

HEALTHCARE FINANCING, TREATMENT ADHERENCE, AND QUALITY OF LIFE AMONG RENAL PATIENTS IN PAKISTAN: A CROSS-SECTIONAL STUDY FROM SARGODHA

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Abstract

Chronic kidney disease (CKD) is a serious health, economic, and psychosocial issue and it is especially problematic in low-resource countries such as Pakistan. The proposed cross-sectional research examines how healthcare financing influences the treatment adherence and quality of life among renal patients in Sargodha. Survey of 250 patients was done through a structured questionnaire which involved the WHOQOL-BREF scale. The analysis of Pearson correlation found that there was a weak, significant positive correlation between healthcare financing and treatment adherence ($r = 0.127, p = 0.045$), and no significant correlation between financing and quality of life ($r = 0.082, p = 0.198$). Results indicate that financial aid helps to comply with it but on its own, it does not bring a positive impact on overall well-being. The paper points out the importance of combining financial aid, patient education, and psychosocial support as integrated interventions that can help to improve health outcomes. Findings offer policy implications to policymakers, health caregivers, and future studies to streamline the renal care under resource-restricted settings.

Keywords: Chronic kidney disease, healthcare financing, treatment adherence, quality of life, renal patients, Pakistan.

Introduction

Cardiovascular complications and kidney failure are some of the conditions that can be caused by chronic kidney failure, which is a worldwide public health issue. In other parts of the world, kidney disease has already become an epidemic among individuals who are above 20 years and have the highest susceptibility to this disease. New study reports that in 2017, the prevalence of kidney failure in the world was 9.1% of the global population. Women and girls enjoyed a greater global majority of kidney failure than men and boys. China and India were reported to have almost one-third of reported cases of kidney failures, with 10 of countries having more than 10 million cases and 79 countries having more than 1 million cases (Butt et al., 2022).

Low HRQOL ratings, as measured by Medical Outcomes Study Short Form-36, were found to be related with hospitalization and death in patient populations that were undergoing dialysis. There have been significant HRQOL studies carried out in the past on people who were suffering from kidney failure. Despite this, not much progress has been made in Pakistan. By evaluating the

health-related quality of life (HRQOL) of patients at the beginning of dialysis therapy, Walters et al. discovered that the HRQOL ratings of patients who had just begun hemodialysis therapy were considerably lesser than those of patients who had been receiving HD for an extended period of time.

Dialysis Outcomes and Practice Patterns Study linked depressed symptoms to death and hospitalization. In contrast, the CHOICE study linked increased depressed symptoms to higher cardiovascular event risk. Early renal failure depression and clinical prognosis are poorly researched. Recent Wirkner et al. study linked comorbidities to diabetes. Advanced CKD has a major impact on patients' HRQOL (NCD-RisC, 2016). Dialysis patients with renal failure had poorer physical composite ratings. K. C. Hung and C. T. Chao (2024). In 2016, NCDs killed 39.5 million people worldwide (Naghavi et al., 2017). Universal Health Coverage (UHC) is another UN sustainable development objective threatened by NCDs. Chronic illnesses can require multiple drugs and treatments over time (Hill et al., 2016), resulting in massive healthcare and individual expenses. Chronic illnesses generally require many drugs and long-term treatment, which is costly for patients and healthcare (Essue et al., 2017). The developing understanding that 'financial risk protection' in addition to 'access to quality, essential healthcare' is vital to ensure equal access to healthcare (Yates, 2009) underpins the UHC aim (Dodd et al.).

Since the process of dialysis necessitates patients to bring changes to their respective lifestyles and routine in order to accommodate themselves and their families, it significantly affects the overall quality of life (QoL) of a patient. It affects their social and economic status, their relationship between them, their physical health, and their functional position equally (Theofilou, 2011). Psychosocial consequences of ESRD have a significant impact on the QoL of the patients. Such include coping mechanisms, peer interaction, emotional health and overall mental health of the patients undergoing ESRD care. The range of psychosocial factors that limit the value of life in ESRD patients is studied in this literature review based on the findings of multiple research and clinical observations. (Nazar et al., 2025).

In Pakistan, the most prevalent disease is kidney failure which leads to morbidity and mortality. In 2016, a total of 891 hemodialysis machines have 5935 patients admitted into various dialysis units located in the country in accordance with the 2016 Pakistan National Kidney Federation Registry. The available data also has some shortcomings since most of the large dialysis centers do not submit their data to the registry. (Butt et al., 2022).

Although the problem is increasingly discussed (Impact of Healthcare Financing on Treatment Compliance and Quality of Life among Renal Patients in Sargodha) the latent problem has not been researched adequately and comprehended properly. Although the awareness of chronic kidney disease (CKD) has increased and dialysis and long-term care have become very expensive, the scientific literature regarding the healthcare financing systems and their impact on the treatment adherence and the quality of life of the renal patients is sparse, in particular, in the low- and middle-income settings. Although a systematic review demonstrates that out-of-pocket expenses systematically impede treatment initiation and persistence in the CKD patients of all countries (Dodd et al., 2018), there is little context-specific data to examine how the financial burden, the insurance coverage, or the subsidy schemes affects adherence to dialysis or medication in such environment as Pakistan. Thus, an urgent systematic, context-sensitive empirical study between the healthcare financing types (governance, subsidies, out-of-pocket, charity support, etc.)

and treatment adherence and quality of life in renal patients in the underexploited areas is crucial. This kind of study would seal a critical vacuum in knowledge and furnish a policy-acting stakeholders, health-care professionals and policymakers with viable evidence to support the current financing mechanisms in order to lessen the disastrous spending, curb dismal patient outcomes and improve patient results.

The research is important as it is able to add valuable information to the already existing academic knowledge as well as provide practical implications to future investigators, policy makers, and educators. Marking the essential problems of the topic of study, the study reduces the gap between theory and practical application which helps the stakeholders to be more aware of the underlying factors affecting the problem. The research results will assist the decision-makers to develop more efficient strategies, enhance the existing practices, and solve problems of the target population. In addition, the research offers a solid base to future researches, as it identifies research gaps and evidence-based suggestions that can implement future studies. All in all, this study contributes to knowledge and makes significant contributions in the academic literature and actual solution.

Objectives of the Study

- To investigate relationship between healthcare financing and adherence to treatment in renal patients in Sargodha region.
- To analyze the effect of healthcare financing on the quality of life of renal patients of the Sargodha region.
- To offer policy proposals on how to strengthen the healthcare financing systems in order to improve treatment adherence and quality of life among renal patients,

Hypotheses of the Study

- H1: Access to healthcare financing is associated with treatment adherence among renal patients.
- H2: Healthcare financing has a significant positive effect on the quality of life of renal patients.

Literature Review

Chronic illnesses present physical and mental issues that impact the patient's lifestyle. The response shift model of quality of life research shows that chronically ill persons change their perceptions, expectations, and priorities to cope. Within this context, renal patients present an important case for understanding how individuals cope with the burdens of lifelong implementing treatment protocols and their associated side effects. (Kamran et al., 2025). The kidney is an important organ which filters waste products from the blood, help to maintain homeostasis, and control many other body processes. Humans have two bean-shaped kidneys below the rib cage on either side of the spine. Each kidney weighs 150 kilos and is 10–12 cm length (NIDDK, 2018). Maintaining renal health is crucial since reduced kidney function can cause major health issues (CDC, 2022). CKD ends in kidney failure, often known as end-stage renal disease. Carroll and Laurence (2006) define renal failure as kidneys that no longer function well enough to support life without dialysis or a transplant. (Nazar et al., 2025).

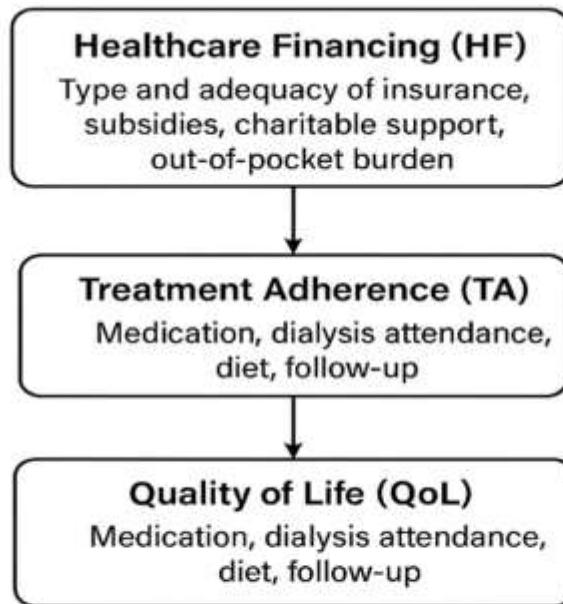
CKD is a global health issue associated to cardiovascular disease, mortality, and increasingly common end-stage renal disease. Prevention is more cost-effective than treatment, yet awareness remains limited, especially in Pakistan. Low health literacy, late referrals, and poverty affect outcomes and quality of life (Ahmed et al., 2022).

Case-based evidence shows how diverse psychosocial and structural elements affect End Stage Renal Disease patients' lived experience and quality of life. The observation of a 55-year-old patient with renal disease can be taken as illustrative of how the inability to deliver timely therapy or be health literate, financial, or even fearful of invasive therapy can be quite detrimental to the clinical outcomes of the patients. The state of development of primary hypertension and Type I diabetes to CKD and then ESRD and comorbidity of myocardial infarction and HCV are indications of how uncontrolled chronic diseases contribute to the physical and mental burden of renal failure. Her fatigue, muscle cramps, swelling, emotional irritability and constant anxiety can be interpreted as the psychosocial trends in ESRD populations. It bears semblance to the results of Nazar et al. (2025) who found out that the psychosocial factors which heavily influence the quality of life of patients undergoing hemodialysis include stress, emotional dysregulation, and social support thus the case illustrates how daily stressor factors, fear-related medical choices, and chronic dialysis dependency have a devastating impact on patients. This example also supports the necessity to look at the impact of the healthcare systems, patient education, and the support systems on the adherence to the treatment, which are important factors of survival and life quality of patients with the kidney problem. (Nazar et al., 2025).

Theoretical Framework

Based on health service consumption and health behavior theories, the suggested research paper links healthcare funding (HF) to treatment adherence (TA) and quality of life (QoL) in the renally ill. The framework is guided by two complementary theories: Andersen's Behavioral Model of Health Services Use, which explains how enabling resources (including financing) affect health care access and use, and HBM, which explains how barriers, benefits, and self-efficacy affect adherence. The model described by Andersen emphasizes that money and external facilitating conditions affect the access of patients to the needed care; the lack of needed funding (high out-of-pocket fees, low insurance rates) serves as a facilitating restraint, bringing downturn to service use and persistence. HBM complements it by describing how perceived security hindrances and perceived advantages of treatment decide motivation to follow difficult programs like dialysis and medication. (Andersen, R. M. 1995). Health Belief Model is an extension of this structural account since it concentrates on the cognitive variables of individuals. In the context, healthcare financing will determine perceived financial hindrances and perceived treatment advantage among the patients, which subsequently determines how patients will be motivated and their self-efficacy to follow a prescribed regimen of treatment. These impressions have a direct influence on the adherence of treatment, such as medical treatment and drug compliance, dialysis attendance, dietary regulation, and follow-up visits. Under this integrated frame, healthcare financing is proposed as an enabling/contextual condition (type and adequacy of insurance, subsidies, charitable support, and out-of-pocket burden) that influences patients in their capacity to afford and gain access to care. Empirical literature demonstrates that even among CKD and dialysis populations, financial deterrence and disastrous out-of-pocket expenses decrease the initiation and continuity of the treatment process, predisposing individuals to delays in treatment, missed appointments, or failure to buy medications. Household economic stability is also aggravated by these financial shocks and adversely affects psychosocial well-being pathways which are likely to decrease QoL amongst renal patients. Systematic reviews and LMIC studies evidenced this financial + adherence + outcomes regards the impact. (Dodd et al., 2018).

Diagram: 01: Conceptual Framework



As the literature on chronic kidney disease and its psychosocial, clinical, and economic features grows, little is known about how healthcare financing affects renal patients' treatment adherence and quality of life, especially in low-resource settings like Sargodha. Pakistani study focuses on dialysis patients' prevalence, clinical results, depression, and quality of life (Nazar et al., 2025), but only a very few have studied the financial determinants of adherence, including out-of-pocket spending, the existence of any government subsidy or charitable based support programs. Alongside, the majority of the studies that evaluate the impact of financing on renal care have been done in the sphere of high-income with formal insurance systems (Dodd et al., 2018), which is why their results cannot be applied to Pakistan, where healthcare is primarily funded by out-of-pocket payments and informal supportive systems. There is no recent study that specifically evaluates the effects of various financing schemes, like government assistance, personal expenditure, or philanthropic resources, on attendance to dialysis sessions, adherence to medications, and follow-up appointments, in the disadvantaged areas such as Sargodha. There is also a gap in literature where literature has recognized the economic cost of CKD but has done minimal or none to demonstrate how healthcare funding has impacted the overall quality of life of patients both emotionally, economically, physically functioning, and socially. Nor does the recent policy reform (e.g., Sehat Sahulat Program) undergo an examination of its effectiveness concerning the effect on the adherence or QoL of renal patients (Haq & Awan, 2025).

Research Methodology

This quantitative, cross-sectional study will explore how healthcare finance structures affect treatment adherence and quality of life in Sargodha renal patients. The design is ideal because it

facilitates statistical investigation of variable correlations by gathering standardized data from a large number of respondents at once.

Study Population

The study population consists of renal patients receiving treatment at Sargodha.

Sampling Technique

A purposive sampling method will be used to select dialysis centers because renal treatment facilities in Sargodha are limited and specialized.

Sample Size

250 respondents

Data Collection Instrument

A structured questionnaire will form the primary tool that will be used to gather the data in the current study. The questionnaire will be divided into four broad sections of the questionnaire to ensure that a comprehensive measure of the research variables is carried out. The former part will be targeted at collecting demographic information regarding respondents having the capacity of considering their characteristics, including age, gender, the education level, and income among other potential background elements. Part B entails the health care financing process and includes questions of sources of financing healthcare, cost of treatment, insurance cover and out of pocket expenditures. Section C will be used to evaluate compliance with the therapy, which currently represents such problems as regularity of drug use, compensation frequency and adherence rate to treatment. Finally, Section D assesses respondents' physical, psychological, social, and functional well-being to determine QoL. These sections create a systematic data capture that meets the study's goals. The current study used the WHOQOL-BREF to assess the study population's quality of life. WHOQOL-BREF, the short version of WHOQOL-100, is a widely used and cross-culturally acceptable 26-item scale (WHOQOL Group, 1998). Individuals' physical, mental, social, and environmental well-being are assessed. All items will be scored on a 5-point Likert scale, with higher scores indicating higher life quality. The scale has been widely validated and shown good psychometric content across cultures (Skevington et al., 2004).

Validity and Reliability of the Instrument

This paper applied the content validity of the questionnaire by ensuring that the item was reviewed by experts in nephrology, public health and research experts and making only minor cultural adaptations to the WHOQOL-BREF according to the WHO guidelines in maintaining the original meaning and structure of the item. To enhance clarity, sequencing, and reliability, a pilot study was done on 20 renal patients. The reliability test done through the Cronbach alpha revealed high internal consistency (51 items which include all the items 51) (0.886), which demonstrated that the instrument was quite appropriate in data collection. To conduct the data collection process, formal consent was granted by the Department of Sociology and Criminology and other hospitals and dialysis centers and participants were also privy to fill the questionnaire with regards to their literacy and comfort level through self reporting survey or interviewer-assist survey during a visit to the clinic or dialysis center.

Data Analysis Techniques

Data will be examined using SPSS. Frequencies and percentages will be used to describe respondents' demographics and major study variables. Pearson correlation analysis will determine

the strength and direction of variable connections seen by inferential statistics. To test hypotheses H1 and H2, correlation analysis will discover if research variables are related.

Results

Table N0. 01: Background of the participants

Sr	Variables	Categories	Frequency	Percentage
1	Age	20-40	134	53.6
		40-60	113	45.2
2	Gender	Male	113	45.2
		Female	137	54.8
3	Marital status	Single	81	32.4
		Married	153	61.2
		Widowed	16	6.4
4	Educational level	No formal education	85	34.0
		Primary	112	44.8
		Secondary	53	21.2
5	Monthly household income (average)	Less than 20k	45	18.0
		20k-49k	148	59.2
		50k-1 lac	57	22.8
6	place of residence	Urban	93	37.2
		Rural	157	62.8
7	Current treatment	Medical treatment	77	30.8
		Hemodialysis	114	45.6
		Peritoneal dialysis	59	23.6
8	Primary Financing	Out-pf-pocket	39	15.6
		government subsidy	178	71.2
		Charity/ NGOs	33	13.2
9	Approximate monthly out-of-pocket spending for renal care	11k-30k	119	47.6
		31k-60k	113	45.2
		61k above	18	7.2
10	I know the eligibility criteria for government or charitable financial assistance programs.	Disagree	20	8.0
		Neutral	58	23.2
		Agree	115	46.0
		strongly agree	57	22.8

The sample used was 250 renal patients, with most being between 20 and 40 years of age (53.6%), and 45.2% were among the people who were below 20 years old up to 60 years of age indicating that the population was relatively young and middle-aged and affected by renal conditions. There was a slightly higher number of female participants than males (54.8% of the sample) which could either represent the gender representation of the treatment seeking behaviour or the proportion of patients in the area. Majorities of them were married (61.2%), then single (32.4) and widowed (6.4) as it is possible to refer to the social support systems that might have a potential impact on

treatment adherence and quality of life. In terms of education level, a significant ratio had primary level education (44.8%), 34% lacked any form of education and 21.2 had secondary education indicating there might be a difficulty in comprehending the intricate treatment plan or financial aid systems. Assuming socioeconomic status, most of the participants had the monthly household income between 20,000 and 49,000 PKR (59.2%), 22.8% had income between 50,000 to 100,000 PKR and 18% had below 20,000 PKR. This sample was mostly rural (62.8 percent) that might have an impact on healthcare accessibility issues as rural areas might lack access to health care infrastructure and might affect adherence to treatment. With regards to the type of treatment, 45.6% were undergoing hemodialysis, 30.8% were receiving medical treatment and 23.6% undergoing peritoneal dialysis which is the distribution of treatment modalities in the area. The patterns in the health care financing demonstrated that the majority of participants depended on the government subsidies (71.2) with lower percentages depending on the out of pocket payments (15.6) and some on the charitable groups and NGOs (13.2). Nevertheless, a considerable percentage of the participants had high out-of-pocket costs per month, 47.6% had to spend between 11,000- 30,000 PKR and 45.2% spent between 31,000- 60,000 PKR on renal care, which indicated that it had high costs even when subsidies were provided. Interestingly, there was a difference in awareness of eligibility criteria when receiving financial assistance programs with 46 percent of the participants saying that they were aware, and 22.8 percent strongly saying they were aware, and finally, 8 percent disagreeing, and 23.2 percent indifferent showed that there were gaps in patient knowledge that probably only detracted optimum use of the available support. In general, the given demographic and socioeconomic information about the participants demonstrates that the renal patients in this setting have to deal with a blend of financial, educational, and geographic issues, and such factors could influence the level of treatment compliance and quality of life. Such results highlight the need to implement specific interventions that support healthcare outcomes based on the provision of financial support and patient education.

Hypothesis testing

- H1: Access to healthcare financing is associated with treatment adherence among renal patients.

Table No. 02: Correlations

		HF	TA
HF	Pearson Correlation	1	.127*
	Sig. (2-tailed)		.045
	N	250	250
TA	Pearson Correlation	.127*	1
	Sig. (2-tailed)	.045	
	N	250	250

*. Correlation is significant at the 0.05 level (2-tailed).

Pearson correlation analysis was conducted to analyze the healthcare funding and adherence to renal patient treatment. The treatment adherence had a weak positive relationship with healthcare finance ($r = 0.127$, $p = 0.045$). In this way, individuals who have more money to fund healthcare have a slight advantage to avoid their treatment plans. In accordance with these results, the null

hypothesis (H2), according to which the availability of healthcare financing does not correlate with the treatment adherence, is rejected. On the other hand, the hypothesis (H1), that the treatment adherence is related to access to the healthcare financing, is accepted. These findings underscore the importance of the financial resource in achieving the adherence to treatments among patients, but the low level of correlation, also reveals the possibility that other variables can be relevant to the adherence among renal patients.

Hypothesis 02

- H2: Healthcare financing has a significant positive effect on the quality of life of renal patients.

Table No. 03: Correlations

		HF	QOL
HF	Pearson Correlation	1	.082
	Sig. (2-tailed)		.198
	N	250	250
QOL	Pearson Correlation	.082	1
	Sig. (2-tailed)	.198	
	N	250	250

Pearson correlation analysis was utilized to determine the relationship between the QoL of renal patients and healthcare financing. QoL was positively related to healthcare financing ($r = 0.082$), which was not statistically significant ($p = 0.198$). This demonstrates that the quality of life among patients of this population is not directly tied to healthcare spending. Relying upon these results, the null hypothesis (H_0), that healthcare financing does not significantly impact on the quality of life, is accepted, and the hypothesis (H2), that the impact that healthcare financing has on the quality of life is positive and significant, is rejected. The implication of these findings is that although money might affect treatment compliance, the connection between money and quality of life is not that straightforward, and thus, other psychosocial, clinical, or structural variables might have a greater impact on the quality of life in patients with renal disease.

Discussion

The research question that was examined in this study was how healthcare finance influences treatment adherence and quality of life among Sargodha renal patients. In the research, the question that was addressed was whether alternative healthcare financing and treatment adherence strategies could be applied by renal patients. There was also a positive but statistically insignificant association between healthcare finance and treatment adherence ($r = 0.127$, $p = 0.045$), wherein patients received increased financial assistance compared to those who treated adhered to their treatment. These data support H1, that treatment adherence is linked to healthcare financing. This supports previous research that suggests financial considerations including out-of-pocket costs and the lack of subsidies may cause chronic renal disease patients to not follow their therapy (Dodd et al., 2018). Dodd et al. (2018) compared the increased financing of healthcare services to the interpretation of financial resources and access to healthcare services in Andersen's Behavioral

Model of Health Services Use, which holds that financial resources support healthcare access (Andersen, 1995). In the same vein, Mohammad Nezhad et al. (2024) showed that patients that were provided structured financial and clinical support demonstrated better adherence to self-care practices and dialysis, which further supports the research hypothesis of how healthcare financing assists the continuation of treatment. The framework identifies moderators and confounders: socioeconomic status, health literacy, comorbidities (diabetes, cardiovascular disease), social support and facility-level factors (public vs private vs charitable dialysis centres) may change the strength and direction of the HF→TA→QoL paths. Indicatively, publicly funded schemes that decrease out-of-pocket expenditures have been linked with quantifiable decreases in OOPE and enhanced financial indemnity, which subsequently can help stay compliant, which has been reported in insurance/subsidy program assessments in Pakistan. Such contextual moderators play a significant role to explain heterogeneous results in settings (Haq and Awan 2025). Although healthcare financing and treatment adherence were significantly associated, it was not associated with quality of life ($r = 0.082$, $p = 0.198$). Thus, H2, the hypothesis that healthcare financing improves quality of life, was rejected. Although compliance is easy, this does not necessarily suggest that more funding improves renal patients' lives. Its lack of impact on quality of life may be due to psychosocial, clinical, and structural factors like emotional distress, comorbidities, and the stress of having a chronic disease, which greatly impacts patients' well-being (Nazar et al., 2025). The same observation has been made by prior studies, as they mention that the renal patients face a high level of psychosocial difficulties, including stress, anxiety, and depression, that do not depend on the financial resources and affect the quality of life (Butt et al., 2022; Theofilou, 2011). Thus, the treatment adherence requires financing, and the quality of life is a complex phenomenon that needs extra maintenance, which is not dependent on financial resources. Another aspect of the outcomes of this research is the significance of addressing contextual and structural variables when conducting the analysis of the impacts of finding healthcare financing. As it is noted, patients, who have renal problems and do undergo dialysis or other treatment, struggle with various problems such as changes in lifestyle, psychosocial stress, and clinical problems, and all of them impact the quality of life (Nazar et al., 2025).

The above problems emphasize the significance of using integrated strategies that imply the delivery of financial assistance and psychosocial counseling, health education, and accessible clinical treatment to enable the improvement of the adherence and quality of life. Such results provide a theoretical premises to the integrated perspective of healthcare financing as a treatment adherence resource (Andersen, 1995) and demonstrate that the quality of life is dependent on other factors than financial access due to the voluminous literature on the treatment of end-stage renal disease and chronic kidney disease (Butt et al., 2022). The study implications on the field of policy and practice refer to the fact that government subsidies and financial support programs are necessary to ensure that the treatment regimens are followed, but interventions that can be used to enhance the quality of life should possess a multi-dimensional character.

Financial interventions can be supplemented with various programs including patient education, mental health support and community engagement which will help improve the overall well being of patients. Additionally, those in need of financial aid should be made aware of the eligibility requirements when it comes to the use of the available resources since almost one-third of the respondents in this research knew nothing or was indifferent about eligibility to the programs. This observation confirms Haq and Awan (2025), who stressed that the proper execution of subsidy programs has to be supported by funds and effective communication and patient interaction. In

general, the paper has verified the existence of a major influence of healthcare financing that facilitates treatment adherence among the renal patients in Sargodha that meets the initial goal of the research. Nonetheless, financing is not able to produce any significant improvement on the quality of life, which makes it possible to call on the multi-component interventions that will focus on psychosocial, educational and structural determinants of well-being, and, as a result, offer evidence-based conclusions to policymakers, medical professionals, and future researchers.

Conclusion

The study examined how healthcare financing, treatment compliance, and renal patients' quality of life in Sargodha, Pakistan, relate. There was a small but statistically significant association between healthcare finance and treatment adherence, indicating that financial support helps patients follow treatment regimens. Quality of life did not correlate with healthcare finance, suggesting that economic support cannot improve health without further treatments. Many behavioral, clinical, and structural aspects affect renal patients' quality of life. Thus, integrated healthcare solutions are needed to address adherence and patient outcomes.

Recommendations

This paper proposes some strategies that could enhance the adherence to treatment and quality of life for renal patients by policymakers, medical caregivers, and researchers. First, the policy makers ought to enhance and increase established healthcare financing plans especially government subsidy plans to minimize out-of-pocket expenses among renal patients. The costs of finances should encompass dialysis, medications, and diagnostic tests as well as transportation and follow-up care. This may assist in treatment continuation and avoid poverty. Second, it can be recommended to enhance the awareness of patients on eligibility criteria and procedures to get access to financial assistance programs. Information desks and counseling services should be established in the hospitals and dialysis facilities where patients and their families would be advised on the possibilities of accessing financial support systems. Third, psychosocial and mental health services would have to be integrated into renal care. Treatment of emotional distress, depression, and anxiety may be beneficial with help of counseling, peer support groups and programs aimed at stress management as it has a great impact on the quality of life of patients. These psychosocial issues cannot be limited to enhancing well being without financial assistance. Fourth, the method of patient education programs is to be reinforced to improve health literacy and self-care practices. Patients of low literacy level can be educated through educational interventions that may help in enhancing knowledge of the treatment regimens, dietary responses, and medication adherence. Lastly, longitudinal and mixed-method designs ought to be used in future studies in order to determine the long-term consequences of healthcare financing on adherence and quality of life. Other mediating variables, including social support and disease severity and health literacy, also should be investigated in studies in order to come up with a more comprehensive and successful intervention strategy.

References

Ahmed, J., Azhar, S., ul Haq, N., Hussain, S., Stájer, A., Urbán, E., ... & Jamshed, S. (2022). Awareness of chronic kidney disease, medication, and laboratory investigation among nephrology and urology patients of Quetta, Pakistan. *International Journal of Environmental Research and Public Health*, 19(9), 5015.

Akhtar, T., Pienaar, A. J., Asmat, K., & Sikander, S. (2025). Lived realities of symptom burden among haemodialysis patients: a phenomenological study from rural Pakistan. *BMJ open*, 15(11), e106937.

Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: does it matter?. *Journal of health and social behavior*, 1-10.

Butt, M. D., Ong, S. C., Butt, F. Z., Sajjad, A., Rasool, M. F., Imran, I., ... & Babar, Z. U. D. (2022). Assessment of health-related quality of life, medication adherence, and prevalence of depression in kidney failure patients. *International journal of environmental research and public health*, 19(22), 15266.

Dodd, R., Palagy, A., Guild, L., Jha, V., & Jan, S. (2018). The impact of out-of-pocket costs on treatment commencement and adherence in chronic kidney disease: a systematic review. *Health policy and planning*, 33(9), 1047-1054.

Essue, B. M. (2017). Disease control priorities: improving health and reducing poverty. *The International Bank for Reconstruction and Development/The World Bank*.

Haq, A. U., & Awan, M. S. (2025). Impact of Sehat Sahulat Program on Out-of-Pocket Health Expenditures in Pakistan. *Journal of Health, Wellness, and Community Research*, e126-e126.

Hill, N. R., Fatoba, S. T., Oke, J. L., Hirst, J. A., O'Callaghan, C. A., Lasserson, D. S., & Hobbs, F. R. (2016). Global prevalence of chronic kidney disease—a systematic review and meta-analysis. *PLoS one*, 11(7), e0158765.

Hung, K. C., & Chao, C. T. (2024). Frailty May Mediate the Relationship Between Depressive Symptoms, Antidepressant Use, and Mortality in Patients With Chronic Kidney Disease. *Kidney Medicine*, 6(9).

Jha, V. (2004). End-stage renal care in developing countries: the Indian experience. *Renal failure*, 26(3), 201-208.

Kamran, F., Anjum, A., Rafique, R., & Alkheshnam, A. (2025). Living with a Chronic Condition: A Study of Patients' Life Transitions with Renal Conditions. *Pakistan Journal of Psychological Research*, 40(1), 79-95.

Mohammadnezhad, G., Ehdaivand, S., Sebty, M., Azadmehr, B., Ziae, S., & Esmaily, H. (2024). Chronic kidney disease and adherence improvement program by clinical pharmacist-provided medication therapy management; a quasi-experimental assessment of patients' self-care perception and practice. *BMC nephrology*, 25(1), 463.

Naghavi, M., Abajobir, A. A., Abbafati, C., Abbas, K. M., Abd-Allah, F., Abera, S. F., ... & Fischer, F. (2017). Global, regional, and national age-sex specific mortality for 264 causes of death, 1980–2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet*, 390(10100), 1151-1210.

Nazar, I., Kamran, F., Rafique, R., & Ishaq, G. (2025). Impact of Psychosocial Factors on Quality of Life: A Case Study of End Stage Renal Disease. *Journal of Research in Social Sciences*, 13(1), 1-8.

NCD Risk Factor Collaboration (NCD-RisC). 2016. Worldwide trends in diabetes since 1980: a pooled analysis of 751 population-based studies with 4.4 million participants. *The Lancet* 387: 1513–30.

Skevington, S. M., Lotfy, M., & O'Connell, K. A. (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: psychometric properties and results of the international field trial. A report from the WHOQOL group. *Quality of life Research*, 13(2), 299-310.

Tariq, M., Munir, M. N., Afzal, R., Afzal, F., & Younas, K. (2024). Psychological Distress, Hope, and Quality of Life Among Cardiac Patients: A Correlational Study. *Dialogue Social Science Review (DSSR)*, 2(4), 472-484.

Yates, R. (2009). Universal health care and the removal of user fees. *The Lancet*, 373(9680), 2078-2081.