- Hussein M, Ahmed S. Effectiveness of an Educational Program on Patients' Knowledge Concerning care of Vascular Access of Hemodialysis in Al-Muthana Teaching Hospitals. *Iraqi National Journal of Nursing Specialties*. 2020 Sep 27;33(1):33-43.

- 8- Athbi HA. Compliance behaviors among patients undergoing hemodialysis therapy in Holy Kerbala/Iraq. *kerbala journal of pharmaceutical sciences*. 2015(9).
- 9-Al-Khazaali IA, Hameed DM, Eidan AJ. Quality of Healthcare Services toward Hemodialysis Unit in Al Diwaniyha Government. *Annals of the Romanian Society for Cell Biology*. 2021 Apr 30;16979-86.
- 10-Mansour K. Assessment of patients' satisfaction toward nursing care at hemodialysis units. *Iraqi National Journal of Nursing Specialties*. 2013;1(26):1-9.
11. Hermis AH, Abed RI. Effectiveness of Self-Regulation Fluid Program on Patients with Hemodialysis Self-Efficacy for Fluid Adherence in Al-Diwaniyah Teaching Hospital. *Iraqi National Journal of Nursing Specialties*. 2021;34(2):74-88.
- 12- Kameel Zatton H, Mohamed Taha N, Ali Metwaly E. Effect of Educational Guidelines on Knowledge, health care practices and Dependency Level for Patients Undergoing Hemodialysis. *Egyptian Journal of Health Care*. 2023 Mar 1;14(1):594-610.
- 13- Fadlalmola HA, Elkareem EM. Impact of an educational program on knowledge and quality of life among hemodialysis patients in Khartoum state. *International Journal of Africa Nursing Sciences*. 2020 Jan 1; 12:100205.
- 14- Khaleel M, Hassan H. Effectiveness of an Instructional Program on Knowledge of Patients with Renal Failure Undergoing Hemodialysis Concerning Self-Care in Baghdad Teaching Hospital. *Indian Journal of Forensic Medicine & Toxicology*. 2019 Oct 1;13(4)
- 15- Alikari V, Tsironi M, Matziou V, Babatsikou F, Psillakis K, Fradelos E, Zyga S. Adherence to Therapeutic Regimen in Adults Patients Undergoing Hemodialysis: The Role of Demographic and Clinical Characteristics. *Int Arch Nurs Health Care*. 2018; 4:096.
- 16- Yang CW, Harris DC, Luyckx VA, Nangaku M, Hou FF, Garcia GG, Abu-Aisha H, Niang A, Sola L, Bunnag S, Eiam-Ong S. Global case studies for chronic kidney disease/end-stage kidney disease care. *Kidney international supplements*. 2020 Mar 1;10(1): e24-48.
- 17- ShyaaWL, Ahmed SA. Effectiveness of an Instructional Program on Knowledge of Patients, Undergoing Hemodialysis Related to Fatigue at Habib Ibin Mudahir Al-Asadi Center. *Journal of Nursing and Health Science*. 2017 Feb;6(10).
- 18- Aliwy NH, Mohammed WK. Effectiveness of an Education Program on Hemodialysis Patient's toward Alleviate of Itching at Al-Hussein Teaching Hospital in Al-Nasiriyah City. *Indian Journal of Public Health Research & Development*. 2018 Oct 1;9(10)