

A Study to Assess the Quality of Life Among Patients Undergoing Hemodialysis with a View to Develop an Information Booklet on Improving Quality of Life at Sharda Hospital, Greater Noida, Uttar Pradesh

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Abstract:-

➤ *Introduction:*

World-wide, chronic kidney disease is a serious issue. Chronic kidney disease affects both industrialised and developing nations, therefore the number of CKD sufferers is rising daily. Chronic renal disease claims the lives of millions of people. The majority of those in need of hemodialysis or kidney transplantation in poor nations face a significant financial burden. Over a million individuals every year die from untreated renal failure in another 112 nations where many people cannot afford any form of care. A research study titled "A study to assess the quality of Life among patient undergoing hemodialysis with a view to develop an information booklet on improving quality of life at Sharda Hospital, Greater Noida.

➤ *Objectives of the Study:*

Objectives of the study were to assess the quality of life among patient undergoing hemodialysis and to find the association between the quality of life among patients undergoing hemodialysis with selected demographic variables.

➤ *Methodology:*

A quantitative research approach was used and the research design adopted for the presented study was descriptive cross sectional research design. The target population for the study were patients undergoing hemodialysis at Sharda hospital. Sample size was 60. A 45 items tool was developed which includes demographic profile and Kidney Disease and Quality of Life (KDQOL-SF™) Assessment tool to assess the quality of life. Data analysis was done on the basis of objectives and

hypothesis of study. Health belief model was used as a conceptual framework for the study.

➤ *Result:*

The collected data was analysed by using descriptive and inferential statistics. In this research study In this research study, majority (40%) of them belongs to the age group of 60 years and above, most (71.7%) of them were males, majority (36.7%) of them had secondary education, majority (80%) of them were married, around 95.0% of them were Hindus, most (28.3%) of them were unemployed, most (46.7%) of them had monthly income of rupees21,000-30,00, around (80%) of them did not have family history of kidney disease, income of rupees21,000-30,00, around (80%) of them did not have family history of kidney disease, majority (50%) of the sample were suffered from 1to 2 years duration of illness, most (38.3%) of them had completed >8 cycles of dialysis till now. The mean score related to health was 12.9±3.4, the mean score related to pain was 9.87±4.95, the mean score related to feelings was 9.43±3.38, the mean score related to behavior was 8.77±3.30, the mean score related to kidney disease was 17.97±3.54, the mean score related to effects of kidney disease was 10.13±4.34 and the mean score related to satisfaction with care was 24.82±0.81.

➤ *Conclusion:*

The most popular form of treatment for chronic renal disease is hemodialysis. Physicians, nurses, and dietitians regularly assess the quality of care, but it's also important to look at the patient's quality of life while they're receiving hemodialysis. Subjectively, the sample of hemodialysis patients' overall quality of life was judged as being relatively high,

with the most satisfaction being found in the quality of care.

Keywords:- Assess, Dialysis, Quality of Life, Chronic Kidney Disease, Hemodialysis.

I. INTRODUCTION

A wide, dynamic concept called "quality of life" (QoL) typically comprises subjective assessments of both good and negative facets of life. It is difficult to assess because, despite the fact that "quality of life" has meaning for almost everyone and across all academic disciplines, various people and groups may define it differently. Philosophers debated the shift in health care decision-making from the concept of "sanctity of life" to "quality of life" and social utility, ethicists discussed the nature of human existence and the definition of the "good life," and environmentalists overwhelmed the features and conditions of the biophysical environment. Scientists have defined quality of life from a variety of perspectives within these fields, taking into consideration things like objective indicators, subjective views, life goals, needs fulfillment, and basic elements of life. Quality of Life is a people's perception of their place in life in relation to their objectives, expectations, norms, and worries as well as the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad concept that is complicatedly influenced by a person's physical and mental health, independent degree, social connections, and personal views, as well as their relationship to key environmental elements.¹

The World Health Organization (WHO) has defined QoL as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. It is a broad concept that is sophisticatedly influenced by a person's physical and mental health level of independence, social relations, and relationship with the salient features of their environment."²

When assessing the experience and results of patients receiving healthcare, quality of life (QOL) is a crucial factor that must be taken into account. This is especially true for those who have long-term chronic illnesses because it is frequently impossible for them to fully recover from their condition.³ Measurement of QOL is becoming more and more popular in both clinical research and routine clinical practices. QOL has been recognized as a key element for evaluating the quality and outcome of healthcare for patients with chronic illnesses such as multiple sclerosis, asthma, and chronic kidney failure, in addition to mortality and morbidity as vital indicators for performance. Initiatives from the National Kidney Foundation in the United States of America (USA) to support efforts targeted at increasing QOL in patients with kidney failure reflect the understanding that the burden of chronic kidney failure stretches beyond its impact on the body's biological structure.⁴

Dialysis therapy must be regularly administered to patients with chronic renal failure in order to survive.⁵ Pain, fluid limitations, itching, discomfort, restrictions on physical activity, exhaustion, weakness, cost for the care, feelings of inadequacy, and depressive moods are the major psychological and physiological stressors faced by dialysis patients.⁶

A dialysis regimen can also seriously interfere in one's personal and professional life⁷. These elements could influence the QOL that regular dialysis patients experience.⁸ How patients react to the physical, emotional, and social effects of sickness on their daily life can have an impact on QOL, which stands for patients' subjective satisfaction with their living circumstances.⁹ People respond to the same situation differently because QOL is individualised.¹⁰ A condition may be considered as an irritation for one person but may be severely frustrating for another.¹¹ As people's health deteriorates, their capacity to function might have an impact on their socioeconomic situation and marital relationships, which can degrade their quality of life (QOL).¹²

The prevalence of chronic kidney disease (CKD) has been identified as a major public health issue on a global scale. The number of people with end-stage kidney disease (ESKD) who require renal replacement therapy is expected to be between 4.902 and 7.083 million worldwide. The estimated prevalence of CKD is 13.4 percent (11.7-15.1 percent).¹³ In India, the prevalence of chronic kidney disease (CKD) is approximately 800 per million people, while the incidence of end-stage renal disease (ESRD) is 150–200 per million people.¹⁴

Hemodialysis is a treatment that eliminates excess fluid, removes waste, and regulates electrolytes (sodium, potassium, bicarbonate, chloride, calcium, magnesium and phosphate). The majority of patients receive hemodialysis (HD), which is performed in about 90.6 percent of cases. These individuals deal with a variety of challenges that affect their daily lives and interpersonal interactions because they frequently experience emotional distress and physical impairment.¹⁵ HD is a complicated procedure for patients who must frequently attend hospitals or dialysis facilities (about three times per week), requiring significant adjustments to the patients' regular way of life. 92 percent of HD patients may experience a high symptom burden, including bothersome symptoms like fatigue, decreased appetite, difficulty focusing, swelling in their hands and feet, and muscle cramps, all of which can be distressing on a daily basis and have a poor impact on QOL. Long-term dialysis results in a loss of mobility, dependence on a caretaker, disruption of marital, family, and social life, as well as a reduction or loss of income. HD is a time-consuming, expensive treatment that requires stricter dietary and fluid restrictions. These all degrade quality of life. Patients with chronic renal failure who are HD-dependent must deal with severe restrictions, including tight adherence to medication and dialysis schedules, food and hydration restrictions, and minimal physical activity.¹⁶

➤ *Data Analysis and Interpretation :*

The analysis and interpretation of data based on using semi structured questionnaire with in depth interview from

the patients (n=60) and the result were computed using descriptive and inferential analysis and the aim of the analysis was to organize and give meaning to the data.

Table 1 Frequency and Percentage Distribution of Participants based on Background Variables (n=60)

S.NO	BACKGROUND VARIABLES	f	%
1.	Age in Years		
	a. 20-30	8	13.3
	b. 31-40	8	13.3
	c. 41-50	9	15.0
	d. 51-60	11	18.3
	e. 60 and Above	24	40
2.	Gender:		
	a. Male	43	71.7
	b. Female	17	28.3
3.	Education:		
	a. No Formal Education	8	13.3
	b. Primary	13	21.7
	c. Secondary	22	36.7
	d. Graduation	12	20.0
	e. Post-Graduation	5	8.3
4.	Marital Status:		
	a. Unmarried	7	11.7
	b. Married	48	80.0
	c. Other (Divorced, Widow, Cohabitation	5	8.3
5.	Occupation:		
	a. Unemployed	17	28.3
	b. Agriculture	13	21.7
	c. Business Service	11	18.3
	d. Service	13	21.7
	e. Others...	6	10.0
6.	Monthly Income in Rupees		
	a. <10,000	9	15.0
	b. 10,000-20,000	9	15.0
	c. 21,000-30,000	28	46.7
	d. 31,000-40,000	10	16.7
	e. >40,000	4	6.7
7.	Religion:		
	a. Hindu	57	95.0
	b. Buddhist	3	5.0
8.	Family History of Renal Disease		
	a. Yes	7	11.7
	b. No	53	88.3
9.	Duration of illness:		
	a. 1-2 Years	30	50.0
	b. 3-4 Years	14	23.3
	c. 5-6 Years	8	13.3
	d. 7-8 Years	3	5.0
	e. >8 Years	5	8.3
10.	Number of session of dialysis completed till now:		
	a. 3-4 Cycles	19	31.7
	b. 5-6 Cycles	9	15.0
	c. 6-7 Cycles	6	10.0
	d. 7-8 Cycles	3	5.0
	e. >8 Cycles	23	38.3

The data presented in table 1 revealed that, majority (40%) of them belongs to the age group of 60 years and above, most (71.7%) of them were males, majority (36.7%) of them had secondary education, most (80%) of them were married, around 95.0% of them were Hindus, majority (28.3%) of them were unemployed, most (46.7%) of them had monthly income of

rupess21,000-30,00, around (80%) of them did not have family history of kidney disease, majority (50%) of the sample were suffered from 1 to 2 years duration of illness, most (38.3%) of them had completed >8 cycles of dialysis till now.

➤ *Description of sample characteristics in figure*

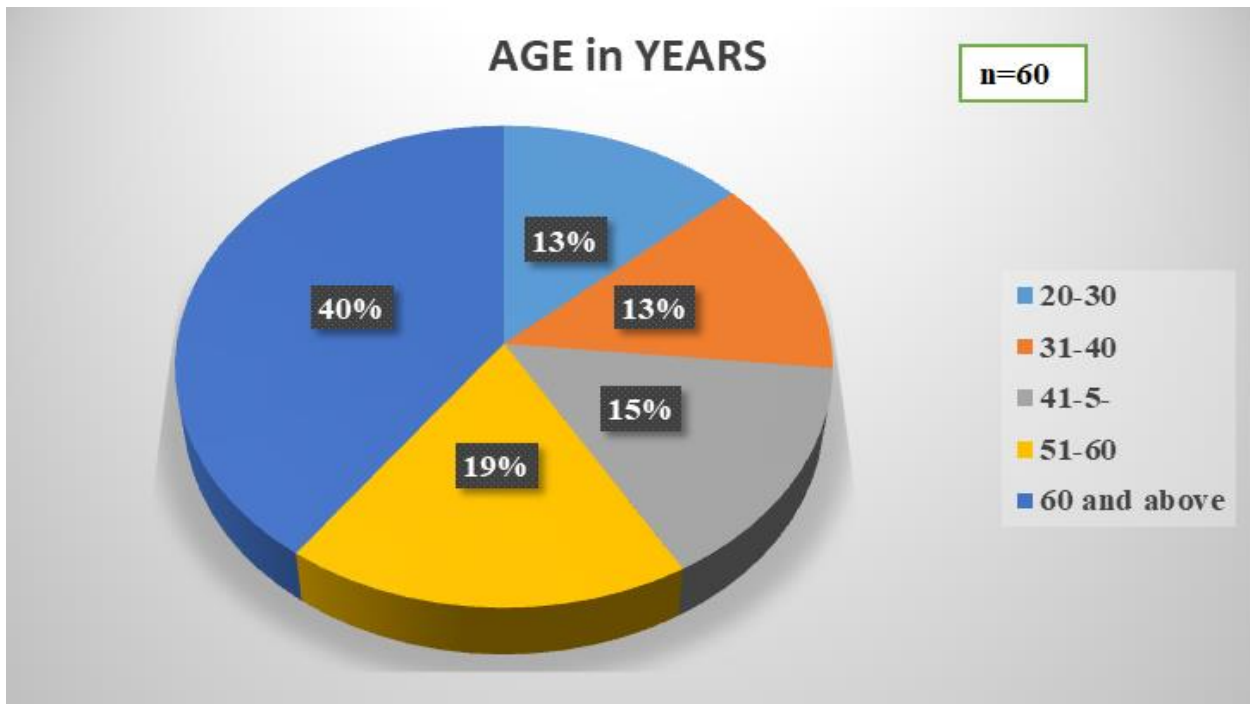


Fig 1 Pie Diagram showing the Percentage Distribution of Patient According to Age in Year

The data presented in figure.1 revealed that majority 24 (40%) of the sample belongs to 60 and above years of age, and 8(13.30%) of the sample were belongs of age to 30-40 and 41-50 years of age.

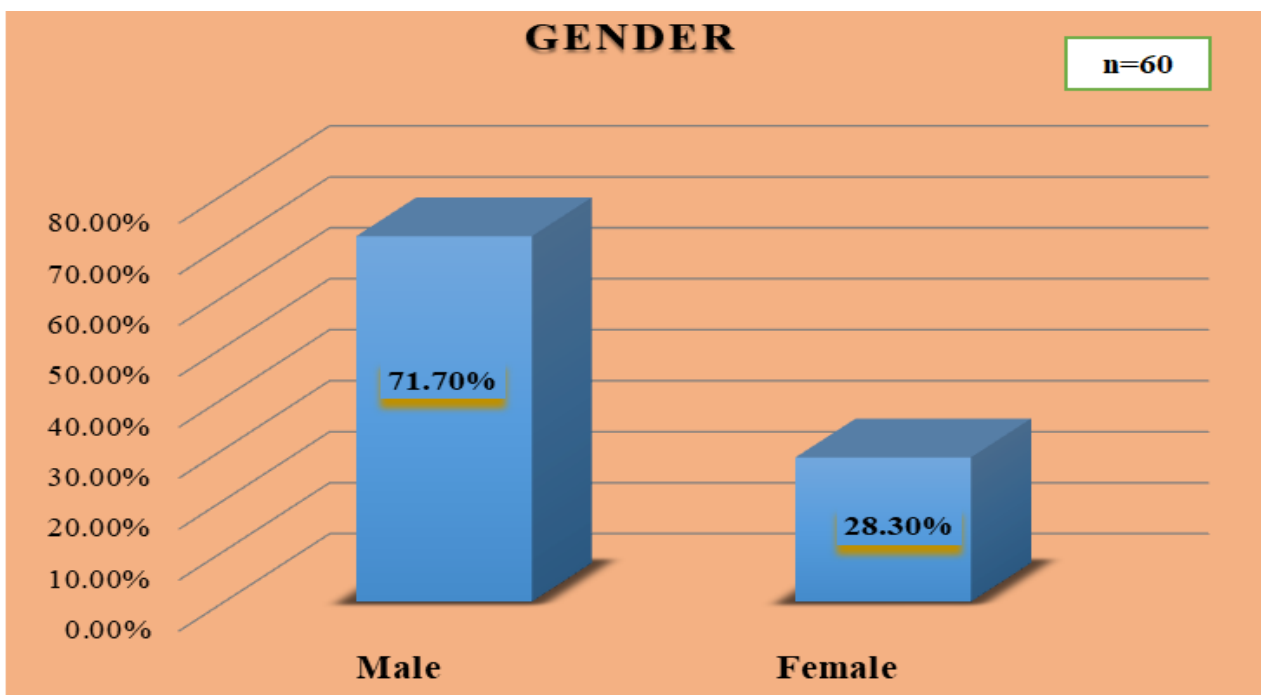


Fig 2 Bar Diagram showing the Percentage Distribution of Patient According to Gender

From the above bar diagram we can know that majority 43(71.70%) of the sample were male and 17(28.3%) of the sample were female.

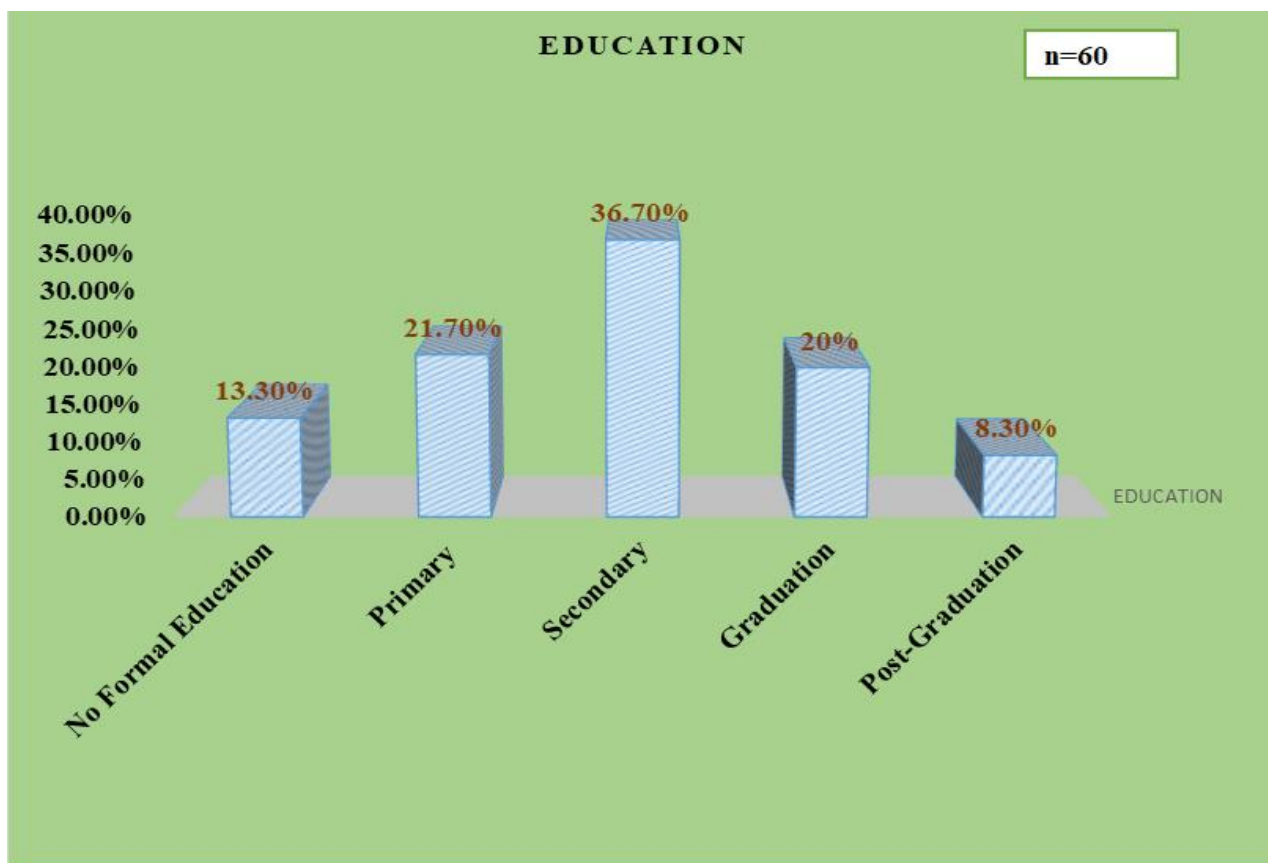


Fig 3 Bar Diagram showing the Percentage Distribution of Education Level of the Patients Undergoing Hemodialysis

The data presented in figure.3 revealed that majority 22(36.7%) of the sample had the secondary level of education and 5(8.3%) of the sample had post-graduate level of education.

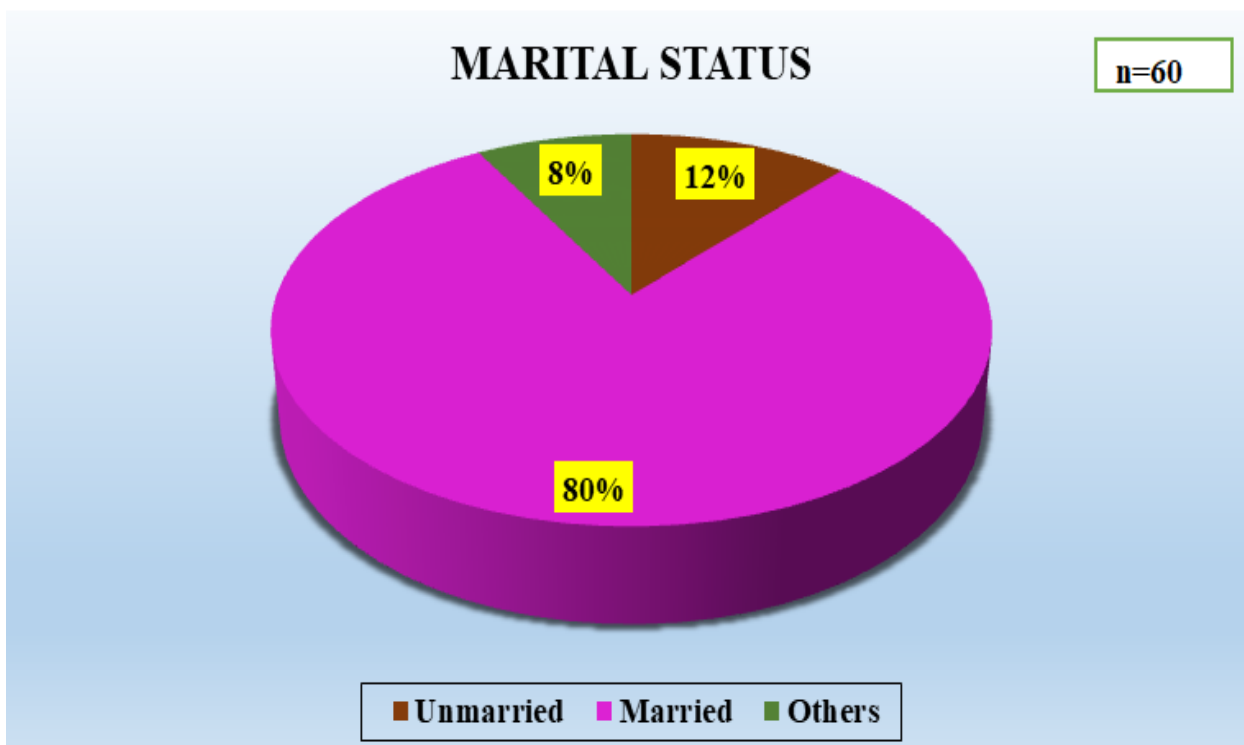


Fig 4 Pie Diagram showing the Percentage Distribution of Patient According to Marital Status

The data presented in figure .4 revealed that most 48 (80%) of the sample were married.



Fig 5 Bar Diagram showing the Percentage Distribution of Patient on the basis of Occupation

The data presented on above bar diagram revealed that majority 17 (28.3%) of the sample were come under unemployment and the least 6 (10%) of the sample come under others.

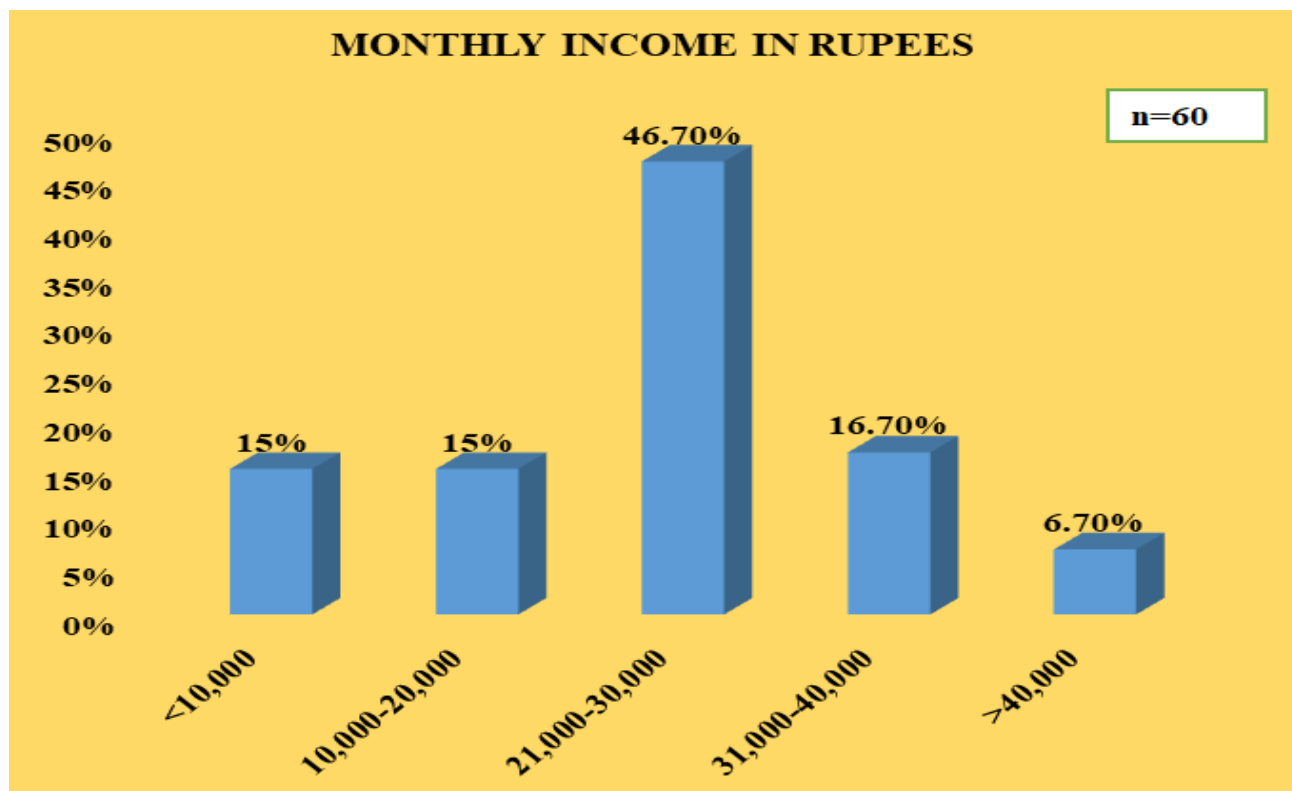


Fig 6 Bar Diagram showing the Percentage Distribution of Patient According to Income in Rupees per Month

The data presented in above bar diagram revealed that majority 28 (46.70%) of the sample have income (21,000-30,000) per month and around 4(6.7%) of the sample have income > 40,000 per month.

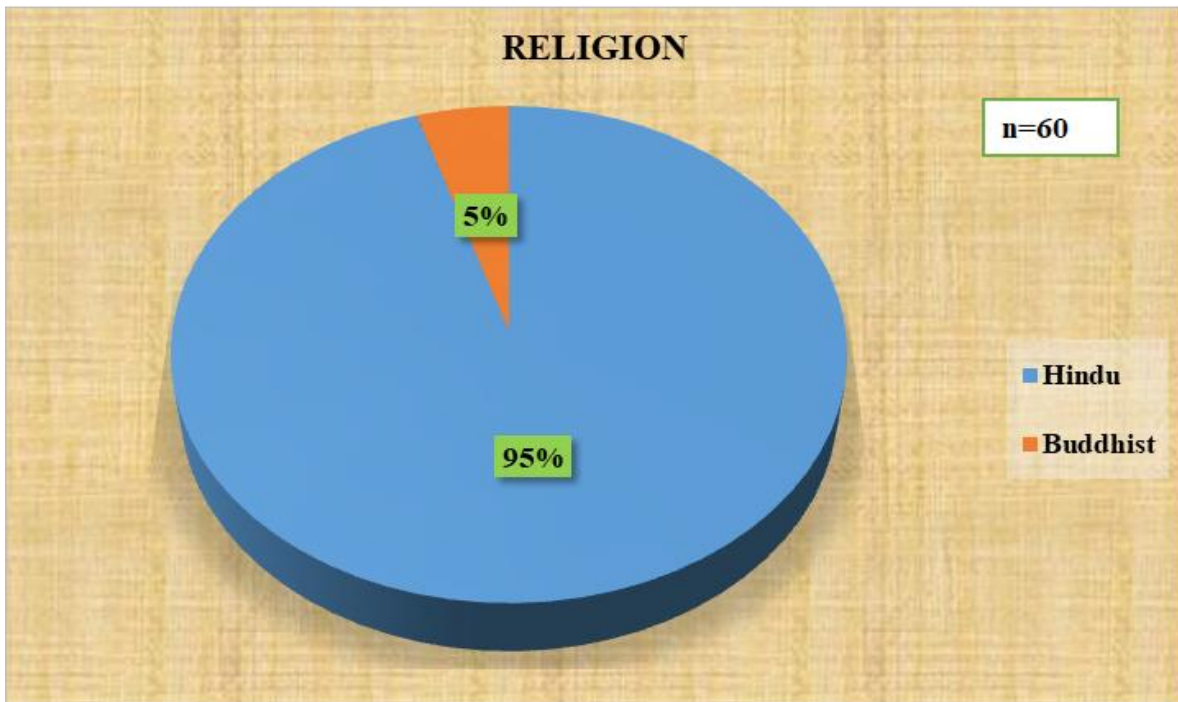


Fig 7 Pie Diagram showing the Percentage Distribution of Patient According to Religion

The data presented in figure.4 revealed that majority 57(95%) of the sample were belong to Hindu religion.

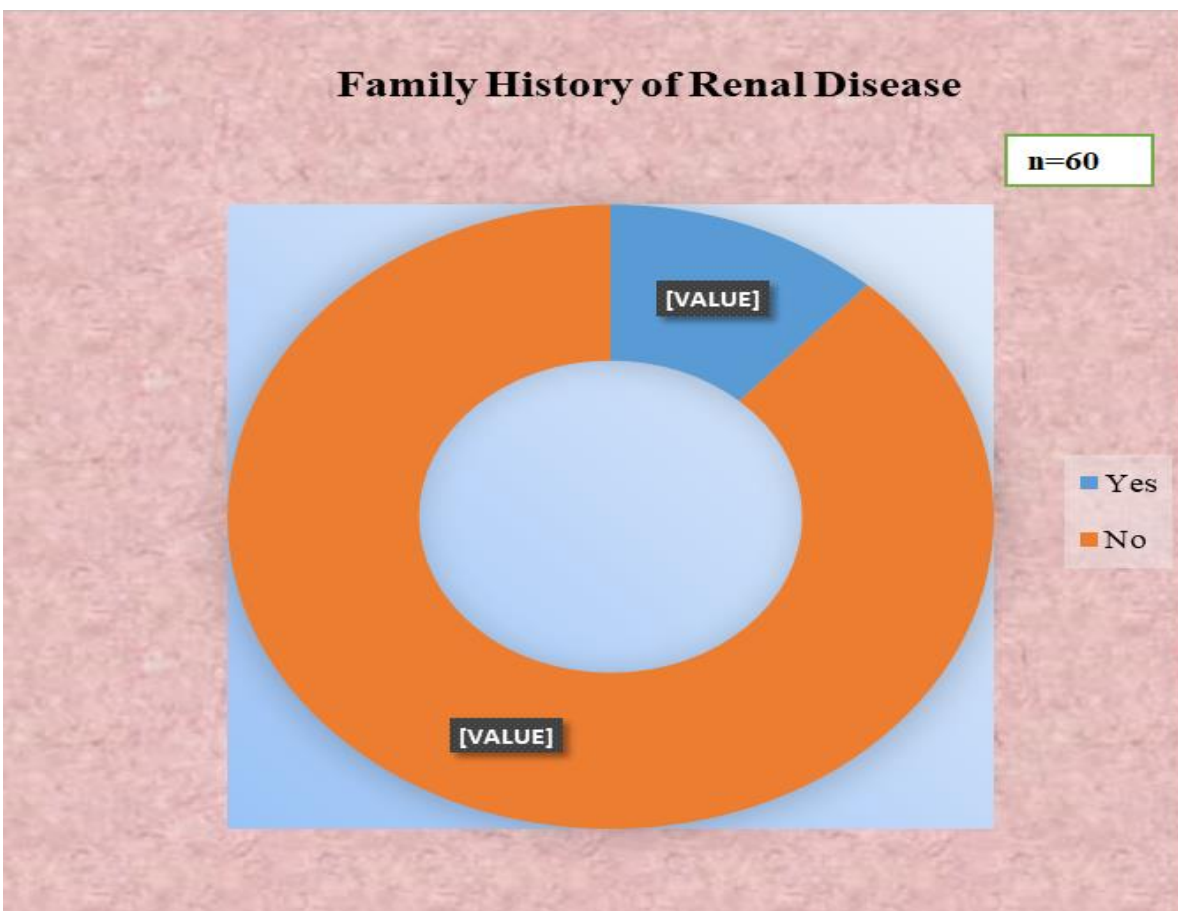


Fig 8 Doughnut Pie Diagram showing the Percentage Distribution of Patient According to Family History of Renal Disease

The above pie diagram shows the distribution of patient according to family history of renal disease, in which majority 53(88.30%) of the participants do not have the family history of renal disease.

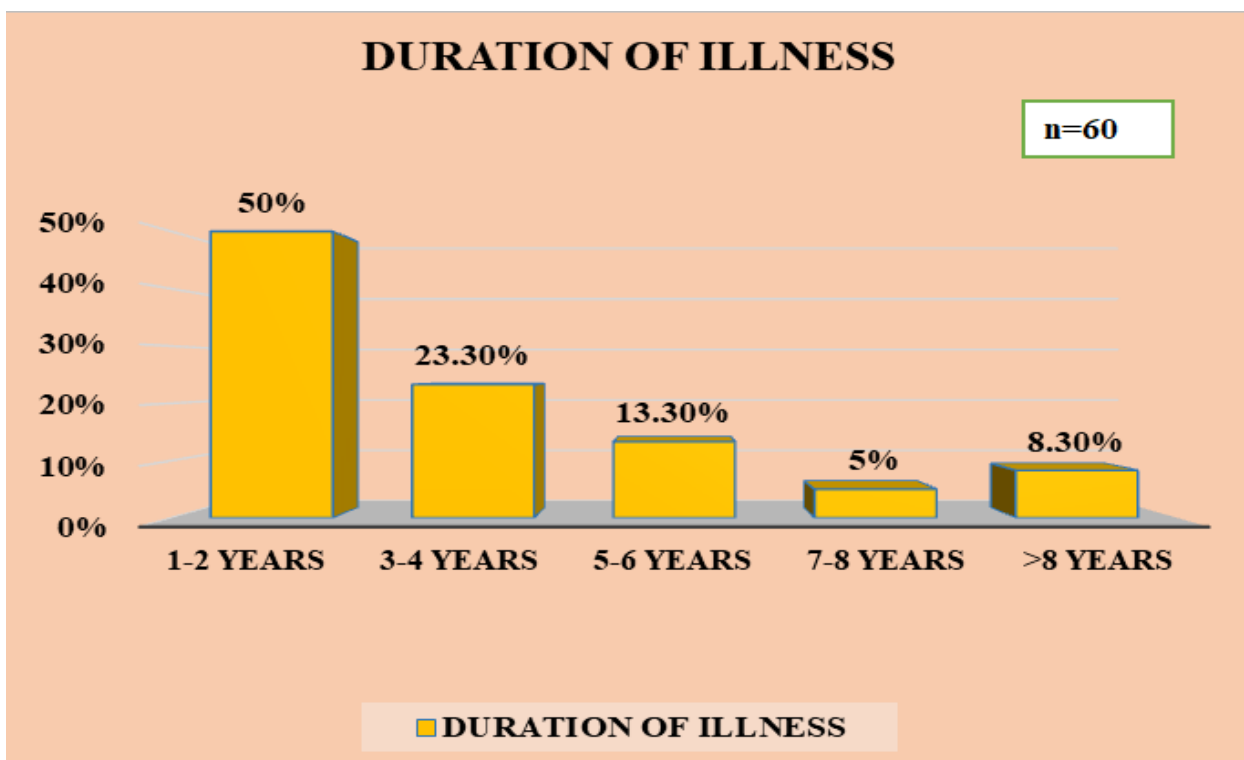


Fig 9 Bar Diagram showing the Percentage Distribution of Patient According to Duration of Illness

The presented data in above bar diagram revealed that majority 30 (50%) of the sample were suffered from illness since 1 to 2 years and least 3(5%) of the sample suffered from illness since 7 to 5 years.

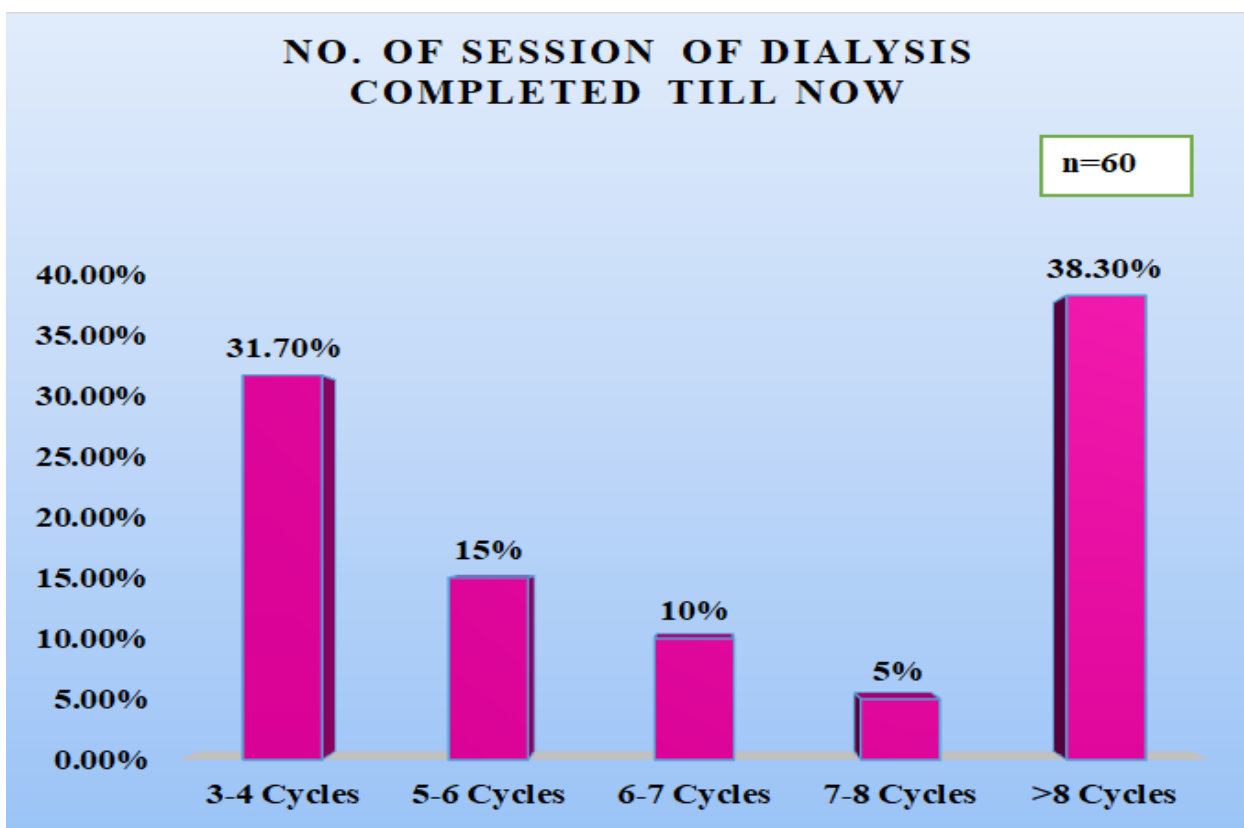


Fig 10 Bar Diagram showing the Percentage Distribution of Patient According to Number of Session of Dialysis Completed till now

From the above bar diagram it can be revealed that majority 23 (38.3%) of the sample had completed >8 cycles and the least 3(5%) had completed 7-8 cycles of session of dialysis till now.

Table 2 Descriptive Statistics Representing Quality of Life Profile of Patient Undergoing Hemodialysis Related to Different Domains n=60

S.NO	QUALITY OF LIFE DOMAINS	MEAN	SD	MAXIMUM	MINIMUM
1.	Related to Health	12.9	3.4	22	9
2.	Related to Pain	9.87	4.95	19	0
3.	Related to Feelings	9.43	3.38	15	1
4.	Related to Behavior	8.77	3.30	18	4
5.	Related to Kidney Disease	17.97	3.54	24	8
6.	Related to Effects of Kidney disease	10.13	4.34	16	0
7.	Related to Satisfaction with Care	24.82	0.81	25	19

Table 2 shows that the mean quality of life profile of the patients. It revealed that, the mean score related to health was 12.9±3.4, the mean score related to pain was 9.87±4.95, the mean score related to feelings was 9.43±3.38, the mean score related to behavior was 8.77±3.30, the mean score related to kidney disease was 17.97±3.54, the mean score related to effects of kidney disease was 10.13±4.34 and the mean score related to satisfaction with care. From the above results it is found that there is the good quality of life among the patients undergoing hemodialysis in all domains except in the domain related to kidney disease.

Table 3 Association between Quality of Life of Patients Undergoing Hemodialysis Related to Health Domain with their Selected Demographic Variables (n=60)

Background	Related to Health			H value Kruskal Wallis Test	P value
	n	Median	IQR(Q3,Q1)		
Age in Years:				3.29	0.50 (NS)
a. 20-30	8	14.50	4.5 (16.75,12.25)		
b. 31-40	8	12.00	5 (15.00,10.00)		
c. 41-50	9	12.00	3.5 (14.00,10.50)		
d. 51-60	11	12.00	4 (14.00,10.00)		
e. 60 and Above	24	12.00	3.75 (14.00,10.25)		
Gender:				0.28	0.59 (NS)
a. Male	43	12.00	3 (14.00,11.00)		
b. Female	17	12.00	4 (14.00,10.00)		
Education				0.66	0.95 (NS)
a. No Formal Education	8	12.00	2.75 (14.00,10.25)		
b. Primary	13	11.00	3.5 (13.50,10.00)		
c. Secondary	22	12.00	4 (14.00,10.00)		
d. Graduation	12	12.00	6 (16.00,10.00)		
e. Post-Graduation	5	12.00	2 (13.50,11.50)		
Marital Status:				3.11	0.21 (NS)
a. Unmarried	7	15.00	5 (17.00,12.00)		
b. Married	48	12.00	2 (14.00,12.00)		
c. Other (Divorced, Widow, Cohabitation)	5	12.00	3 (14.00, 11.00)		
Occupation:				2.37	0.66 (NS)
a. Unemployed	17	12.00	3 (14.00,11.00)		
b. Agriculture	13	13.00	7 (17.50,10.50)		
c. Business	11	11.00	3 (13.00,10.00)		
d. Service	13	12.00	4 (14.50,10.50)		
e. Others	6	11.00	5 (14.75,9.75)		
Monthly Income:				5.11	0.27 (NS)
a. <10,000	9	12.00	3 (14.00,11.00)		
b. 10,000-20,000	9	14.00	10 (21.00,11.00)		
c. 21,000-30,000	28	12.00	3.25 (13.25,10.00)		
d. 31,000-40,000	10	11.50	3.25 (13.25,10.00)		
e. >40,000	4	16.50	10.50 (21.75,11.25)		
Religion:				1.28	0.25 (NS)
a. Hindu	57	12.00	4 (14.00,10.00)		
b. Christian	3	14.00	-11 (0.00,11.00)		
Family History of Renal Disease				2.76	0.09 (NS)
a. Yes	7	14.00	2 (14.00,12.00)		

b. No	53	12.00	4 (14.00,10.00)	1.28	0.86 (NS)
Duration of illness:					
a. 1-2 Years	30	12.00	4.25 (14.25,10.00)		
b. 3-4 Years	14	12.00	4 (14.00,10.00)		
c. 5-6 Years	8	12.00	5 (15.50,10.500)		
d. 7-8 Years	3	11.00	-9 (0.00,9.00)		
e. >8 Years	5	12.00	2 (13.50,11.50)	4.28	0.37 (NS)
Number of session of dialysis completed till now:					
a. 3-4 Cycles	19	11.00	4 (14.00,10.00)		
b. 5-6 Cycles	9	12.00	3.5 (14.00,10.50)		
c. 6-7 Cycles	6	11.50	5 (14.75,9.750)		
d. 7-8 Cycles	3	14.00	-14 (0.00,14.00)		
e. >8 Cycles	23	12.00	3 (14.00,11.00)		

(P<0.05=Significant level), S: Significant, NS: Non-Significant)

Table 3 shows the association between quality of life related to health with selected demographic variables of the participants. Kruskal Wallis Test was computed to find the significant association between quality of life related to health with selected demographic variables of the participants. It revealed that there was no statistically significant association (P>0.05) found between the quality of life related to health with selected demographic variables of the participants. Hence, the researcher accepted the null hypothesis (H01).

Table 4 Association between Quality of Life of Patients Undergoing Hemodialysis Related to Pain Domain with their Selected Demographic Variables (n=60)

Background	Related to Pain			H value Kruskal Wallis Test	P value
	n	Median	IQR(Q3,Q1)		
Age in Years:				11.83	0.50 (NS)
a. 20-30	8	3.50	7.75 (8.50,0.75)		
b. 31-40	8	8.00	3.5 (9.75,6.25)		
c. 41-50	9	10.00	5 (13.00,8.00)		
d. 51-60	11	12.00	8 (16.00,8.00)		
e. 60 and Above	24	12.00	6 (15.00,9.00)		
Gender:				0.25	0.59 (NS)
a. Male	43	12.00	8 (14.00,6.00)		
b. Female	17	9.00	5.5 (13.00,7.50)	7.98	0.92 (NS)
Education					
a. No Formal Education	8	12.00	2.75 (14.75,12.00)		
b. Primary	13	11.00	5.5 (14.50,9.00)		
c. Secondary	22	10.00	6.5 (13.25,6.75)		
d. Graduation	12	6.50	6.25 (9.50,3.25)		
e. Post-Graduation	5	13.00	9 (14.50,5.50)	9.35	0.09 (NS)
Marital Status:					
a. Unmarried	7	3.00	7 (7.00,0.00)		
b. Married	48	10.00	5 (13.00,8.00)	2.43	0.65 (NS)
c. Other (Divorced, Widow, Cohabitation)	5	14.00	3.5 (15.50,12.00)		
Occupation:					
a. Unemployed	17	12.00	6 (14.00,8.00)	3.77	0.43 (NS)
b. Agriculture	13	10.00	7.5 (15.00,7.50)		
c. Business	11	12.00	7 (15.00,8.00)		
d. Service	13	8.00	8 (13.00,5.00)		
e. Others	6	8.00	9.25 (11.50,2.25)		
Monthly Income:					
a. <10,000	9	12.00	3.5 (13.00,9.50)	0.81	0.36
b. 10,000-20,000	9	8.00	3.5 (9.50,6.00)		
c. 21,000-30,000	28	10.50	7.5 (15.00,7.50)		
d. 31,000-40,000	10	9.00	11.25 (14.50,3.25)		
e. >40,000	4	12.50	5.5 (13.00,7.50)		
Religion:					

a. Hindu	57	10.00	7 (13.50,6.50)	0.02	(NS)
b. Christian	3	12.00	-10 (0.00,10.00)		
Family History of Renal Disease				10.81	0.87 (NS)
a. Yes	7	12.00	10 (14.00,4.00)		
b. No	53	10.00	6.5 (13.50,7.00)		
Duration of illness:				1.03	0.90 (NS)
a. 1-2 Years	30	9.00	12.25 (13.25,3.00)		
b. 3-4 Years	14	9.00	3.5 (11.25,7.75)		
c. 5-6 Years	8	12.50	6.99 (14.74,6.75)		
d. 7-8 Years	3	16.00	-13 (0.00,13.00)		
e. >8 Years	5	14.00	4.5 (15.50,11.0)		
Number of session of dialysis completed till now				1.03	0.90 (NS)
a. 3-4 Cycles	19	12.00	13 (16.00,3.00)		
b. 5-6 Cycles	9	10.00	5 (12.50,7.50)		
c. 6-7 Cycles	6	9.00	6 (12.00,6.00)		
d. 7-8 Cycles	3	12.00	-6 (0.00,6.00)		
e. >8 Cycles	23	10.00	6 (14.00,8.00)		

(P<0.05=Significant level), S: Significant, NS: Non-Significant)

Table 4 shows the association between quality of life related to pain with selected demographic variables of the participants. Kruskal Wallis Test was computed to find the significant association between quality of life related to pain with selected demographic variables of the participants. It revealed that there was no statistically significant association (P>0.05) found between the quality of life related to pain with selected background characteristics of participants, except for the variables like duration of illness (p<0.05). Hence, researcher accepted null hypothesis (H01).

Table 5 Association between Quality of Life of Patients Undergoing Hemodialysis Related to Feelings Domain with their Selected Demographic Variables (n=60)

Background	Related to Feelings			H value Kruskal Wallis Test	P value
	n	Median	IQR(Q3,Q1)		
Age in Years:				2.91	0.57 (NS)
a. 20-30	8	11.00	3.75 (11.75,8.00)		
b. 31-40	8	8.00	1.5 (9.00,7.50)		
c. 41-50	9	10.00	2.5 (11.00,8.50)		
d. 51-60	11	10.00	4 (11.00,7.00)		
e. 60 and Above	24	11.00	4.75 (11.75,7.00)		
Gender:				0.32	0.57 (NS)
a. Male	43	10.00	4 (11.00,7.00)		
b. Female	17	10.00	4 (11.00,7.00)	3.34	0.50 (NS)
Education					
a. No Formal Education	8	11.00	6.5 (14.00,7.50)		
b. Primary	13	11.00	4 (11.50,7.50)		
c. Secondary	22	10.00	4.25 (11.25,7.00)		
d. Graduation	12	8.00	3.75 (10.75,7.00)		
e. Post-Graduation	5	10.00	2 (11.00,9.00)	2.32	0.31 (NS)
Marital Status:					
a. Unmarried	7	11.00	4 (12.00,8.00)		
b. Married	48	10.00	4 (11.00,7.00)	7.37	0.11 (NS)
c. Other (Divorced, Widow, Cohabitation)	5	11.00	5.5 (14.50,9.00)		
Occupation:				4.66	0.32 (NS)
a. Unemployed	17	11.00	3 (11.50,8.50)		
b. Agriculture	13	11.00	8 (14.00,6.00)		
c. Business	11	10.00	3 (11.00,8.00)		
d. Service	13	8.00	3 (10.00,7.00)		
e. Others	6	7.50	4.75 (11.25,6.50)		
Monthly Income:				4.66	0.32 (NS)
a. <10,000	9	11.00	2.5 (12.00,9.50)		
b. 10,000-20,000	9	11.00	12 (13.00,1.00)		

c. 21,000-30,000	28	10.00	3.75 (11.00,7.25)	0.01	0.97 (NS)
d. 31,000-40,000	10	8.50	4 (11.00,7.00)		
e. >40,000	4	8.50	7.5 (10.00,2.50)		
Religion:				0.31	0.57 (NS)
a. Hindu	57	10.00	4 (11.00,7.00)		
b. Christian	3	11.00	-7 (0.00,7.00)		
Family History of Renal Disease				5.78	0.21 (NS)
a. Yes	7	11.00	3 (11.00,8.00)		
b. No	53	10.00	4 (11.00,7.00)		
Duration of illness:				7.60	0.10 (NS)
a. 1-2 Years	30	11.00	4.25 (11.25,7.00)		
b. 3-4 Years	14	8.00	3.75 (10.25,6.50)		
c. 5-6 Years	8	10.50	4.5 (11.75,7.25)		
d. 7-8 Years	3	10.00	-8 (0.00,8.00)		
e. >8 Years	5	11.00	2 (12.50,10.50)		
Number of session of dialysis:					
a. 3-4 Cycles	19	11.00	6 (14.00,8.00)		
b. 5-6 Cycles	9	9.00	5 (11.00,6.00)		
c. 6-7 Cycles	6	11.00	4.75 (12.50,7.75)		
d. 7-8 Cycles	3	7.00	-1 (0.00,1.00)		
e. >8 Cycles	23	10.00	3 (11.00,8.00)		

(P<0.05=Significant level), S: Significant, NS: Non-Significant)

Table 5 shows the association between quality of life related to feelings with selected demographic variables of the participants. Kruskal Wallis Test was computed to find the significant association between quality of life related to feelings with selected demographic variables of the participants. It revealed that there was no statistically significant association (P>0.05) found between the quality of life related to feelings with selected demographic variables of the participants. Hence, the researcher accepted the null hypothesis (H01).

Table 6 Association between Quality of Life of Patients Undergoing Hemodialysis Related to Behavior Domain with their Selected Demographic Variables (n=60)

Background	Related to Behavior			H value Kruskal Wallis Test	P value
	n	Median	IQR(Q3,Q1)		
Age in Years:				7.40	0.11 (NS)
a. 20-30	8	6.00	4.25 (8.75,4.50)		
b. 31-40	8	7.50	5 (11.00,6.00)		
c. 41-50	9	10.00	7.5 (12.00,4.50)		
d. 51-60	11	12.00	7 (14.00,7.00)		
e. 60 and Above	24	8.00	3 (10.00,7.00)		
Gender:				0.98	0.32 (NS)
a. Male	43	8.00	5 (11.00,6.00)		
b. Female	17	9.00	6.5 (12.50,6.00)	2.65	0.61 (NS)
Education:					
a. No Formal Education	8	8.50	4.25 (11.50,7.25)		
b. Primary	13	9.00	4 (10.50,6.50)		
c. Secondary	22	9.50	5.25 (11.25,6.00)		
d. Graduation	12	7.00	4.75 (10.75,6.00)		
e. Post-Graduation	5	6.00	5.5 (10.50,5.00)	5.40	0.06 (NS)
Marital Status:					
a. Unmarried	7	6.00	4 (8.00,4.00)		
b. Married	48	9.00	4.75 (11.00,6.25)	2.85	0.58 (NS)
c. Other (Divorced, Widow, Cohabitation)	5	9.00	3.5 (11.00,7.50)		
Occupation:					
a. Unemployed	17	9.00	5 (11.50,6.50)		
b. Agriculture	13	9.00	3 (10.00,7.00)		
c. Business	11	9.00	6 (12.00,6.00)		
d. Service	13	7.00	7 (11.00,4.00)		
e. Others	6	9.00	8.5 (14.00,5.50)		

Monthly Income:					
a. <10,000	9	8.00	4 (11.00,7.00)	3.25	0.51 (NS)
b. 10,000-20,000	9	9.00	5.5 (11.50,6.00)		
c. 21,000-30,000	28	9.00	4 (11.00,7.00)		
d. 31,000-40,000	10	6.00,	7.25 (11.25,4.00)		
e. >40,000	4	8.00	5.75 (10.50,4.75)		
Religion:					
a. Hindu	57	8.00	5 (11.00,6.00)	0.58	0.44 (NS)
b. Christian	3	10.00	-8 (0.00,8.00)		
Family History of Renal Disease					
a. Yes	7	7.00	3 (9.00,6.00)	0.56	0.45 (NS)
b. No	53	8.00	5 (11.00,6.00)		
Duration of illness:					
a. 1-2 Years	30	7.50	5.25 (11.00,5.75)	5.20	0.26 (NS)
b. 3-4 Years	14	10.50	5.5 (12.50,7.00)		
c. 5-6 Years	8	9.00	5.25 (11.50,6.25)		
d. 7-8 Years	3	10.00	-4 (0.00,4.00)		
e. >8 Years	5	8.00	2.5 (9.00,6.50)		
Number of session of dialysis:					
a. 3-4 Cycles	19	7.00	5 (10.00,5.00)	4.97	0.29 (NS)
b. 5-6 Cycles	9	9.00	3.5 (11.00,7.50)		
c. 6-7 Cycles	6	10.00	8.75 (15.00,6.25)		
d. 7-8 Cycles	3	12.00	-7 (0.00,7.00)		
e. >8 Cycles	23	9.00	5 (11.00,6.00)		

(P<0.05=Significant level), S: Significant, NS: Non-Significant)

Table 6 shows the association between quality of life related to behavior with selected demographic variables of the participants. Kruskal Wallis Test was computed to find the significant association between quality of life related to behavior with selected demographic variables of the participants. It revealed that there was no statistically significant association (P>0.05) found between the quality of life related to behavior with selected demographic variables of the participants. Hence, the researcher accepted the null hypothesis (H01).

Table 7 Association between Quality of Life of Patients Undergoing Hemodialysis Related to Kidney Disease Domain with their Selected Demographic (n=60)

Background	Related to Kidney Disease			H value Kruskal Wallis Test	P value
	n	Median	IQR(Q3,Q1)		
Age in Years:				2.46	0.65 (NS)
a. 20-30	8	17.50	5.5 (19.50,14.00)		
b. 31-40	8	19.50	2.5 (20.00,17.50)		
c. 41-50	9	18.00	3.5 (21.00,17.50)		
d. 51-60	11	16.00	7 (22.00,15.00)		
e. 60 and Above	24	18.50	4 (20.00,16.00)		
Gender:				0.27	0.59 (NS)
a. Male	43	19.00	5 (21.00,16.00)		
b. Female	17	18.00	4.5 (20.00,15.50)		
Education:				1.69	0.79 (NS)
a. No Formal Education	8	19.50	5.5 (21.00,15.50)		
b. Primary	13	20.00	3.5 (20.00,16.50)		
c. Secondary	22	17.50	5 (20.00,15.00)		
d. Graduation	12	18.50	7.5 (22.75,15.25)		
e. Post-Graduation	5	18.00	20.50,17.00		
Marital Status:				1.82	0.40 (NS)
a. Unmarried	7	18.00	7 (20.00,13.00)		
b. Married	48	18.00	4 (20.00,16.00)		
c. Other (Divorced, Widow, Cohabitation)	5	20.00	3.5 (21.50,18.00)		
Occupation:				3.36	0.49 (NS)
a. Unemployed	17	19.00	4.5 (21.50,17.00)		
b. Agriculture	13	17.00	4.5 (20.50,16.00)		

c. Business	11	18.00	2 (18.00,16.00)		
d. Service	13	19.00	8 (21.50,13.50)		
e. Others	6	16.00	4 (18.50,14.50)		
Monthly Income:				1.04	0.90 (NS)
a. <10,000	9	19.00	5.5 (20.50,15.00)		
b. 10,000-20,000	9	18.00	6 (22.00,16.00)		
c. 21,000-30,000	28	18.00	3.75 (20.00,16.25)		
d. 31,000-40,000	10	19.50	8 (22.00,14.00)		
e. >40,000	4	17.00	10.5 (20.25,10.00)		
Religion:				0.22	0.63 (NS)
a. Hindu	57	18.00	4.5 (20.50,16.00)		
b. Christian	3	19.00	-8 (0.00,8.00)		
Family History of Renal Disease				1.03	0.30 (NS)
a. Yes	7	18.00	5 (22.00,17.00)		
b. No	53	18.00	4.5 (20.00,15.50)		
Duration of illness:				2.30	0.68 (NS)
a. 1-2 Years	30	18.00	6 (21.00,15.00)		
b. 3-4 Years	14	17.00	4.25 (20.00,15.75)		
c. 5-6 Years	8	18.50	3.25 (20.00,16.25)		
d. 7-8 Years	3	20.00	-16.5 (0.00,16.00)		
e. >8 Years	5	20.00	4.5 (22.00,17.50)		
Number of session of dialysis:				1.28	0.86 (NS)
a. 3-4 Cycles	19	18.00	6 (21.00,15.00)		
b. 5-6 Cycles	9	17.00	4 (20.50,16.50)		
c. 6-7 Cycles	6	17.50	7.25 (21.75,14.50)		
d. 7-8 Cycles	3	17.00	-16 (0.00,16.00)		
e. >8 Cycles	23	19.00	4 (20.00,16.00)		

(P<0.05=Significant level), S: Significant, NS: Non-Significant)

Table 7 shows the association between quality of life related to kidney disease with selected demographic variables of the participants. Kruskal Wallis Test was computed to find the significant association between quality of life related to kidney disease with selected demographic variables of the participants. It revealed that there was no statistically significant association (P>0.05) found between the quality of life related to kidney disease with selected demographic variables of the participants. Hence, the researcher accepted the null hypothesis (H01).

Table 8 Association between Quality of Life of Patients Undergoing Hemodialysis Related to Effects of Kidney Disease Domain with their Selected Demographic Variables (n=60)

Background	Related to Effects of Kidney Disease			H value Kruskal Wallis Test	P value
	n	Median	IQR(Q3,Q1)		
Age in Years:				5.29	0.25 (NS)
a. 20-30	8	7.50	8.75 (14.00,5.25)		
b. 31-40	8	12.00	2.5 (12.00,9.50)		
c. 41-50	9	10.00	6.5 (12.50,6.00)		
d. 51-60	11	14.00	5 (15.00,10.00)		
e. 60 and Above	24	11.00	5 (13.00,8.00)		
Gender:				0.28	0.59 (NS)
a. Male	43	11.00	6 (14.00,8.00)		
b. Female	17	9.00	6 (13.00,7.00)		
Education:				4.14	0.38 (NS)
a. No Formal Education	8	12.00	4.5 (14.00,9.50)		
b. Primary	13	11.00	6.5 (15.50,9.00)		
c. Secondary	22	9.50	6.5 (12.25,5.75)		
d. Graduation	12	10.50	6.25 (12.75,6.50)		
e. Post-Graduation	5	12.00	6 (14.00,8.00)		
Marital Status:				2.18	0.33 (NS)
a. Unmarried	7	6.00	6 (11.00,5.00)		
b. Married	48	11.00	6 (14.00,8.00)		
c. Other (Divorced, Widow, Cohabitation)	5	11.00	5 (13.50,8.50)		

Occupation:					0.97 (NS)
a. Unemployed	17	11.00	5 (13.50,8.50)	0.45	
b. Agriculture	13	9.00	11 (15.00,4.00)		
c. Business	11	11.00	5 (12.00,7.00)		
d. Service	13	11.00	3.5 (13.00,9.50)		
e. Others	6	11.50	8.75 (14.50,5.75)		
Monthly Income:					
a. <10,000	9	11.00	5.5 (13.50,8.00)	4.25	0.37 (NS)
b. 10,000-20,000	9	7.00	13 (15.00,2.00)		
c. 21,000-30,000	28	11.00	6 (14.00,8.00)		
d. 31,000-40,000	10	12.00	3.5 (13.50,10.00)		
e. >40,000	4	6.00	11 (11.50,0.50)		
Religion:					
a. Hindu	57	11.00	6 (14.00,8.00)	2.61	0.10 (NS)
b. Christian	3	6.00	0 (0.00,0.00)		
Family History of Renal Disease					
a. Yes	7	12.00	6 (15.00,9.00)	0.71	0.39 (NS)
b. No	53	11.00	6 (13.50,7.50)		
Duration of illness:					
a. 1-2 Years	30	10.00	7 (13.00,6.00)	5.18	0.26 (NS)
b. 3-4 Years	14	11.50	6.5 (14.00,7.50)		
c. 5-6 Years	8	11.00	4.5 (12.75,8.25)		
d. 7-8 Years	3	16.00	-10 (0.00,10.00)		
e. >8 Years	5	12.00	4.5 (15.00,10.50)		
Number of session of dialysis:					
a. 3-4 Cycles	19	10.00	6 (13.00,7.00)	2.75	0.60 (NS)
b. 5-6 Cycles	9	9.00	6.5 (13.50,7.00)		
c. 6-7 Cycles	6	14.00	5 (14.50,9.50)		
d. 7-8 Cycles	3	23.00	-2 (0.00,2.00)		
e. >8 Cycles	23	11.00	5 (13.00,8.00)		

(P<0.05=Significant level), S: Significant, NS: Non-Significant)

Table 8 shows the association between quality of life related to effects of kidney disease with selected demographic variables of the participants. Kruskal Wallis Test was computed to find the significant association between quality of life related to effects of kidney disease with selected demographic variables of the participants. It revealed that there was no statistically significant association (P>0.05) found between the quality of life related to effects of kidney disease with selected demographic variables of the participants. Hence, researcher accepted the null hypothesis (H01).

Table 9 Association between Quality of Life of Patients Undergoing Hemodialysis Related to Satisfaction with care with Selected their Demographic Variables (n=60)

Background	Related to Satisfaction with care			H value Kruskal Wallis Test	P value
	N	Median	IQR(Q3,Q1)		
Age in Years:				2.94	0.56 (NS)
a. 20-30	8	25.00	0.75 (25.00,24.25)		
b. 31-40	8	25.00	0.00 (25.00,25.00)		
c. 41-50	9	25.00	0.00 (25.00,25.00)		
d. 51-60	11	25.00	0.00 (25.00,25.00)		
e. 60 and Above	24	25.00	0.00 (25.00,25.00)		
Gender:				0.46	0.49 (NS)
a. Male	43	25.00	0.00 (25.00,25.00)		
b. Female	17	25.00	0.00 (25.00,25.00)		
Education:				5.37	0.25 (NS)
a. No Formal Education	8	25.00	0.00 (25.00,25.00)		
b. Primary	13	25.00	0.00 (25.00,25.00)		
c. Secondary	22	25.00	0.00 (25.00,25.00)		
d. Graduation	12	25.00	0.75 (25.00,24.25)		
e. Post-Graduation	5	25.00	0.50 (25.00,24.50)		
Marital Status:					

a. Unmarried	7	25.00	1 (25.00,24.00)	3.70	0.15 (NS)
b. Married	48	25.00	0.00 (25.00,25.00)		
c. Other (Divorced, Widow, Cohabitation)	5	25.00	0.5 (25.00,24.50)		
Occupation:				1.05	0.90 (NS)
a. Unemployed	17	25.00	0.00 (25.00,25.00)		
b. Agriculture	13	25.00	0.00 (25.00,25.00)		
c. Business	11	25.00	0.00 (25.00,25.00)		
d. Service	13	25.00	0.00 (25.00,25.00)		
e. Others	6	25.00	0.25 (25.00,24.75)		
Monthly Income:				4.01	0.40 (NS)
a. <10,000	9	25.00	0.00 (25.00,25.00)		
b. 10,000-20,000	9	25.00	0.00 (25.00,25.00)		
c. 21,000-30,000	28	25.00	0.00 (25.00,25.00)		
d. 31,000-40,000	10	25.00	0.25 (25.00,24.75)		
e. >40,000	4	25.00	0.00 (25.00,25.00)		
Religion:				2.34	0.12 (NS)
a. Hindu	57	25.00	0.00 (25.00,25.00)		
b. Christian	3	25.00	-19 (0.00,19.00)		
Family History of Renal Disease				2.83	0.09 (NS)
a. Yes	7	25.00	1 (25.00,24.00)		
b. No	53	25.00	0.00 (25.00,25.00)		
Duration of illness:				3.92	0.41 (NS)
a. 1-2 Years	30	25.00	0.00 (25.00,25.00)		
b. 3-4 Years	14	25.00	0.00 (25.00,25.00)		
c. 5-6 Years	8	25.00	0.00 (25.00,25.00)		
d. 7-8 Years	3	25.00	0.00 (25.00,25.00)		
e. >8 Years	5	25.00	0.00 (25.00,25.00)		
Number of session of dialysis:				1.80	0.77 (NS)
a. 3-4 Cycles	19	25.00	0.00 (25.00,25.00)		
b. 5-6 Cycles	9	25.00	0.00 (25.00,25.00)		
c. 6-7 Cycles	6	25.00	0.00 (25.00,25.00)		
d. 7-8 Cycles	3	25.00	0.00 (25.00,25.00)		
e. >8 Cycles	23	25.00	0.00 (25.00,25.00)		

(P<0.05=Significant level), S: Significant, NS: Non-Significant)

Table 9 shows the association between quality of life related to satisfaction with care with selected demographic variables of the participants. Kruskal Wallis Test was computed to find the significant association between quality of life related to satisfaction with care with selected demographic variables of the participants. It revealed that there was no statistically significant association (P>0.05) found between the quality of life related to satisfaction with care with selected demographic variables of the participants. Hence, researcher accepted the null hypothesis (H01).

II. MAJOR FINDINGS

➤ *From the Present Study the following Conclusion of the Findings had drawn*

In this research study, majority (40%) of them belongs to the age group of 60 years and above, most (71.7%) of them were males, majority (36.7%) of them had secondary education, majority (80%) of them were married, around 95.0% of them were Hindus, most (28.3%) of them were unemployed, most (46.7%) of them had monthly income of rupees 21,000-30,00, around (80%) of them did not have family history of kidney disease, majority (50%) of the sample were suffered from 1 to 2 years duration of illness,

most (38.3%) of them had completed >8 cycles of dialysis till now.

The mean score related to health was 12.9±3.4, the mean score related to pain was 9.87±4.95, the mean score related to feelings was 9.43±3.38, the mean score related to behaviour was 8.77±3.30, the mean score related to kidney disease was 17.97±3.54, the mean score related to effects of kidney disease was 10.13±4.34 and the mean score related to satisfaction with care was 24.82±0.81. From the above results it is found that there is the good quality of life among the patients undergoing hemodialysis in all domains except in the domain related to kidney disease.

Kruskal Wallis Test was computed to find the significant association between quality of life and selected demographic variables of the participants. In this research study researcher found that there was no statistically significant association (P>0.05) found between the quality of life with selected demographic variables of the participants.

III. DISCUSSION

From the various research studies, it is evidenced that patients with chronic kidney disease undergoing hemodialysis experiencing various kinds of problems like physical, psychological, financial. This initiated the researcher to assess the quality of life among the patients undergoing hemodialysis which ultimately helps the health care team for better services to the patients.

From this study it was found that out of 60 sample majority (40%) of them belongs to the age group of 60 years and above, most (71.7%) of them were males, majority (36.7%) of them had secondary education, majority (80%) of them were married, around 95.0% of them were Hindus, most (28.3%) of them were unemployed, most (46.7%) of them had monthly income of rupees 21,000-30,00, around (80%) of them did not have family history of kidney disease, majority (50%) of the sample were suffered from 1 to 2 years duration of illness, most (38.3%) of them had completed >8 cycles of dialysis till now. From this research study it also came to be known that there is the good quality of life among the patients undergoing hemodialysis in all domains except in the domain related to kidney disease and Kruskal Wallis Test was computed to find the significant association between quality of life and selected demographic variables of the participants and it is found that there was no statistically significant association ($P > 0.05$) found between the quality of life related to satisfaction with care with selected demographic variables of the participants.

The findings of the present research study were supported by a study conducted by by Bk S, Rajbanshi L, Lopchan M. which revealed that, the number of male patients were higher than female patients. This may be probably because the prevalence of kidney disease is more common in male's patients as compared to female patients or health seeking behavior of male patients was higher than female patients.¹⁷

The findings were also supported by a study conducted by Mollaoglu & Devenci which revealed that, most affected QOL dimensions in the sampling were disease burden based on Kidney disease. The researcher concluded that chronic renal failure led to an advanced increase in the disease burden of the patients. In order to enhance the QOL in patients with CRF, it is necessary to improve the affected areas with a multidisciplinary approach and to handle the factors which influence the QOL with the understanding of effective and holistic health services in line with the individualized need for patient care.¹⁸

The present study also supported by a study conducted by Cruz. which revealed that, there was no association between the stages of the disease and the quality of life.¹⁹

IV. CONCLUSION

As quality of life is very important for everyone for the optimum levels of health. Being a hemodialysis patient, it is very challenging for them to maintained quality of life. Through various research and additional programs, the quality of life of chronic kidney disease patients can be improved for the better outcome of the care.

When treating chronic illnesses like chronic kidney disease (CKD), where the focus is on helping patients adapt to their physical limits, lifestyle adjustments, and medicinal therapies rather than curing the illness, Quality of Life has emerged as a critical outcome metric. Positive outcomes in dialysis patients, including improvements in vital laboratory results, cognitive and emotional functioning, mortality and hospitalization rates, and improved adherence to therapy, have been linked to higher QoL and self-efficacy.²⁰

RECOMMENDATIONS

- *A few Recommendations that can be made in this Study Include:*
- *The study can be conducted with large samples to generalize the findings*
 - *A similar study can be conducted in different settings.*
 - *Information booklet can be prepared in every hospital and provided to every patients with renal disease.*
 - *Comparative study can be done between hemodialysis and peritoneal dialysis.*

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