

Adherence in hemodialysis patients who are on a therapeutic regimen

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INTRODUCTION

Hemodialysis (HD) is one of the most often used renal replacement therapies, and it is the most effective treatment for end-stage renal failure. The number of HD patients worldwide is increasing at a rate of 7%–9% per year. In 2017, 86.9% of incident late-stage kidney patients commenced renal replacement therapy with HD, according to statistics from the United States Renal Data System (USRDS) in 2019. According to the Indonesian Renal Registry's 2017 data, there are 77,892 HD patients in Indonesia, and about 98% of patients with renal difficulties still consider HD to be the best kidney replacement therapy. Most patients get HD twice a week, with each session lasting four to five hours. Health care costs for kidney disease were ranked second highest in the Health Social Security Institution in 2017, according to the Indonesian Ministry of Health's Center for Data Information (BPJS). HD can help patients feel better, but it can't cure, restore, or fully replace kidney function. It also has an impact on patients' quality of life and can lead to substantial physiologic changes, which can lead to disability. Patients must self-manage their illness and adapt their behavior and lifestyle while adhering to the HD therapy regimen, which is dependent on their attendance at HD sessions, medication, fluid restriction, and food compliance. Physical exercise, in addition to these four components, is an important factor that patients must follow as directed. Patients should engage in moderate physical exercise for 30 minutes on most days, according to the National Kidney Foundation (NKF), as part of a treatment plan that focuses on improving or maintaining their quality of life. Following the therapy regimen is critical for achieving optimal, effective, and successful HD results. Adherence is an important aspect in helping patients obtain positive therapy outcomes. It helps to reduce HD-related morbidity, mortality, and symptoms such as muscle cramping, starvation, sepsis, and infections. Furthermore, it lowers the risk of hospitalization and promotes good health and quality of life.

Failure to follow the HD regimen, on the other hand, can result in serious and sometimes fatal conditions such as hypertension, muscle cramps, Arteriovenous Fistula (AVF) blockage, dyspnea associated with pulmonary edema, or heart attack due to hyperkalemia, as well as a lower quality of life, shorter life expectancy, increased morbidity and mortality, and a higher cost and burden on the health-care system. Despite having appropriate information of the risks, poor adherence to the therapy regimen has been consistently reported among HD patients. In two previous studies, for example, adherence to the prescribed diet was 24.0% and 27.7%, adherence to fluid intake restrictions was 24.5% and 31%, adherence to HD schedule attendance was 52.0% and 91.0%, and adherence to medication was 66.5% and 81.0%, respectively. Previous studies have demonstrated the benefits of physical exercise, and poor physical functioning is likely the most ubiquitous and disabling disturbance in patients' dialysis. Patients with HD frequently struggle to stick to at least one of the therapy regimens. Adherence to therapy in chronic disease patients is a complex issue that necessitates a diversified strategy. Patients' experiences with HD therapy adherence must be understood in order to provide complete nursing care and broad nursing practices for kidney disease patients. Other patients may become more conscious of the lifestyle choices and behaviors that they may need to change as a result of hearing

about these patients' experiences, allowing them to improve their own adherence. Researchers with a special interest in medical surgical nursing, particularly hemodialysis, should conduct extensive research to learn more about therapeutic adherence. Nurses, in particular, must pay close attention to patients' experiences and viewpoints. Despite the numerous researches on adherence among HD patients, none have looked at the patients' experiences in sticking to the therapy regimen. As a result, the goal of this study was to identify and investigate HD patients' experiences with therapy regimen adherence in terms of scheduled attendance, medication, fluid restriction, nutrition, and physical exercise.

Patients with chronic renal disease experience significant changes in their lives, affecting many aspects of their lives. Noncompliance with HD therapy, on the other hand, frequently results in the patient's mental health deteriorating. Most patients find the first few months of HD the most difficult, as they are in a period of transition and must adjust to changes. Not all patients, however, are adequately prepared, and some are unaware of the need of attending therapy on time. Because they are healthy, some individuals even use alternative medications and avoid HD despite having kidney disease. This finding supports a recent study that found that patients with chronic renal illness receive insufficient emotional support from nurses during the period of hemodialysis. Furthermore, many patients have health problems that may require hospitalization when they begin HD therapy. This could be due to their chronic kidney illness, which is often asymptomatic and only discovered later. Furthermore, some patients with many of the risk factors for chronic kidney disease are uninformed of the consequences that can arise and how to avoid them; as a result, their kidney disease develops to the end-stage, requiring kidney replacement therapy. Because such diseases are often reported late, patients who undergo HD for the first time have poor overall health and substantial comorbidities. Delayed referral from general care typically limits dialysis options, and insufficient preparation time might increase the risk of problems used for hemodialysis.

Despite the fact that HD has the ability to minimize patients' symptoms, it cannot cure or help them to totally recover from the disease. As a result, patients confront a variety of problems, changes, and stressful situations, including hydration limits, dietary restrictions, associated medical concerns, and the loss of their old daily routine. As a result, patients must take care of themselves in order to maintain their quality of life, health, and general well-being. Patients must continue their HD treatment as scheduled, take their medications as directed, monitor their fluid intake, participate in physical activity, and fulfill all of their nutritional requirements. Patients report differences in their physical health when they follow the HD treatment regimen, based on their experiences in this study. When they regulate their fluid consumption, they feel maximally healthy, have no shortness of breath, and have a better mindset. When they fail to do so, they experience discomforts such as bodily aches, shortness of breath, swelling, inability to sleep, and a swollen stomach. This finding is consistent with a recent study that found patients can execute self-care by maintaining their lifestyles in accordance with the HD therapy regimen's recommendations, such as taking medicine, restricting fluids, and dieting, among other things.

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Patients are in charge of many aspects of their treatment. For example, most of the patients in this study limited their fluid intake without using a precise method of assessment, made no lifestyle changes, and ate what was readily available to them. Patients might not always have a precise idea of how much medication they should take. Average patients, for example, take medication based on their own knowledge and judgment. Furthermore, individuals frequently construct their knowledge based on their ideas and common sense, then use this understanding as an alibi to excuse what occurs to them. In actuality, however, patients do not always follow the recommendations. The patients' level of education and capacity to comprehend the information supplied, as well as the nurses' delivery methods, are critical elements. This finding is consistent with a recent study that found that due to time restrictions, patients do not acquire the necessary information and are unable to comprehend the behavioral changes required since the information is too complex for them to comprehend. Knowledge, on the other hand, is a critical tool for empowering patients and stabilizing their health. As a result, a lack of knowledge is a barrier, and the information offered by doctors and nurses is critical in achieving complete compliance. The majority of the study participants found it difficult to control their fluid intake due to thirst. This finding is consistent with a recent study, which found that the most common theme is the difficulty in limiting fluid intake. The difficulty in controlling fluids leads to an increase in IDWG, with an increase of 4% being normal, 4% to 6% being average, and >6% being hazardous³⁸. The majority of the individuals in our survey (70%) fell into the average category. 4, 3, and 1 subject showed an average increase of 4%, 5%, and 6%, respectively. The IDWG should be less than 4% of total body weight. Maintaining weight during the HD period is a regular difficulty for many people.

Nurses are in charge of providing direct care to patients before to, during, and after HD. Annulation of the AVF is a crucial skill for all HD nurses. This is critical for patients with temporary vascular access or small blood arteries who are having difficulty. Patients with this condition may experience more pain, discomfort, and worry. This finding is consistent with a recent study that found that not all nurses demonstrate a high degree of competence, making patients more nervous. The most common cause of recirculation is a needle insertion mistake. Patients' fears of AVF injury and distrust of the HD staff are exacerbated by negative annulation experiences. HD was performed in our study with a pre-determined time limit of four to five hours for each procedure. However, some patients finish their sessions early for medical and non-medical reasons; for

example, some patients have significant intra-dialysis problems and hence cease HD, while others cite a lack of time and transportation. Nurses frequently explain the ramifications to patients who want to stop HD treatment early, and then ask them to sign an informed consent form, confirming that they fully understand the consequences of their choice and accept all risks associated with it. Nurses can ultimately boost HD effectiveness by sticking to the exact duration of each session.

The ability of HD patients to engage in physical activities changes as their treatment progresses. Reduced mobility, restrictions in performing particular physical activities, shortness of breath, weariness, and weakness are the most evident alterations, all of which prevent patients from finishing the treatment. Renal failure, side effects of renal replacement treatment, and progression of comorbidities are the three main factors that limit physical activity. Uremic intoxication, anemia, mineral and metabolic abnormalities, higher cardiovascular risk with high comorbid disease, uremic sarcopenia, lower muscle strength due to muscle catabolism, and metabolic waste are all causes of low physical ability. Patients face physical challenges in their daily lives, which manifest as limitations in doing specific physical activities. Low energy and weakness are caused by a lack of food and fluid intake, excessive hydration, and an increase in metabolic waste in the patient's body. The experience of HD patients adhering to their therapy regimen varies and is highly individualized; it is influenced by both supportive and inhibiting variables. The first few weeks are frequently the most tough, as patients must adjust to a variety of unpleasant circumstances. Nurses have a crucial role in promoting medication regimen adherence. Patients should conduct self-care to maintain their physical condition, based on their experiences with being unable to follow therapeutic regimens in accordance with recommendations and being unable to make adjustments to their conditions. Because adherence to the therapeutic regimen varies, it is necessary to increase the supporting variables while weakening the inhibitory factors. Nurses are one of the health professionals entrusted with providing the clinical care and support that patients require to succeed during hemodialysis treatment. As a result, they must play an active role, particularly in terms of preparing and assisting patients during the beginning stages of HD. Only body weight information was acquired from medical records. Because laboratory tests are infrequently performed and are not covered by BPJS, data supporting the therapy regimen such as phosphate, salt, and albumin levels were not acquired. As a result, future research should focus on this topic.